

LEDS C4[®]

Luminaire

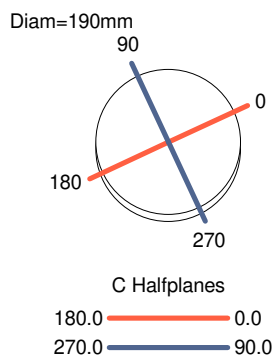
Code 05-E087-DC-CL
Name MOAL

Measurerm.

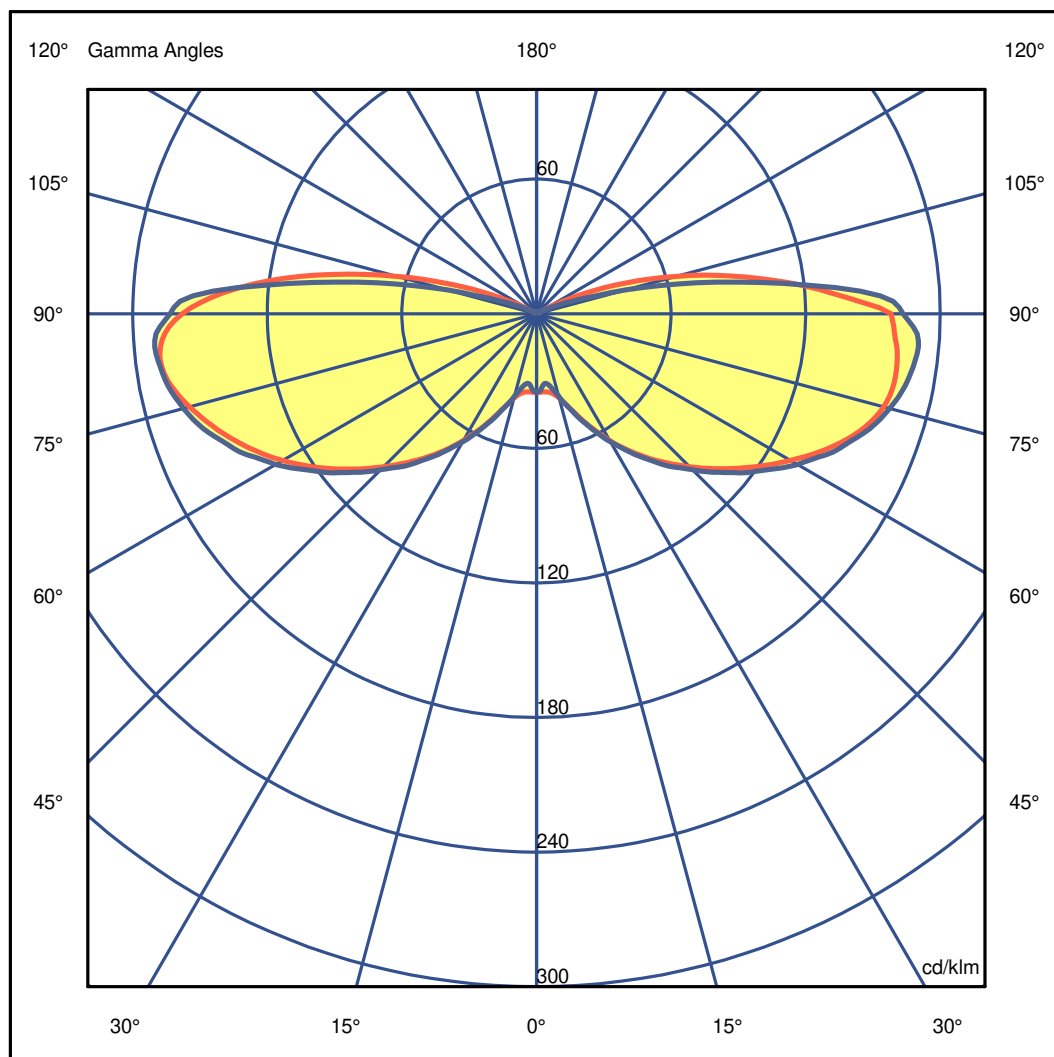
Code 05-E087-DC-CL
Name MOAL

Luminaire Flux	311.79 lm	Luminaire Power	11.17 W	Efficacy	27.91 lm/W	Efficiency	100.00%
Sources Flux	311.79 lm	Maximum value	170.86 cd/klm	Position	C=90.00 G=85.00	CG	Asymmetrical
Round Luminaire		Diam.	190 mm	Height	65 mm		
Round Luminous Area		Diam.	110 mm	Height	0 mm		
Horizontal Luminous Area		0.009503 m2		Emitting area on Plane 180°		0.000000 m2	
Emitting area on Plane 0°		0.000000 m2		Emitting area on Plane 270°		0.000000 m2	
Emitting area on Plane 90°		0.000000 m2		Glare area at 76°		0.002299 m2	
Coordinate system		CG		Symmetry Type		Asymmetrical	
Date		03-07-2020		Maximum Gamma Angle		180	
Measurement Distance		0.00		Measurement Flux		311.79 lm	
Operator		qualitat		Rated Voltage			
Temperature		25.00 °C		Rated Current			
Humidity		60.00 %		Photocell			
Notes							

Line		Code		Luminaire Sources		Flux [lm]	Pow. [W]	Q.ty
		05-E087-DC-CL		Name		311.79	11.17	1
				05-E087-DC-CL				
C.I.E.	13 36 66 76 100			D DIN 5040	B11			
F UTE	--			B NBN	BZ 10			



