

Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P644408

Luminaire Tested: CRQ4DIP-SR4F0-75D125U935-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644408
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-75D125U935-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1250 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

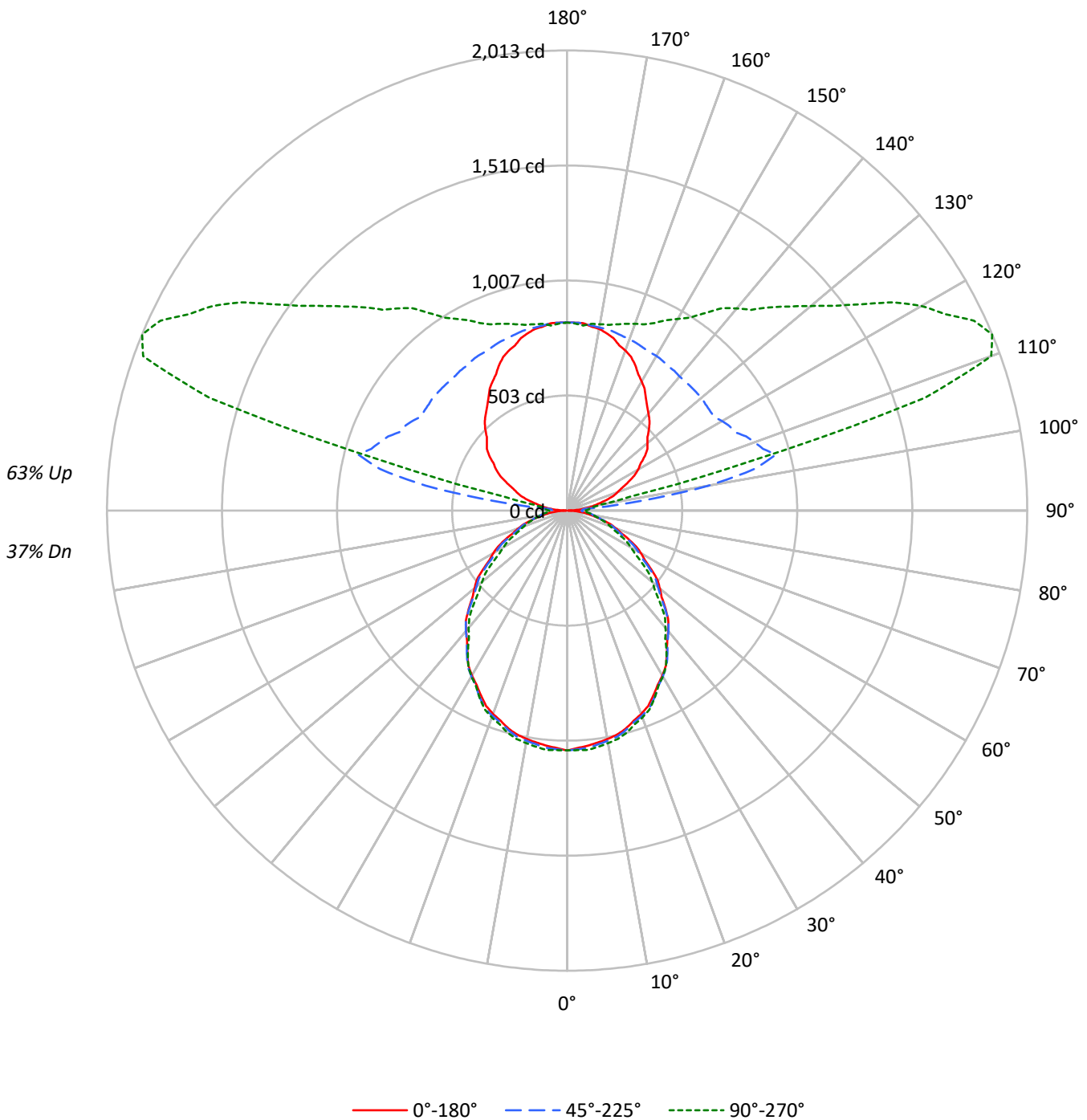
Lumens per Lamp: N/A
Luminaire Lumens: 7125.9 lumens
Efficiency: N/A
Efficacy: 118.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 60
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	104	104	104	104	94	94	94	94	76	76	76	60	60	60	44	44	44	37				
1	95	90	87	83	86	82	79	76	67	64	62	52	51	49	39	38	37	31				
2	86	79	73	68	78	72	67	62	58	55	52	46	43	41	34	33	31	26				
3	79	69	62	57	71	63	57	52	51	47	43	41	38	35	31	28	27	22				
4	72	61	54	48	65	56	49	44	46	41	37	36	33	30	27	25	23	19				
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	25	22	20	17				
6	61	49	41	35	55	45	38	33	37	32	28	29	26	23	22	20	18	15				
7	56	44	36	31	51	40	34	29	33	28	24	27	23	20	20	18	16	13				
8	52	40	33	27	47	37	30	25	30	25	22	24	21	18	19	16	14	12				
9	48	37	29	24	44	34	27	23	28	23	19	22	19	16	17	15	13	11				
10	45	33	26	22	41	31	24	20	26	21	17	21	17	14	16	13	12	10				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16939	16939	16939
5°	16618	14956	14492
10°	16400	13306	12518
15°	16159	11916	10950
20°	15789	10689	9577
25°	15297	9546	8345
30°	14812	8435	7244
35°	14156	7418	6218
40°	13543	6494	5270
45°	12836	5582	4399
50°	12087	4727	3608
55°	11295	3978	2910
60°	10537	3260	2326
65°	9604	2600	1841
70°	8708	2037	1454
75°	7613	1565	1147
80°	6364	1164	893
85°	4640	846	679

