

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: P644248

Luminaire Tested: CRQ4DIP-SR4F0-125D100U840-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644248
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-SR4F0-125D100U840-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

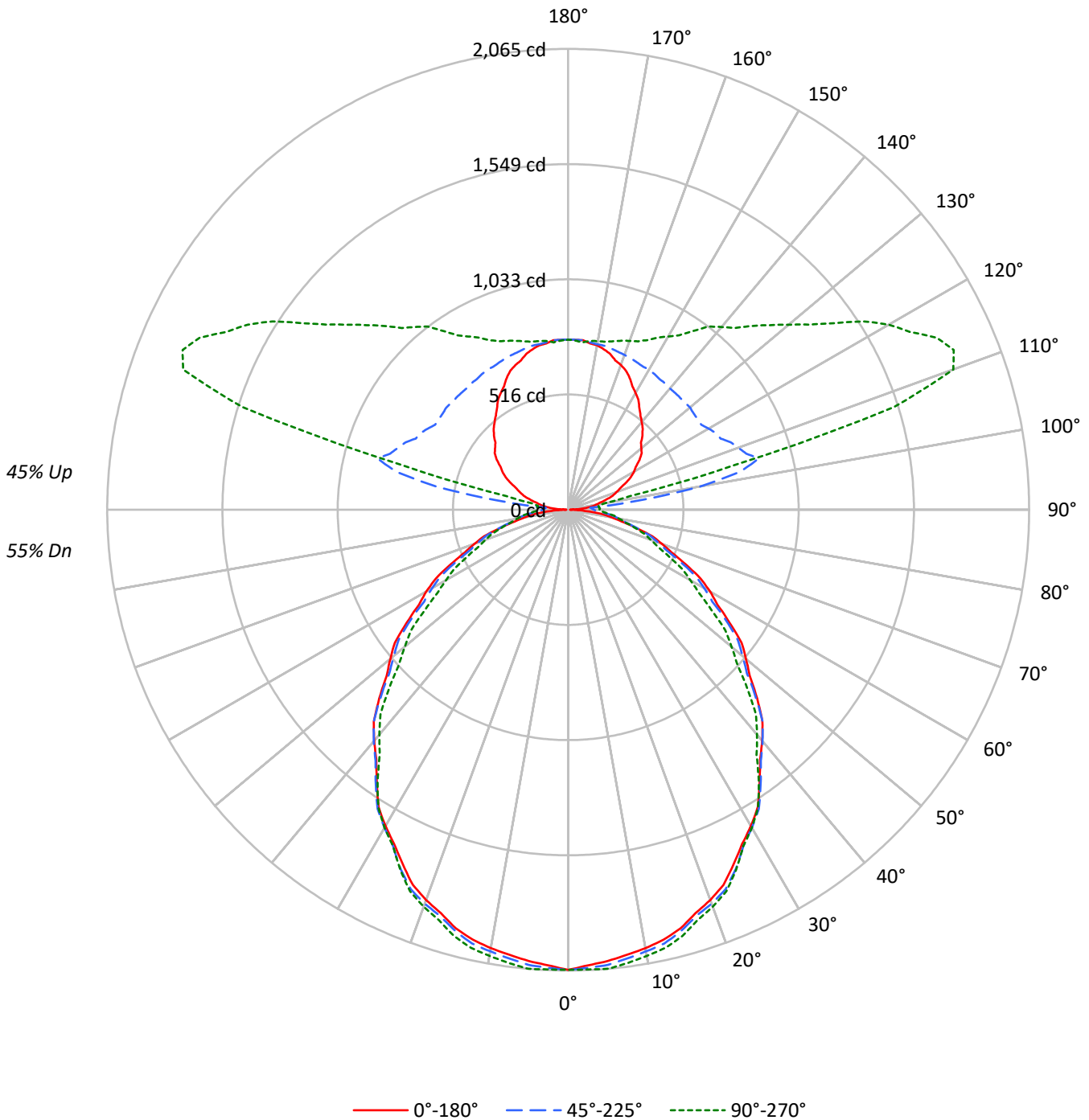
Lumens per Lamp: N/A
Luminaire Lumens: 9411.2 lumens
Efficiency: N/A
Efficacy: 136.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 69
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	0
RCR																		
0	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55
1	99	94	90	87	92	88	84	81	75	73	71	64	62	61	54	52	51	46
2	90	82	76	71	83	77	71	67	66	62	58	56	53	51	47	45	43	39
3	82	73	65	59	76	68	61	56	58	53	49	50	46	43	42	39	37	33
4	75	64	56	50	70	60	53	48	52	47	42	45	40	37	38	35	32	28
5	69	57	49	43	64	54	46	41	47	41	36	40	36	32	34	31	28	25
6	64	52	43	38	59	48	41	36	42	36	32	36	32	28	31	27	25	22
7	59	47	39	33	55	44	37	31	38	32	28	33	28	25	28	25	22	19
8	55	42	35	29	51	40	33	28	35	29	25	30	26	22	26	22	20	17
9	51	39	31	26	47	36	30	25	32	26	23	28	23	20	24	20	18	16
10	48	36	28	24	44	34	27	22	30	24	20	26	21	18	22	19	16	14