ULOR 23.51 %
DLOR 76.49 %
RN 23.51 %



LEDS C4⁺

Luminaire

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Measurement

Code 05-E087-DC-CL
Name MOAL

Luminaire Flux		311.79 lm		Luminaire Power		11.17 W		Efficacy		27.91 lm/W		Efficiency		100.00%	
Sources Flux		311.79 lm		Maximum value		170.86 cd/klm		Position		C=90.00 G=85.00		CG Asymmetrical			
Luminous Intensity Table cd/klm Table 1/2															
	C 0.00	C 15.00	C 30.00	C 45.00	C 60.00	C 75.00	C 90.00	C 105.00	C 120.00	C 135.00	C 150.00	C 165.00	C 180.00		
G 0.0	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
G 2.5	34.95	34.94	34.89	34.78	34.62	34.50	34.45	34.49	34.62	34.77	34.89	34.93	34.94	34.94	34.94
G 5.0	34.91	34.84	34.43	33.60	32.77	32.23	32.03	32.22	32.76	33.59	34.42	34.83	34.90	34.90	34.90
G 7.5	35.08	34.87	33.87	32.64	31.84	31.42	31.27	31.41	31.83	32.63	33.85	34.86	35.07	35.07	35.07
G 10.0	35.67	35.27	34.20	33.32	32.74	32.44	32.34	32.44	32.73	33.31	34.19	35.26	35.66	35.66	35.66
G 12.5	36.86	36.44	35.85	35.26	34.96	34.85	34.77	34.84	34.95	35.24	35.84	36.43	36.85	36.85	36.85
G 15.0	38.86	38.61	38.53	38.19	38.24	38.10	38.01	38.09	38.23	38.18	38.52	38.61	38.86	38.86	38.86
G 17.5	41.81	41.82	41.92	42.03	42.11	42.02	41.90	42.01	42.10	42.02	41.92	41.83	41.82	41.82	41.82
G 20.0	45.58	45.82	45.89	46.31	46.29	45.92	45.80	45.91	46.28	46.31	45.91	45.84	45.60	45.60	45.60
G 22.5	49.98	50.30	50.38	50.76	50.47	50.60	50.85	50.59	50.46	50.77	50.40	50.34	50.02	50.02	50.02
G 25.0	54.85	55.08	55.15	55.25	55.02	55.47	55.36	55.47	55.02	55.26	55.19	55.12	54.89	54.89	54.89
G 27.5	60.00	60.01	60.03	59.90	60.10	60.59	60.67	60.58	60.10	59.93	60.06	60.04	60.03	60.03	60.03
G 30.0	65.24	65.03	64.93	64.80	65.42	65.78	65.90	65.77	65.42	64.83	64.96	65.04	65.24	65.24	65.24
G 32.5	70.44	70.06	69.85	69.94	70.43	70.82	70.90	70.82	70.44	69.97	69.87	70.04	70.39	70.39	70.39
G 35.0	75.59	75.12	74.85	75.14	75.57	76.07	76.68	76.06	75.59	75.17	74.83	75.05	75.49	75.49	75.49
G 37.5	80.72	80.24	80.01	80.21	81.09	81.40	81.73	81.40	81.10	80.22	79.95	80.12	80.59	80.59	80.59
G 40.0	85.88	85.43	85.37	85.41	86.45	87.03	87.78	87.02	86.46	85.41	85.28	85.29	85.74	85.74	85.74
G 42.5	91.09	90.73	90.90	90.98	91.92	92.56	92.86	92.56	91.94	90.95	90.79	90.61	90.99	90.99	90.99
G 45.0	96.39	96.18	96.57	96.77	97.55	98.16	98.29	98.16	97.57	96.72	96.47	96.13	96.39	96.39	96.39
G 47.5	101.82	101.78	102.36	102.54	103.11	104.03	104.38	104.03	103.12	102.48	102.31	101.87	101.99	101.99	101.99
G 50.0	107.37	107.53	108.26	108.31	108.88	109.67	110.00	109.67	108.88	108.24	108.30	107.80	107.73	107.73	107.73
G 52.5	113.04	113.39	114.27	114.14	115.04	115.47	116.39	115.47	115.02	114.10	114.43	113.81	113.54	113.54	113.54
G 55.0	118.83	119.32	120.29	120.12	121.27	121.45	121.93	121.45	121.24	120.13	120.56	119.82	119.35	119.35	119.35
G 57.5	124.72	125.29	126.26	126.19	127.24	127.50	128.15	127.50	127.20	126.28	126.59	125.71	125.10	125.10	125.10
G 60.0	130.72	131.26	132.13	132.17	133.13	133.45	134.26	133.46	133.10	132.34	132.41	131.41	130.72	130.72	130.72
G 62.5	136.78	137.19	137.87	137.88	139.04	139.05	139.62	139.06	139.03	138.10	137.98	136.82	136.16	136.16	136.16
G 65.0	142.70	142.94	143.46	143.27	144.81	144.40	145.74	144.40	144.83	143.46	143.23	141.91	141.39	141.39	141.39
G 67.5	148.24	148.30	148.75	148.34	149.96	149.60	150.36	149.59	150.02	148.37	148.11	146.72	146.41	146.41	146.41
G 70.0	153.16	153.07	153.56	153.06	154.40	154.27	155.31	154.25	154.48	152.79	152.60	151.27	151.22	151.22	151.22
G 72.5	157.22	157.04	157.70	157.27	158.32	158.35	159.56	158.31	158.38	156.70	156.68	155.58	155.81	155.81	155.81
G 75.0	160.18	160.01	160.96	160.77	161.81	161.89	162.90	161.88	161.73	160.08	160.29	159.67	160.18	160.18	160.18
G 77.5	161.87	161.78	163.15	163.36	164.73	164.69	165.98	164.75	164.41	162.90	163.42	163.50	164.21	164.21	164.21
G 80.0	162.44	162.48	164.20	164.85	166.73	167.15	168.21	167.25	166.32	165.13	165.90	166.61	167.35	167.35	167.35
G 82.5	162.12	162.31	164.30	165.21	167.43	169.36	169.83	169.22	167.48	166.61	167.35	168.34	168.96	168.96	168.96
G 85.0	161.13	161.49	163.69	164.71	166.64	170.16	170.86	169.89	167.80	166.90	167.34	168.04	168.38	168.38	168.38
G 87.5	159.69	160.23	162.61	163.62	164.74	167.87	169.12	168.66	166.45	165.59	165.46	165.06	164.96	164.96	164.96
G 90.0	158.03	158.76	161.28	162.24	162.26	163.08	163.41	163.08	162.26	162.24	161.28	158.76	158.03	158.03	158.03
G 92.5	141.96	143.85	151.56	154.39	152.60	148.88	156.71	149.67	154.31	156.36	154.41	148.68	147.22	147.22	147.22
G 95.0	125.98	128.91	141.22	145.31	141.42	129.83	133.70	129.55	142.57	147.50	144.87	135.46	133.23	133.23	133.23
G 97.5	110.18	113.91	129.67	133.84	126.95	105.25	105.58	105.12	127.00	135.23	132.72	119.94	117.02	117.02	117.02
G100.0	94.66	98.84	116.35	119.03	107.70	79.32	81.33	79.41	107.29	119.31	118.05	102.97	99.57	99.57	99.57
G102.5	79.50	83.72	100.71	100.33	84.99	57.25	60.00	57.31	84.67	99.86	100.99	85.44	81.84	81.84	81.84
G105.0	64.81	68.57	82.53	79.21	61.46	41.53	41.36	41.52	61.38	78.51	81.86	68.23	64.81	64.81	64.81
G107.5	50.71	53.60	62.86	58.00	40.57	31.64	24.81	31.61	40.63	57.42	61.83	52.14	49.30	49.30	49.30
G110.0	37.52	39.36	43.38	38.71	24.76	23.73	16.08	23.70	24.84	38.44	42.43	37.56	35.58	35.58	35.58
G112.5	25.60	26.43	25.73	23.10	14.33	16.16	9.76	16.15	14.39	23.13	25.09	24.85	23.76	23.76	23.76
G115.0	15.30	15.35	11.42	12.18	8.25	10.05	5.47	10.05	8.27	12.37	11.19	14.33	13.98	13.98	13.98
G117.5	6.98	6.63	4.37	5.37	4.83	6.05	2.94	6.06	4.82	5.59	4.37	6.25	6.35	6.35	6.35
G120.0	1.00	2.29	3.50	8.27	2.78	3.59	1.49	3.60	2.75	8.27	3.50	2.29	1.00	1.00	1.00
G122.5	0.97	2.03	2.77	4.43	1.67	2.00	1.49	2.00	1.64	4.43	2.77	2.03	0.97	0.97	0.97
G125.0	0.95	1.79	2.16	1.43	1.22	1.49	1.42	1.49	1.19	1.43	2.16	1.79	0.95	0.95	0.95
G127.5	0.93	1.55	1.65	1.13	1.43	1.33	1.35	1.26	1.10	1.70	1.65	1.55	0.93	0.93	0.93
G130.0	0.90	1.33	1.21	1.11	1.21	1.29	1.35	1.28	1.14	2.15	1.21	1.33	0.90	0.90	0.90
G132.5	0.88	1.12	1.06	1.09	1.15	1.28	1.32	1.28	1.15	2.29	1.06	1.12	0.88	0.88	0.88
G135.0	0.85	0.99	1.04	1.06	1.13	1.28	1.28	1.28	1.13	2.07	1.04	0.99	0.85	0.85	0.85
G137.5	0.84	0.97	1.02	1.03	1.10	1.27	1.28	1.27	1.10	1.61	1.02	0.97	0.84	0.84	0.84
G140.0	0.83	0.95	0.99	1.00	1.09	1.22	1.28	1.22	1.09	1.12	0.99	0.95	0.83	0.83	0.83
G142.5	0.81	0.93	0.97	0.99	1.08	1.14	1.17	1.14	1.08	0.99	0.97	0.93	0.81	0.81	0.81
G145.0	0.80	0.91	0.94	0.99	1.06	1.11	1.14	1.11	1.06	0.99	0.94	0.91	0.80	0.80	0.80
G147.5	0.79	0.90	0.92	0.98	1.04	1.09	1.12	1.09	1.04	0.98	0.92	0.90	0.79	0.79	0.79
G150.0	0.77	0.89	0.91	0.97	1.03	1.07	1.07	1.07	1.03	0.97	0.91	0.89	0.77	0.77	0.77
G152.5	0.79	0.88	0.90	0.95	1.01	1.05	1.07	1.05	1.01	0.95	0.90	0.88	0.79	0.79	0.79
G155.0	0.80	0.88	0.90	0.92	1.00	1.04	1.07	1.04	1.00	0.92	0.90	0.88	0.80	0.80	0.80
G157.5	0.81	0.88	0.90	0.90	1.06	1.04	1.07	1.04	0.98	0.90	0.90	0.88	0.81	0.81	0.81
G160.0	0.83	0.88	0.89	0.90	0.95	1.09	1.07	1.03	0.95	0.90	0.89	0.88	0.83	0.83	0.83
G162.5	0.84	0.88	0.89	0.91	0.94	0.99	1.04	0.99	0.94	0.91	0.89	0.88	0.84	0.84	0.84
G165.0	0.85	0.89	0.90	0.92	0.94	0.97	1.00	0.97	0.94	0.92	0.90	0.89	0.85	0.85	0.85
G167.5	0.86	0.90	0.91	0.91	0.94	0.97	1.00	0.97	0.94	0.91	0.91	0.90	0.86	0.86	0.86
G170.0</															

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Measurerm.