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12836 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	99.0	1.4
10°-20°	281.0	3.9
20°-30°	414.8	5.8
30°-40°	476.9	6.7
40°-50°	462.6	6.5
50°-60°	387.3	5.4
60°-70°	279.0	3.9
70°-80°	170.5	2.4
80°-90°	84.7	1.2
90°-100°	133.9	1.9
100°-110°	732.7	10.3
110°-120°	982.7	13.8
120°-130°	798.2	11.2
130°-140°	640.8	9.0
140°-150°	505.0	7.1
150°-160°	369.3	5.2
160°-170°	229.4	3.2
170°-180°	78.2	1.1
0°-30°	794.8	11.2
0°-40°	1271.7	17.8
0°-60°	2121.6	29.8
0°-90°	2655.7	37.3
90°-120°	1849.4	26.0
90°-150°	3793.4	53.2
90°-180°	4470.0	62.7
0°-180°	7125.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1049	1049	1049	1049	1049	
5°	1033	1052	1042	1043	1051	98
15°	988	1003	994	999	1006	278
25°	892	906	904	900	905	411
35°	760	772	765	757	757	476
45°	609	615	605	587	578	469
55°	449	455	439	412	399	403
65°	296	298	283	262	255	295
75°	160	160	163	158	156	171
85°	49	59	82	87	87	52
90°	4	34	64	78	79	7
95°	56	90	72	88	100	59
105°	175	252	944	1210	808	185
115°	295	350	810	1681	1964	293
125°	415	468	762	1330	1573	368
135°	507	563	766	1096	1257	391
145°	600	651	771	954	1056	377
155°	704	729	786	865	906	323
165°	781	792	807	828	843	219
175°	823	828	823	817	812	78
180°	823	823	823	823	823	