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	33293	33293	33293
5°	32663	29395	28483
10°	32234	26154	24605
15°	31762	23421	21521
20°	31034	21011	18824
25°	30067	18762	16404
30°	29115	16578	14238
35°	27826	14581	12221
40°	26622	12765	10360
45°	25229	10971	8646
50°	23756	9292	7092
55°	22200	7819	5719
60°	20710	6408	4572
65°	18880	5110	3618
70°	17117	4004	2858
75°	14965	3076	2254
80°	12502	2287	1755
85°	9118	1664	1334

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 25229 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.6	2.1
10°-20°	552.3	5.9
20°-30°	815.3	8.7
30°-40°	937.4	10.0
40°-50°	909.3	9.7
50°-60°	761.2	8.1
60°-70°	548.4	5.8
70°-80°	335.1	3.6
80°-90°	164.5	1.7
90°-100°	158.1	1.7
100°-110°	691.0	7.3
110°-120°	914.6	9.7
120°-130°	741.1	7.9
130°-140°	593.8	6.3
140°-150°	467.8	5.0
150°-160°	342.0	3.6
160°-170°	212.4	2.3
170°-180°	72.4	0.8
0°-30°	1562.2	16.6
0°-40°	2499.6	26.6
0°-60°	4170.0	44.3
0°-90°	5218.0	55.4
90°-120°	1763.7	18.7
90°-150°	3566.3	37.9
90°-180°	4193.0	44.6
0°-180°	9411.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2062	2062	2062	2062	2062	
5°	2030	2067	2047	2051	2065	193
15°	1943	1971	1954	1963	1978	546
25°	1753	1782	1777	1768	1780	808
35°	1494	1517	1503	1488	1488	936
45°	1197	1208	1188	1153	1136	923
55°	882	894	862	809	783	791
65°	582	585	556	515	501	579
75°	314	314	320	312	306	336
85°	96	116	160	172	172	101
90°	9	62	114	137	140	12
95°	68	97	100	125	137	68
105°	178	240	882	1134	765	188
115°	284	329	754	1560	1822	281
125°	390	436	707	1232	1457	347
135°	470	521	709	1015	1165	362
145°	556	603	714	884	978	349
155°	652	675	728	801	839	299
165°	724	733	748	767	781	203
175°	762	767	762	757	752	72
180°	762	762	762	762	762	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2062.0	2062.0	2062.0	2062.0	2062.0
2.5°	2043.4	2073.0	2055.0	2059.7	2062.0
5°	2030.0	2067.0	2047.4	2050.7	2064.9
7.5°	2011.3	2045.5	2028.2	2032.1	2048.6
10°	1995.0	2029.2	2009.6	2015.7	2030.0
12.5°	1974.0	2005.9	1990.9	1997.1	2011.3
15°	1942.6	1971.1	1954.2	1963.3	1977.5
17.5°	1896.0	1926.8	1908.8	1913.8	1928.0
20°	1861.0	1889.5	1878.5	1878.8	1893.1
22.5°	1819.1	1849.9	1841.2	1834.6	1851.1
25°	1753.3	1781.8	1776.6	1768.1	1779.5
27.5°	1688.0	1709.1	1699.1	1690.6	1699.1
30°	1636.8	1662.4	1645.5	1637.0	1645.5