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Luminaire Flux	311.79 lm		Luminaire Power		11.17 W		Efficacy		27.91 lm/W		Efficiency		100.00%	
Sources Flux	311.79 lm		Maximum value		170.86 cd/klm		Position		C=90.00 G=85.00		CG Asymmetrical			
Luminous Intensity Table cd/klm Table 2/2														
	C 195.00	C 210.00	C 225.00	C 240.00	C 255.00	C 270.00	C 285.00	C 300.00	C 315.00	C 330.00	C 345.00			
G 0.0	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00	35.00
G 2.5	34.93	34.89	34.77	34.62	34.49	34.45	34.50	34.62	34.78	34.89	34.94	34.89	34.89	34.94
G 5.0	34.83	34.42	33.59	32.76	32.22	32.03	32.23	32.77	33.60	34.43	34.84	34.84	34.84	34.84
G 7.5	34.86	33.85	32.63	31.83	31.41	31.27	31.42	31.84	32.64	33.87	34.87	34.87	34.87	34.87
G 10.0	35.26	34.19	33.31	32.73	32.44	32.34	32.44	32.74	33.32	34.20	35.27	35.27	35.27	35.27
G 12.5	36.43	35.84	35.24	34.95	34.84	34.77	34.85	34.96	35.26	35.85	36.44	36.44	36.44	36.44
G 15.0	38.61	38.52	38.18	38.23	38.09	38.01	38.10	38.24	38.19	38.53	38.61	38.61	38.61	38.61
G 17.5	41.83	41.92	42.02	42.10	42.01	41.90	42.02	42.11	42.03	41.92	41.82	41.82	41.82	41.82
G 20.0	45.84	45.91	46.31	46.28	45.91	45.80	45.92	46.29	46.31	45.89	45.82	45.82	45.82	45.82
G 22.5	50.34	50.40	50.77	50.46	50.59	50.85	50.60	50.47	50.76	50.38	50.30	50.30	50.30	50.30
G 25.0	55.12	55.19	55.26	55.02	55.47	55.36	55.47	55.02	55.25	55.15	55.08	55.08	55.08	55.08
G 27.5	60.04	60.06	59.93	60.10	60.58	60.67	60.59	60.10	59.90	60.03	60.01	60.01	60.01	60.01
G 30.0	65.04	64.96	64.83	65.42	65.77	65.90	65.78	65.42	64.80	64.93	65.03	65.03	65.03	65.03
G 32.5	70.04	69.87	69.97	70.44	70.82	70.90	70.82	70.43	69.94	69.85	70.06	70.06	70.06	70.06
G 35.0	75.05	74.83	75.17	75.59	76.06	76.68	76.07	75.57	75.14	74.85	75.12	75.12	75.12	75.12
G 37.5	80.12	79.95	80.22	81.10	81.40	81.73	81.40	81.09	80.21	80.01	80.24	80.24	80.24	80.24
G 40.0	85.29	85.28	85.41	86.46	87.02	87.78	87.03	86.45	85.41	85.37	85.43	85.43	85.43	85.43
G 42.5	90.61	90.79	90.95	91.94	92.56	92.86	92.56	91.92	90.98	90.90	90.73	90.73	90.73	90.73
G 45.0	96.13	96.47	96.72	97.57	98.16	98.29	98.16	97.55	96.77	96.57	96.18	96.18	96.18	96.18
G 47.5	101.87	102.31	102.48	103.12	104.03	104.38	104.03	103.11	102.54	102.36	101.78	101.78	101.78	101.78
G 50.0	107.80	108.30	108.24	108.88	109.67	110.00	109.67	108.88	108.31	108.26	107.53	107.53	107.53	107.53
G 52.5	113.81	114.43	114.10	115.02	115.47	116.39	115.47	115.04	114.14	114.27	113.39	113.39	113.39	113.39
G 55.0	119.82	120.56	120.13	121.24	121.45	121.93	121.45	121.27	120.12	120.29	119.32	119.32	119.32	119.32
G 57.5	125.71	126.59	126.28	127.20	127.50	128.15	127.50	127.24	126.19	126.26	125.29	125.29	125.29	125.29
G 60.0	131.41	132.41	132.34	133.10	133.46	134.26	133.45	133.13	132.17	132.13	131.26	131.26	131.26	131.26
G 62.5	136.82	137.98	138.10	139.03	139.06	139.62	139.05	139.04	137.88	137.87	137.19	137.19	137.19	137.19
G 65.0	141.91	143.23	143.46	144.83	144.40	145.74	144.40	144.81	143.27	143.46	142.94	142.94	142.94	142.94
G 67.5	146.72	148.11	148.37	150.02	149.59	150.36	149.60	149.96	148.34	148.75	148.30	148.30	148.30	148.30
G 70.0	151.27	152.60	152.79	154.48	154.25	155.31	154.27	154.40	153.06	153.56	153.07	153.07	153.07	153.07
G 72.5	155.58	156.68	156.70	158.38	158.31	159.56	158.35	158.32	157.27	157.70	157.04	157.04	157.04	157.04
G 75.0	159.67	160.29	160.08	161.73	161.88	162.90	161.89	161.81	160.77	160.96	160.01	160.01	160.01	160.01
G 77.5	163.50	163.42	162.90	164.41	164.75	165.98	164.69	164.73	163.36	163.15	161.78	161.78	161.78	161.78
G 80.0	166.61	165.90	165.13	166.32	167.25	168.21	167.15	166.73	164.85	164.20	162.48	162.48	162.48	162.48
G 82.5	168.34	167.35	166.61	167.48	169.22	169.83	169.36	167.43	165.21	164.30	162.31	162.31	162.31	162.31
G 85.0	168.04	167.34	166.90	167.80	169.89	170.86	170.16	166.64	164.71	163.69	161.49	161.49	161.49	161.49
G 87.5	165.06	165.46	165.59	166.45	168.66	169.12	167.87	164.74	163.62	162.61	160.23	160.23	160.23	160.23
G 90.0	158.76	161.28	162.24	162.26	163.08	163.41	163.08	162.26	162.24	161.28	158.76	158.76	158.76	158.76
G 92.5	148.68	154.41	156.36	154.31	149.67	156.71	148.88	152.60	154.39	151.56	143.85	143.85	143.85	143.85
G 95.0	135.46	144.87	147.50	142.57	129.55	133.70	129.83	141.42	145.31	141.22	128.91	128.91	128.91	128.91
G 97.5	119.94	132.72	135.23	127.00	105.12	105.58	105.25	126.95	133.84	129.67	113.91	113.91	113.91	113.91
G100.0	102.97	118.05	119.31	107.29	79.41	81.33	79.32	107.70	119.03	116.35	98.84	98.84	98.84	98.84
G102.5	85.44	100.99	99.86	84.67	57.31	60.00	57.25	84.99	100.33	100.71	83.72	83.72	83.72	83.72
G105.0	68.23	81.86	78.51	61.38	41.52	41.36	41.53	61.46	79.21	82.53	68.57	68.57	68.57	68.57
G107.5	52.14	61.83	57.42	40.63	31.61	24.81	31.64	40.57	58.00	62.86	53.60	53.60	53.60	53.60
G110.0	37.56	42.43	38.44	24.84	23.70	16.08	23.73	24.76	38.71	43.38	39.36	39.36	39.36	39.36
G112.5	24.85	25.09	23.13	14.39	16.15	9.76	16.16	14.33	23.10	25.73	26.43	26.43	26.43	26.43
G115.0	14.33	11.19	12.37	8.27	10.05	5.47	10.05	8.25	12.18	11.42	15.35	15.35	15.35	15.35
G117.5	6.25	4.37	5.59	4.82	6.06	2.94	6.05	4.83	5.37	4.37	6.63	6.63	6.63	6.63
G120.0	2.29	3.50	8.27	2.75	3.60	1.49	3.59	2.78	8.27	3.50	2.29	2.29	2.29	2.29
G122.5	2.03	2.77	4.43	1.64	2.00	1.49	2.00	1.67	4.43	2.77	2.03	2.03	2.03	2.03
G125.0	1.79	2.16	1.43	1.19	1.49	1.42	1.49	1.22	1.43	2.16	1.79	1.79	1.79	1.79
G127.5	1.55	1.65	1.70	1.10	1.26	1.35	1.33	1.43	1.13	1.65	1.55	1.55	1.55	1.55
G130.0	1.33	1.21	2.15	1.14	1.28	1.35	1.29	1.21	1.11	1.21	1.33	1.33	1.33	1.33
G132.5	1.12	1.06	2.29	1.15	1.28	1.32	1.28	1.15	1.09	1.06	1.12	1.12	1.12	1.12
G135.0	0.99	1.04	2.07	1.13	1.28	1.28	1.28	1.13	1.06	1.04	0.99	0.99	0.99	0.99
G137.5	0.97	1.02	1.61	1.10	1.27	1.28	1.27	1.10	1.03	1.02	0.97	0.97	0.97	0.97
G140.0	0.95	0.99	1.12	1.09	1.22	1.28	1.22	1.09	1.00	0.99	0.95	0.95	0.95	0.95
G142.5	0.93	0.97	0.99	1.08	1.14	1.17	1.14	1.08	0.99	0.97	0.93	0.93	0.93	0.93
G145.0	0.91	0.94	0.99	1.06	1.11	1.14	1.11	1.06	0.99	0.94	0.91	0.91	0.91	0.91
G147.5	0.90	0.92	0.98	1.04	1.09	1.12	1.09	1.04	0.98	0.92	0.90	0.90	0.90	0.90
G150.0	0.89	0.91	0.97	1.03	1.07	1.07	1.07	1.03	0.97	0.91	0.89	0.89	0.89	0.89
G152.5	0.88	0.90	0.95	1.01	1.05	1.07	1.05	1.01	0.95	0.90	0.88	0.88	0.88	0.88
G155.0	0.88	0.90	0.92	1.00	1.04	1.07	1.04	1.00	0.92	0.90	0.88	0.88	0.88	0.88
G157.5	0.88	0.90	0.90	0.98	1.04	1.07	1.04	1.06	0.90	0.90	0.88	0.88	0.88	0.88
G160.0	0.88	0.89	0.89	0.95	1.03	1.07	1.09	0.95	0.89	0.89	0.88	0.88	0.88	0.88
G162.5	0.88	0.89	0.91	0.94	0.99	1.04	0.99	0.94	0.91	0.89	0.88	0.88	0.88	0.88
G165.0	0.89	0.90	0.92	0.94	0.97	1.00	0.97	0.94	0.92	0.90	0.89	0.89	0.89	0.89
G167.5	0.90	0.91	0.91	0.94	0.97	1.00	0.97	0.94	0.91	0.91	0.90	0.90	0.90	0.90
G170.0	0.90	0.92	0.92	0.92	0.95	0.97	0.95	0.92	0.92	1.00	0.90	0.90	0.90	0.90
G172.5	0.89	0.93	0.94	0.93	0.93	0.93	0.93	0.93	0.99	0.93	0.89	0.89	0.89	0.89
G175.0	0.89	0.91	0.94	0.95	0.96	0.97	0.97	0.97	0.94	0.91	0.89	0.89	0.89	0.89
G177.5	0.90	0.90	0.91	0.92	0.92	0.93	0.92	0.92	0.91	0.90	0.90	0.90	0.90	0.90
G180.0	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90	0.90