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CATALOG NUMBER: CRQ4DIP-SR4F0-75D125U935-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1049.1	1049.1	1049.1	1049.1	1049.1
2.5°	1039.6	1054.7	1045.5	1047.9	1049.1
5°	1032.8	1051.6	1041.7	1043.3	1050.6
7.5°	1023.3	1040.7	1031.9	1033.9	1042.3
10°	1015.0	1032.4	1022.4	1025.5	1032.8
12.5°	1004.3	1020.6	1012.9	1016.0	1023.3
15°	988.3	1002.8	994.3	998.9	1006.1
17.5°	964.6	980.3	971.1	973.7	980.9
20°	946.8	961.3	955.7	955.9	963.1
22.5°	925.5	941.1	936.8	933.4	941.8
25°	892.0	906.5	903.9	899.6	905.3
27.5°	858.8	869.5	864.5	860.1	864.5
30°	832.7	845.8	837.2	832.8	837.2
32.5°	804.3	817.3	808.7	803.2	805.2
35°	760.1	771.7	764.6	757.2	757.2
37.5°	718.4	725.9	721.0	708.5	705.3
40°	687.5	696.2	689.0	674.1	669.7
42.5°	655.5	664.2	655.8	639.7	633.0
45°	609.0	614.8	604.6	586.6	577.9
47.5°	561.0	567.1	553.0	533.2	522.8
50°	529.0	536.2	518.6	497.6	486.0
52.5°	498.2	503.1	486.6	462.1	451.6
55°	449.0	454.8	438.6	411.6	398.6
57.5°	403.0	408.5	389.4	363.7	353.5
60°	373.4	377.7	358.6	331.7	321.5
62.5°	340.2	344.6	326.6	303.2	293.1
65°	296.3	297.8	283.0	262.1	254.9
67.5°	255.2	255.2	242.7	227.2	221.4
70°	226.7	226.7	217.8	205.8	200.0
72.5°	200.6	199.5	194.1	185.7	181.1
75°	160.0	160.0	163.0	158.5	155.6
77.5°	124.5	122.1	134.8	134.2	132.8
80°	100.8	100.8	117.1	120.0	118.5
82.5°	79.4	81.7	102.8	106.9	105.5
85°	48.9	59.0	81.5	87.4	87.4
87.5°	22.2	40.9	66.1	74.8	75.1
90°	4.4	34.1	63.7	77.8	79.2
92.5°	21.6	39.7	66.6	85.0	91.6
95°	56.2	90.2	72.5	88.3	99.9
97.5°	91.3	156.1	326.8	120.9	110.5
100°	116.1	192.0	628.4	205.0	147.2
102.5°	139.7	219.7	838.9	494.8	282.0
105°	175.2	252.5	944.0	1209.8	808.0
107.5°	210.7	267.1	898.3	1749.6	1640.8
110°	234.4	287.8	872.3	1835.6	1973.7



TEST NUMBER: P644408

CATALOG NUMBER: CRQ4DIP-SR4F0-75D125U935-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	259.2	312.7	847.4	1781.6	2012.7
115°	295.0	349.9	810.2	1680.7	1964.1
117.5°	331.5	387.1	800.6	1570.5	1861.9
120°	359.3	412.0	782.8	1486.8	1790.3
122.5°	380.0	435.6	762.1	1415.9	1695.1
125°	414.7	467.5	762.1	1330.2	1573.0
127.5°	442.9	498.4	763.2	1230.8	1470.6
130°	458.3	519.0	767.3	1164.2	1391.9
132.5°	476.6	537.4	766.1	1134.3	1321.5
135°	507.1	562.7	765.8	1095.5	1257.4
137.5°	533.0	592.7	765.8	1052.5	1191.1
140°	553.7	609.3	765.8	1027.4	1153.9
142.5°	574.4	626.0	770.0	998.2	1116.6
145°	600.2	650.8	771.0	954.4	1055.6
147.5°	631.3	675.8	777.2	922.8	1000.7
150°	652.0	692.5	781.3	901.8	967.6
152.5°	672.7	709.1	781.3	885.0	938.6
155°	703.7	729.0	786.5	865.0	905.5
157.5°	728.6	752.8	792.7	852.4	881.7
160°	745.1	765.4	796.9	844.0	869.3
162.5°	757.5	777.8	801.0	839.7	856.9
165°	781.3	791.5	807.2	828.3	843.4
167.5°	794.8	803.9	812.4	822.9	832.0
170°	807.2	812.3	812.4	822.8	827.9
172.5°	811.3	820.5	816.5	818.7	823.8
175°	822.7	827.8	822.7	817.4	812.4
177.5°	822.7	826.8	822.7	822.6	818.6
180°	822.7	822.7	822.7	822.7	822.7

(END OF REPORT)