32.5°	1580.9	1606.5	1589.6	1578.6	1582.6
35°	1494.1	1516.9	1502.8	1488.3	1488.3
37.5°	1411.9	1426.8	1417.2	1392.6	1386.3
40°	1351.4	1368.5	1354.3	1325.0	1316.4
42.5°	1288.5	1305.5	1289.0	1257.3	1244.2
45°	1197.0	1208.4	1188.3	1152.9	1135.9
47.5°	1102.6	1114.6	1086.9	1048.0	1027.5
50°	1039.7	1054.0	1019.4	978.1	955.3
52.5°	979.2	988.8	956.4	908.2	887.7
55°	882.5	893.9	862.1	809.1	783.4
57.5°	792.2	803.0	765.4	714.8	694.9
60°	733.9	742.5	704.8	651.9	632.0
62.5°	668.7	677.2	641.9	596.0	576.1
65°	582.5	585.3	556.3	515.2	500.9
67.5°	501.5	501.5	477.1	446.5	435.1
70°	445.6	445.6	428.1	404.6	393.2
72.5°	394.3	392.1	381.5	365.0	355.9
75°	314.5	314.5	320.4	311.5	305.8
77.5°	244.6	240.1	265.0	263.8	261.0
80°	198.0	198.0	230.1	235.8	233.0
82.5°	156.1	160.7	202.1	210.2	207.4
85°	96.1	116.0	160.2	171.8	171.8
87.5°	43.7	79.4	127.7	143.9	144.4
90°	8.7	61.8	114.4	136.8	139.6
92.5°	29.6	59.9	107.3	133.6	142.5
95°	67.5	97.4	99.5	125.0	137.2
97.5°	103.0	153.8	326.1	144.4	136.5
100°	126.0	185.7	600.5	216.1	165.6
102.5°	146.7	210.2	790.6	479.6	284.3
105°	177.7	240.3	882.1	1134.5	765.3
107.5°	208.7	252.2	836.3	1629.2	1529.9
110°	229.4	271.4	811.0	1706.4	1835.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	252.4	294.4	788.0	1653.9	1869.5
115°	284.0	328.8	753.5	1559.9	1822.3
117.5°	316.0	363.3	744.3	1455.9	1725.8
120°	340.5	386.3	726.6	1377.1	1658.3
122.5°	359.6	407.0	707.4	1311.4	1570.1
125°	390.3	436.1	707.4	1232.1	1457.0
127.5°	414.6	464.8	708.4	1140.0	1362.1
130°	427.6	483.8	712.2	1078.4	1289.3
132.5°	442.1	498.3	709.9	1050.7	1224.1
135°	469.7	521.2	709.3	1014.7	1164.6
137.5°	493.7	549.0	709.3	974.9	1103.3
140°	512.8	564.4	709.3	951.6	1068.8
142.5°	532.0	579.8	713.2	924.6	1034.3
145°	556.0	602.8	714.1	884.0	977.7
147.5°	584.7	626.0	719.9	854.8	926.9
150°	603.9	641.4	723.7	835.3	896.2
152.5°	623.1	656.8	723.7	819.7	869.4
155°	651.8	675.2	728.5	801.2	838.7
157.5°	674.8	697.3	734.3	789.5	816.7
160°	690.2	708.9	738.1	781.8	805.2
162.5°	701.7	720.4	741.9	777.7	793.7
165°	723.7	733.1	747.7	767.2	781.2
167.5°	736.2	744.6	752.5	762.2	770.7
170°	747.7	752.4	752.5	762.2	766.8
172.5°	751.5	759.9	756.3	758.3	763.0
175°	762.1	766.7	762.1	757.2	752.5
177.5°	762.1	765.8	762.1	762.0	758.2
180°	762.1	762.1	762.1	762.1	762.1

(END OF REPORT)