LEDS C4[®]

Luminaire

Code 05-E087-DC-CL
Name MOAL

Measurem.

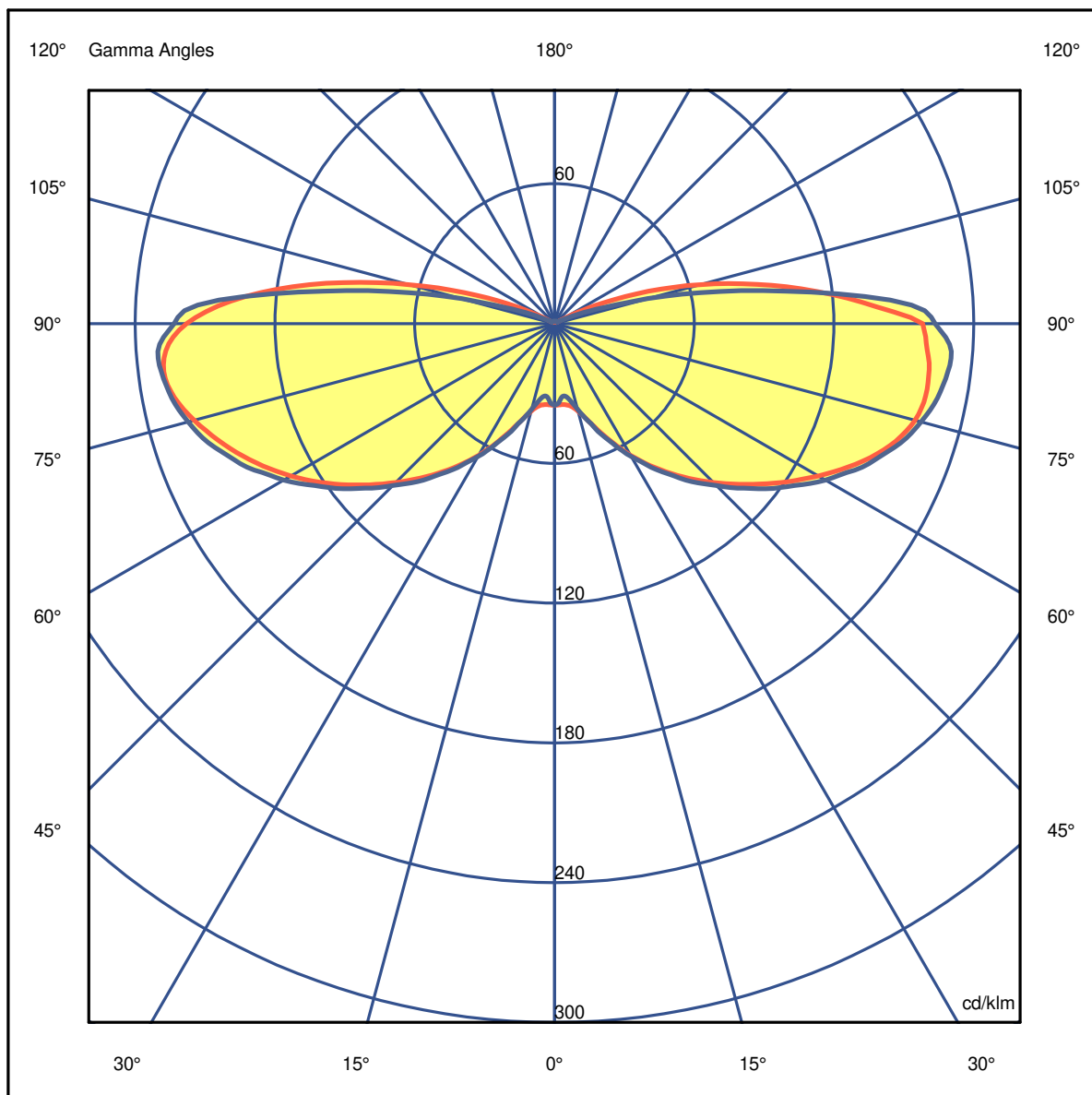
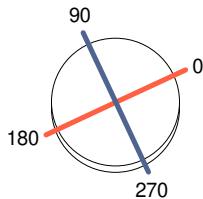
Code 05-E087-DC-CL
Name MOAL

Luminaire Flux	311.79 lm	Luminaire Power	11.17 W	Efficacy	27.91 lm/W	Efficiency	100.00%
Sources Flux	311.79 lm	Maximum value	170.86 cd/klm	Position	C=90.00 G=85.00	CG	Asymmetrical

Diam=190mm

C Halfplanes

180.0 — 0.0
270.0 — 90.0



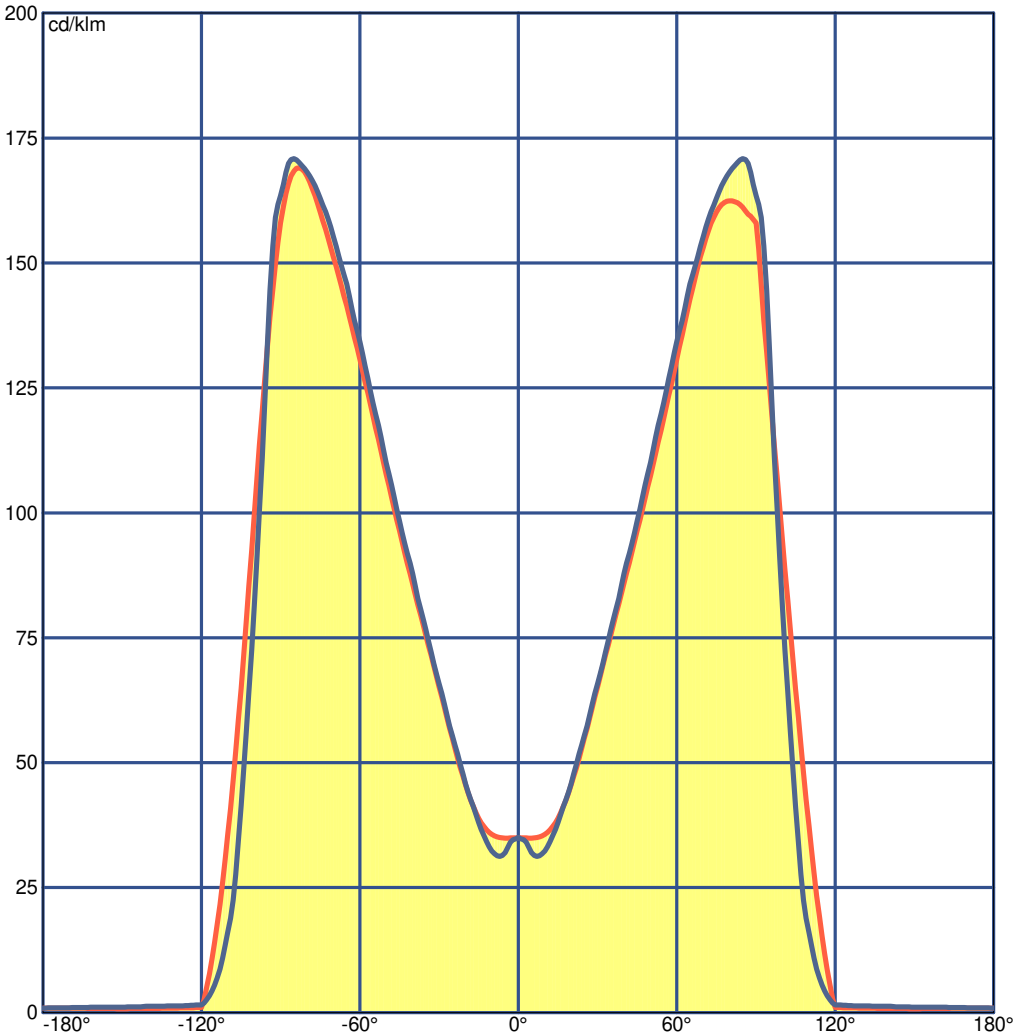
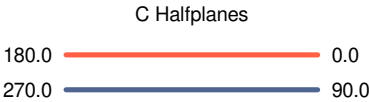
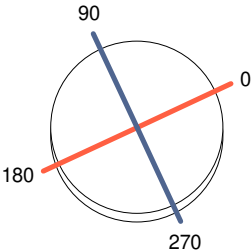
LEDS C4[®]

Luminaire

Code 05-E087-DC-CL
Name MOAL
Measurem.
Code 05-E087-DC-CL
Name MOAL

Luminaire Flux	311.79 lm	Luminaire Power	11.17 W	Efficacy	27.91 lm/W	Efficiency	100.00%
Sources Flux	311.79 lm	Maximum value	170.86 cd/klm	Position	C=90.00 G=85.00	CG	Asymmetrical

Diam=190mm



LEDS C4[®]

Luminaire

Code 05-E087-DC-CL
Name MOAL

Measurem.

Code 05-E087-DC-CL
Name MOAL

Luminaire Flux	311.79 lm	Luminaire Power	11.17 W	Efficacy	27.91 lm/W	Efficiency	100.00%
Sources Flux	311.79 lm	Maximum value	170.86 cd/klm	Position	C=90.00 G=85.00	CG	Asymmetrical

UGR
S = 0.250

Reflectancies										
Ceiling/Cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Working Plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room Dimensions										
Room Dimensions	Lateral View					Viewed Endwise				
	x=2H	y=2H	x=2H	y=2H	x=2H	y=2H	x=2H	y=2H	x=2H	y=2H
x=2H y=2H	18.1	19.5	18.7	20.2	20.9	18.2	19.6	18.8	20.3	21.0
x=2H y=3H	22.1	23.4	22.8	24.1	24.9	22.2	23.6	22.9	24.2	25.0
x=2H y=4H	24.3	25.6	25.0	26.3	27.1	24.5	25.7	25.1	26.4	27.2
x=2H y=6H	26.8	27.9	27.4	28.6	29.5	26.8	28.0	27.5	28.7	29.6
x=2H y=8H	28.1	29.2	28.8	29.9	30.8	28.1	29.3	28.8	30.0	30.8
x=2H y=12H	29.5	30.6	30.2	31.3	32.2	29.6	30.7	30.3	31.4	32.3
x=4H y=2H	19.5	20.7	20.1	21.4	22.2	19.5	20.8	20.2	21.5	22.3
x=4H y=3H	23.5	24.6	24.2	25.4	26.2	23.6	24.7	24.3	25.5	26.3
x=4H y=4H	25.8	26.9	26.6	27.6	28.5	25.9	27.0	26.7	27.7	28.6
x=4H y=6H	28.4	29.3	29.1	30.1	31.0	28.4	29.4	29.2	30.1	31.0
x=4H y=8H	29.8	30.6	30.5	31.4	32.3	29.8	30.7	30.6	31.5	32.4
x=4H y=12H	31.3	32.1	32.0	32.9	33.8	31.4	32.2	32.1	32.9	33.9
x=8H y=4H	26.7	27.6	27.5	28.4	29.3	26.8	27.7	27.6	28.5	29.4
x=8H y=6H	29.5	30.3	30.3	31.1	32.0	29.6	30.3	30.3	31.1	32.1
x=8H y=8H	31.1	31.8	31.9	32.6	33.5	31.1	31.8	31.9	32.6	33.6
x=8H y=12H	32.8	33.4	33.6	34.2	35.2	32.9	33.5	33.7	34.3	35.3
x=12H y=4H	27.0	27.8	27.8	28.6	29.5	27.1	27.9	27.8	28.7	29.6
x=12H y=6H	29.9	30.6	30.7	31.4	32.4	29.9	30.6	30.7	31.4	32.4
x=12H y=8H	31.6	32.2	32.4	33.0	34.0	31.6	32.2	32.4	33.0	34.0

LEDS C4⁺

Luminaire

Code 05-E087-DC-CL
Name MOAL

Measurem.

Code 05-E087-DC-CL
Name MOAL

Luminaire Flux	311.79 lm	Luminaire Power	11.17 W	Efficacy	27.91 lm/W	Efficiency	100.00%
Sources Flux	311.79 lm	Maximum value	170.86 cd/klm	Position	C=90.00 G=85.00	CG Asymmetrical	

Utilizations CIE

Mounting	Direct				Normalization			Normalised				Suspension Ratio1/3						Standard CIE Settings							
Ceiling																									
K	8873	8773	8871	8771	7773	7771	7753	7553	7751	7551	7731	7331	7711	7111	5551	5531	5331	5511	5111	3331	3311	1111	0000		
0.60	398	357	366	331	340	316	262	222	249	212	204	154	171	117	198	164	145	139	111	138	118	102	88		
0.80	450	413	402	371	393	354	304	266	281	248	229	182	190	139	231	191	173	160	133	164	138	121	104		
1.00	487	453	422	395	431	378	337	301	303	272	248	204	205	157	255	211	194	176	150	184	154	138	118		
1.25	518	488	434	412	464	395	368	334	321	294	264	225	218	175	276	230	214	192	167	203	171	154	131		
1.50	539	512	440	421	488	405	392	361	333	309	276	240	229	189	291	244	229	204	181	218	184	168	141		
2.00	566	544	442	427	519	413	428	400	347	327	292	262	245	211	310	263	250	223	203	240	204	189	157		
2.50	582	563	438	427	538	414	452	428	353	337	302	276	257	227	321	276	265	236	219	254	219	204	168		
3.00	592	576	434	424	550	412	470	448	357	343	308	286	265	239	327	285	275	247	231	265	230	216	176		
4.00	603	591	425	418	565	407	495	477	360	349	317	299	278	256	335	296	288	261	248	278	247	234	188		
5.00	610	600	417	411	574	402	511	496	360	351	322	307	286	268	338	303	297	271	260	287	258	246	196		
10.00	618	613	392	389	588	383	547	539	356	352	331	323	307	296	341	318	314	295	289	306	284	275	214		
20.00	619	616	372	371	592	366	567	563	350	348	334	330	319	314	339	324	322	310	306	314	301	293	224		

Wall

K	8873	8773	8871	8771	7773	7771	7753	7553	7751	7551	7731	7331	7711	7111	5551	5531	5331	5511	5111	3331	3311	1111	0000
0.60	506	484	466	448	472	439	372	354	354	338	297	278	255	237	330	280	273	243	234	269	235	229	212
0.80	602	580	546	529	563	516	458	438	430	413	369	348	323	302	401	348	340	308	297	334	297	289	269
1.00	680	658	609	593	637	578	531	510	494	477	431	409	382	360	461	407	399	365	353	390	352	341	318
1.25	758	738	672	658	712	640	608	587	559	543	496	474	446	423	523	470	461	426	414	450	411	398	373
1.50	823	803	723	710	775	691	673	652	614	598	552	531	501	479	576	523	515	480	468	501	462	448	420
2.00	921	904	801	790	871	769	776	756	699	686	640	621	591	569	659	609	602	567	555	584	546	529	497
2.50	996	981	859	851	945	829	856	838	765	753	710	692	662	642	724	677	670	636	625	650	614	595	560
3.00	1000	1000	908	900	1000	878	922	905	819	809	768	751	722	703	778	734	727	695	684	705	671	650	613
4.00	1000	1000	985	979	1000	957	1000	1000	906	897	859	846	818	801	864	824	819	788	779	793	762	739	698
5.00	1000	1000	1000	1000	1000	1000	1000	1000	973	966	932	920	893	879	932	896	891	863	854	864	835	810	767
10.00	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	984
20.00	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000	1000

Working Pl.

K	8873	8773	8871	8771	7773	7771	7753	7553	7751	7551	7731	7331	7711	7111	5551	5531	5331	5511	5111	3331	3311	1111	0000
0.60	403	380	376	356	365	343	243	225	234	217	160	141	107	89	206	141	134	94	85	129	84	77	58
0.80	494	468	455	434	447	416	317	295	302	282	221	197	160	136	265	195	186	141	129	176	127	116	93
1.00	568	542	517	497	514	474	381	357	360	339	276	248	210	182	316	243	233	186	172	219	168	154	128
1.25	642	616	579	559	582	533	450	424	421	400	335	306	266	236	370	297	286	237	221	267	214	196	168
1.50	702	677	627	609	637	579	507	481	471	450	385	356	315	284	415	343	331	282	266	309	256	234	205
2.00	791	769	697	682	722	648	599	574	549	530	467	439	398	366	487	418	407	359	342	377	326	299	267
2.50	854	835	746	733	782	697	668	644	606	589	529	503	461	431	540	475	465	418	402	430	381	350	317
3.00	901	884	781	770	827	733	721	699	649	634	576	552	512	483	581	520	510	465	450	471	425	390	356
4.00	966	952	829	820	890	782	797	778	710	697	645	624	586	561	639	585	576	536	522	532	490	450	416
5.00	1000	998	861	853	932	814	850	833	751	740	693	675	639	617	679	630	623	585	573	574	537	492	458
10.00	1000	1000	933	929	1000	890	978	968	849	843	810	800	773	759	776	743	739	712	704	681	655	603	568
20.00	1000	1000	977	975	1000	936	1000	1000	911	908	888	882	864	856	839	818	816	799	794	754	737	679	645

LM53 SHR C0-C180: 3.329 SHR C90-C270: 3.362 SHR Square: 3.160

LEDS C4²

Luminaire

Code 05-E087-DC-CL
Name MOAL

Measurem.

Code 05-E087-DC-CL
Name MOAL

Luminaire Flux	311.79 lm	Luminaire Power	11.17 W	Efficacy	27.91 lm/W	Efficiency	100.00%
Sources Flux	311.79 lm	Maximum value	170.86 cd/klm	Position	C=90.00 G=85.00	CG	Asymmetrical

Left beam angle not found, gamma = -83

Left beam angle not found, gamma = -83

Left beam angle not found, gamma = -83

LEDS C4[°]

Luminaire

Code 05-E087-DC-CL
Name MOAL

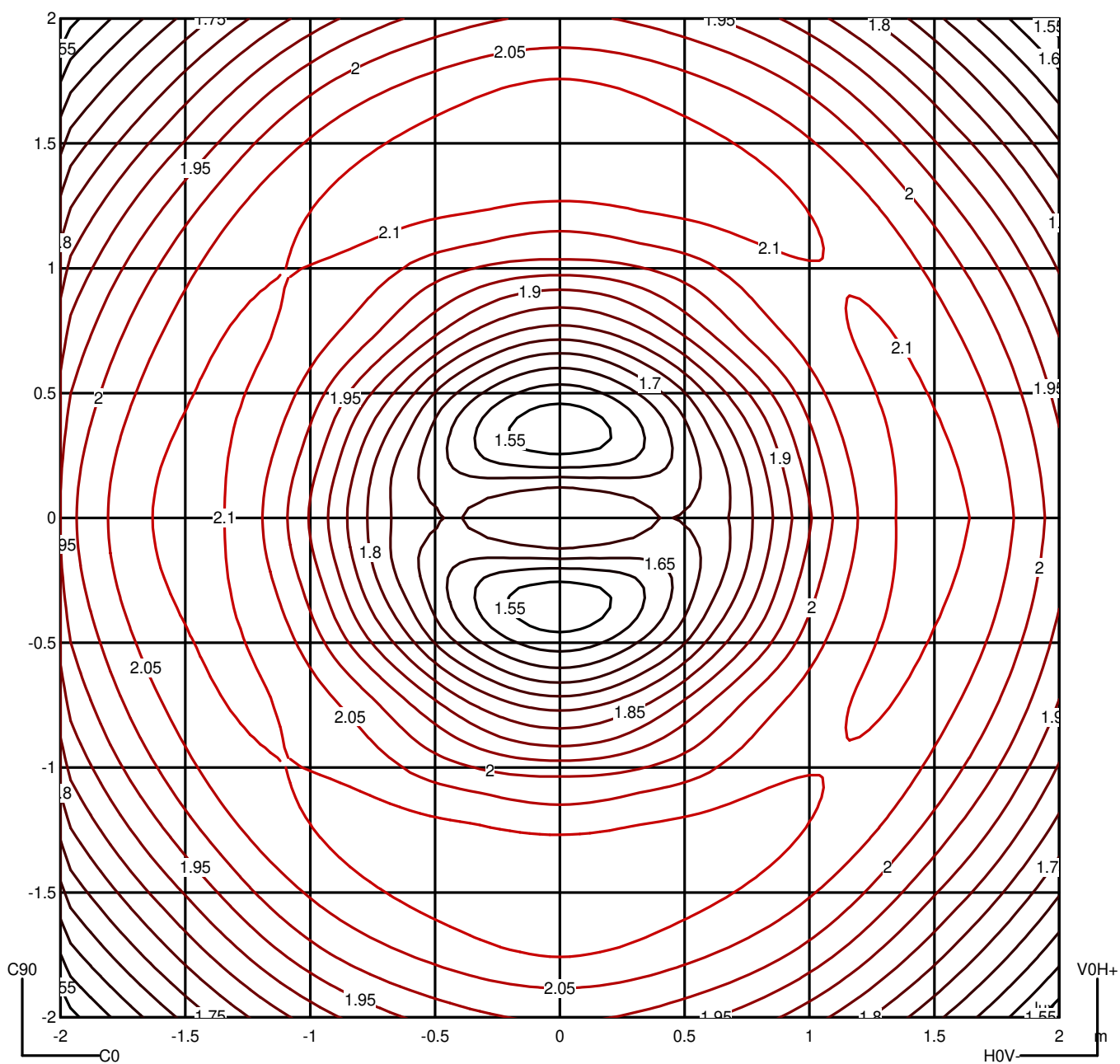
Measurement

Code 05-E087-DC-CL
Name MOAL

Luminaire Flux	311.79 lm	Luminaire Power	11.17 W	Efficacy	27.91 lm/W	Efficiency	100.00%
Sources Flux	311.79 lm	Maximum value	170.86 cd/klm	Position	C=90.00 G=85.00	CG	Asymmetrical

Isolux (Floor)

Luminaire position X=0.00m Y=0.00m Z=2.50m



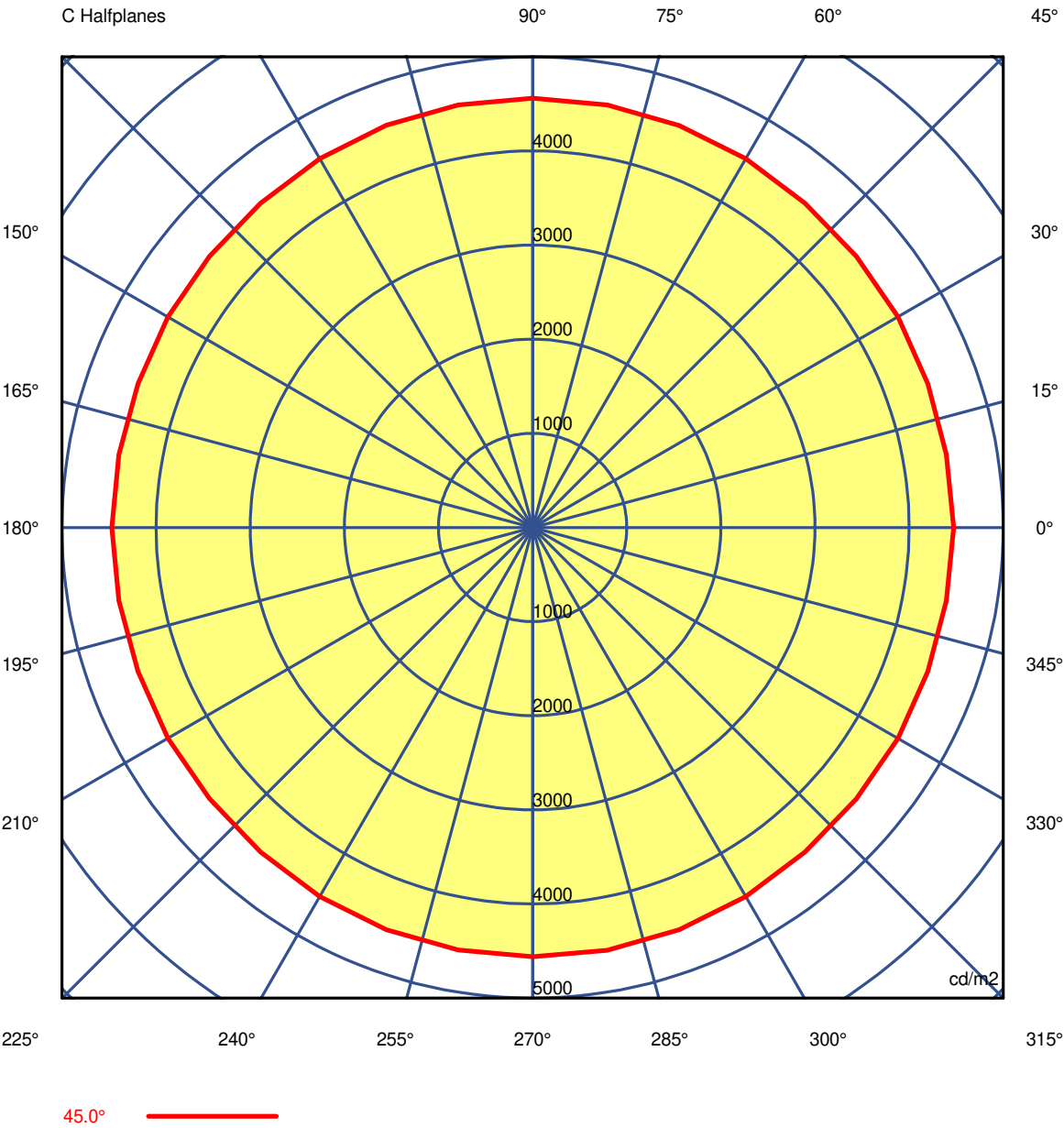
LEDS C4[®]

Luminaire

Code 05-E087-DC-CL
Name MOAL
Measurem.
Code 05-E087-DC-CL
Name MOAL

Luminaire Flux	311.79 lm	Luminaire Power	11.17 W	Efficacy	27.91 lm/W	Efficiency	100.00%
Sources Flux	311.79 lm	Maximum value	170.86 cd/klm	Position	C=90.00 G=85.00	CG	Asymmetrical

Luminance



LEDS C4²

Luminaire

Code 05-E087-DC-CL
Name MOAL

Measurment

Code 05-E087-DC-CL
Name MOAL

Luminaire Flux	311.79 lm	Luminaire Power	11.17 W	Efficacy	27.91 lm/W	Efficiency	100.00%
Sources Flux	311.79 lm	Maximum value	170.86 cd/klm	Position	C=90.00 G=85.00	CG	Asymmetrical

Luminance cd/m2 Table 1/3

	C 0.00	C 10.00	C 20.00	C 30.00	C 40.00	C 50.00	C 60.00	C 70.00	C 80.00	C 90.00	C 100.00	C 110.00	C 120.00
G 0.0	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34
G 5.0	1149.61	1148.86	1144.48	1133.84	1116.46	1096.77	1079.13	1066.03	1057.88	1054.99	1057.82	1065.91	1078.96
G 10.0	1188.25	1181.91	1164.71	1139.30	1118.53	1102.69	1090.75	1083.22	1079.00	1077.48	1078.88	1083.00	1090.44
G 15.0	1320.08	1313.40	1310.85	1308.75	1300.32	1296.81	1299.02	1296.30	1292.43	1291.09	1292.25	1296.00	1298.63
G 20.0	1591.23	1597.93	1600.21	1602.34	1612.33	1619.18	1616.21	1607.21	1600.59	1599.16	1600.40	1606.87	1615.87
G 25.0	1985.68	1991.80	1994.81	1996.58	2000.44	1996.59	1991.90	2003.17	2006.81	2004.20	2006.63	2002.86	1991.72
G 30.0	2471.71	2465.50	2462.48	2459.93	2454.23	2460.84	2478.38	2488.88	2494.25	2496.60	2494.05	2488.68	2478.50
G 35.0	3027.39	3014.82	3003.30	2997.80	3004.01	3015.55	3026.88	3038.38	3057.41	3071.28	3057.19	3038.31	3027.33
G 40.0	3677.93	3663.34	3657.23	3656.30	3653.34	3670.79	3702.33	3718.46	3740.54	3759.40	3740.29	3718.59	3703.05
G 45.0	4472.54	4462.48	4467.28	4480.79	4485.36	4499.48	4526.38	4547.91	4558.52	4560.48	4558.33	4548.27	4527.04
G 50.0	5480.45	5485.71	5500.96	5525.89	5527.45	5533.89	5557.49	5585.63	5606.89	5614.57	5606.91	5585.92	5557.23
G 55.0	6796.98	6810.60	6846.79	6880.69	6870.32	6888.45	6936.66	6945.02	6956.39	6974.56	6956.80	6944.71	6934.87
G 60.0	8577.61	8596.93	8634.59	8669.98	8671.58	8690.28	8735.42	8747.96	8776.99	8809.64	8778.02	8746.93	8733.62
G 65.0	11078.24	11085.54	11114.47	11136.77	11127.14	11161.36	11241.92	11214.16	11243.40	11314.05	11244.02	11213.54	11243.52
G 70.0	14692.14	14676.84	14703.99	14730.34	14685.37	14718.71	14811.02	14798.98	14832.27	14897.82	14828.27	14801.22	14819.05
G 75.0	20304.34	20270.53	20323.31	20403.17	20381.00	20417.10	20511.88	20518.26	20567.75	20649.81	20565.21	20512.83	20501.40
G 80.0	30691.45	30696.20	30798.76	31023.10	31094.57	31258.17	31500.78	31556.00	31652.69	31781.39	31680.99	31538.83	31423.73
G 85.0	60655.71	60745.55	61040.50	61618.79	61898.52	62153.21	62730.69	63665.96	64270.95	64318.53	64133.70	63699.65	63166.48
G 90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

LEDS C4[°]

Luminaire

Code 05-E087-DC-CL
Name MOAL

Measurerm.

Code 05-E087-DC-CL
Name MOAL

Luminaire Flux	311.79 lm		Luminaire Power		11.17 W		Efficacy		27.91 lm/W		Efficiency		100.00%	
Sources Flux	311.79 lm		Maximum value		170.86 cd/klm		Position		C=90.00 G=85.00		CG		Asymmetrical	
Luminance cd/m2 Table 2/3														
	C 130.00	C 140.00	C 150.00	C 160.00	C 170.00	C 180.00	C 190.00	C 200.00	C 210.00	C 220.00	C 230.00	C 240.00	C 250.00	
G 0.0	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	
G 5.0	1096.56	1116.21	1133.56	1144.18	1148.58	1149.30	1148.58	1144.18	1133.56	1116.21	1096.56	1078.96	1065.91	
G 10.0	1102.30	1118.18	1138.89	1164.01	1182.27	1187.85	1182.27	1164.01	1138.89	1118.18	1102.30	1090.44	1083.00	
G 15.0	1296.39	1300.08	1308.52	1310.23	1314.63	1320.08	1314.63	1310.23	1308.52	1300.08	1296.39	1298.63	1296.00	
G 20.0	1619.02	1612.33	1602.77	1601.41	1597.51	1592.14	1597.51	1601.41	1602.77	1612.33	1619.02	1615.87	1606.87	
G 25.0	1996.87	2001.13	1997.76	1996.62	1992.05	1987.05	1992.05	1996.62	1997.76	2001.13	1996.87	1991.72	2002.86	
G 30.0	2461.53	2455.48	2461.07	2462.72	2466.86	2471.71	2466.86	2462.72	2461.07	2455.48	2461.53	2478.50	2488.68	
G 35.0	3016.41	3004.74	2997.08	3000.10	3013.51	3023.60	3013.51	3000.10	2997.08	3004.74	3016.41	3027.33	3038.31	
G 40.0	3671.15	3656.04	3652.41	3650.64	3660.06	3671.95	3660.06	3650.64	3652.41	3656.04	3671.15	3703.05	3718.59	
G 45.0	4498.38	4482.06	4476.18	4463.12	4463.53	4472.54	4463.53	4463.12	4476.18	4482.06	4498.38	4527.04	4548.27	
G 50.0	5531.23	5525.21	5527.84	5510.91	5498.26	5498.45	5498.26	5510.91	5527.84	5525.21	5531.23	5557.23	5585.92	
G 55.0	6886.85	6874.61	6896.17	6872.82	6838.72	6826.77	6838.72	6872.82	6896.17	6874.61	6886.85	6934.87	6944.71	
G 60.0	8696.74	8683.92	8688.48	8649.66	8599.50	8577.61	8599.50	8649.66	8688.48	8683.92	8696.74	8733.62	8746.93	
G 65.0	11173.96	11124.55	11118.90	11053.94	10992.18	10976.07	10992.18	11053.94	11118.90	11124.55	11173.96	11243.52	11213.54	
G 70.0	14708.62	14641.15	14638.47	14551.86	14509.24	14505.73	14497.19	14551.86	14638.47	14641.15	14708.62	14819.05	14801.22	
G 75.0	20351.91	20284.30	20318.98	20261.28	20255.80	20304.34	20255.80	20261.28	20318.98	20284.30	20351.91	20501.40	20512.83	
G 80.0	31247.08	31217.24	31345.32	31433.74	31538.94	31619.40	31538.94	31433.74	31345.32	31217.24	31247.08	31423.73	31538.83	
G 85.0	62869.49	62844.95	62993.29	63174.98	63323.42	63385.76	63323.42	63174.98	62993.29	62844.95	62869.49	63166.48	63699.65	
G 90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	

LEDS C4²

Luminaire

Code 05-E087-DC-CL
Name MOAL

Measurem.

Code 05-E087-DC-CL
Name MOAL

Luminaire Flux	311.79 lm	Luminaire Power	11.17 W	Efficacy	27.91 lm/W	Efficiency	100.00%
Sources Flux	311.79 lm	Maximum value	170.86 cd/klm	Position	C=90.00 G=85.00	CG Asymmetrical	

Luminance cd/m2 Table 3/3

	C 260.00	C 270.00	C 280.00	C 290.00	C 300.00	C 310.00	C 320.00	C 330.00	C 340.00	C 350.00
G 0.0	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34	1148.34
G 5.0	1057.82	1054.99	1057.88	1066.03	1079.13	1096.77	1116.46	1133.84	1144.48	1148.86
G 10.0	1078.88	1077.48	1079.00	1083.22	1090.75	1102.69	1118.53	1139.30	1164.71	1181.91
G 15.0	1292.25	1291.09	1292.43	1296.30	1299.02	1296.81	1300.32	1308.75	1310.85	1313.40
G 20.0	1600.40	1599.16	1600.59	1607.21	1616.21	1619.18	1612.33	1602.34	1600.21	1597.93
G 25.0	2006.63	2004.20	2006.81	2003.17	1991.90	1996.59	2000.44	1996.58	1994.81	1991.80
G 30.0	2494.05	2496.60	2494.25	2488.88	2478.38	2460.84	2454.23	2459.93	2462.48	2465.50
G 35.0	3057.19	3071.28	3057.41	3038.38	3026.88	3015.55	3004.01	2997.80	3003.30	3014.82
G 40.0	3740.29	3759.40	3740.54	3718.46	3702.33	3670.79	3657.51	3656.30	3657.23	3663.34
G 45.0	4558.33	4560.48	4558.52	4547.91	4526.38	4499.48	4485.36	4480.79	4467.28	4462.48
G 50.0	5606.91	5614.57	5606.89	5585.63	5557.49	5533.89	5527.45	5525.89	5500.96	5485.71
G 55.0	6956.80	6974.56	6956.39	6945.02	6936.66	6888.45	6870.32	6880.69	6846.79	6810.60
G 60.0	8778.02	8809.64	8776.99	8747.96	8735.42	8690.28	8671.58	8669.98	8634.59	8596.93
G 65.0	11244.02	11314.05	11243.40	11214.16	11241.92	11161.36	11127.14	11136.77	11114.47	11085.54
G 70.0	14828.27	14897.82	14832.27	14798.98	14811.02	14718.71	14685.37	14730.34	14703.99	14676.84
G 75.0	20565.21	20649.81	20567.75	20518.26	20511.88	20417.10	20381.00	20403.17	20323.31	20270.53
G 80.0	31680.99	31781.39	31652.69	31556.00	31500.78	31258.17	31094.57	31023.10	30798.76	30696.20
G 85.0	64133.70	64318.53	64270.95	63665.96	62730.69	62153.21	61898.52	61618.79	61040.50	60745.55
G 90.0	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00