

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P644272

Luminaire Tested: CRQ4DIP-SR4F0-125D150U840-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644272
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-SR4F0-125D150U840-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

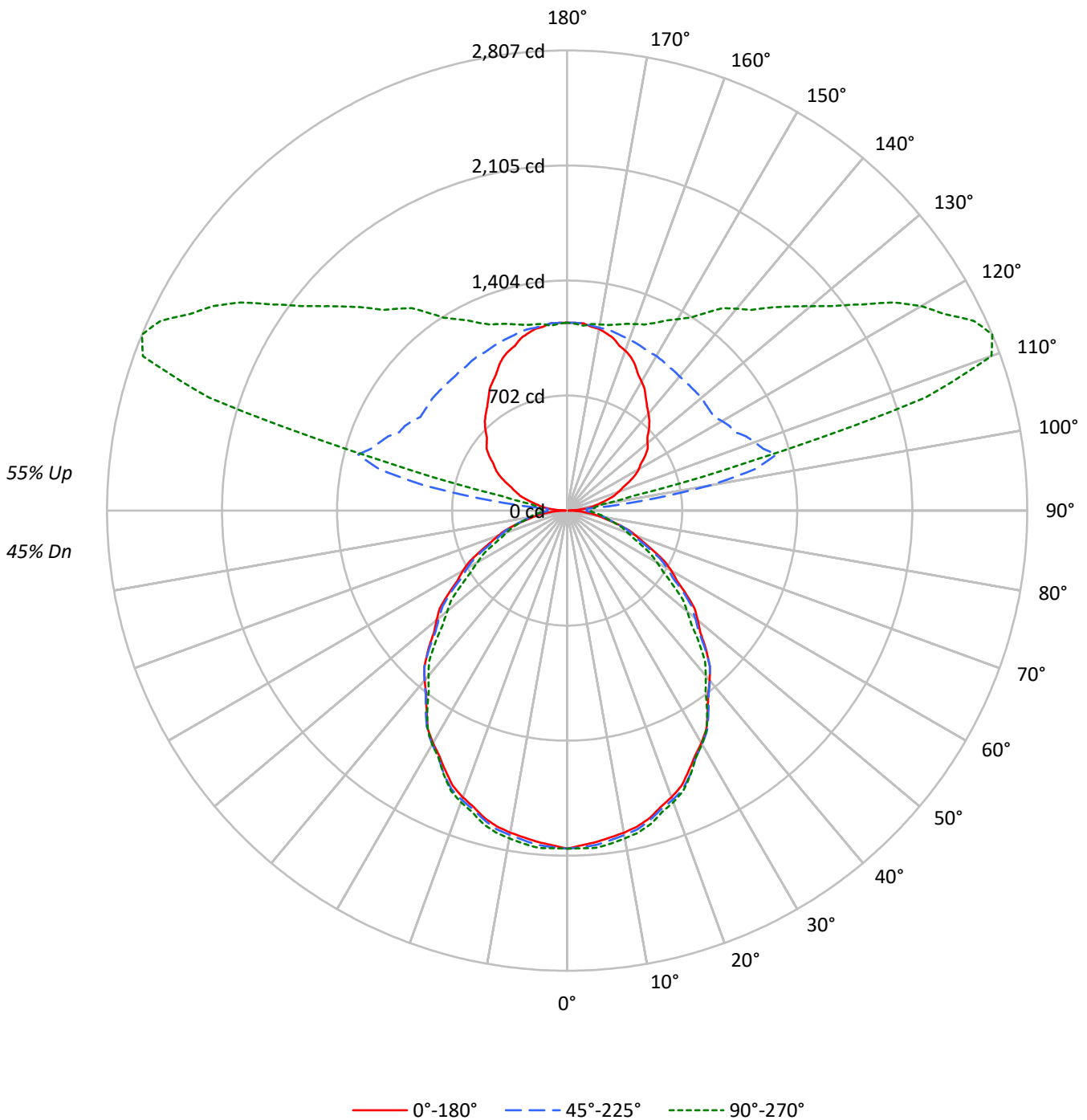
Lumens per Lamp: N/A
Luminaire Lumens: 11476.0 lumens
Efficiency: N/A
Efficacy: 129.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 88.6
Input Voltage (V): 120
Input Current (A_{in}): 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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45				
1	97	92	88	85	88	85	81	78	71	68	66	58	56	54	46	45	44	38				
2	88	81	74	69	80	74	69	64	62	58	55	51	48	45	40	38	37	32				
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	36	33	31	27				
4	73	63	55	49	67	58	51	46	49	43	39	40	36	33	32	29	27	23				
5	67	56	48	42	62	52	45	39	44	38	34	36	32	29	29	26	24	20				
6	62	50	42	36	57	46	39	34	39	34	30	33	28	25	26	23	21	18				
7	57	45	37	32	53	42	35	30	36	30	26	30	25	22	24	21	19	16				
8	53	41	33	28	49	38	31	27	32	27	23	27	23	20	22	19	17	14				
9	50	38	30	25	46	35	28	24	30	24	21	25	21	18	20	17	15	13				
10	46	34	27	23	43	32	26	21	27	22	19	23	19	16	19	16	14	12				

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	1.7
10°-20°	552.3	4.8
20°-30°	815.3	7.1
30°-40°	937.4	8.2
40°-50°	909.3	7.9
50°-60°	761.2	6.6
60°-70°	548.4	4.8
70°-80°	335.1	2.9
80°-90°	165.4	1.4
90°-100°	205.4	1.8
100°-110°	1027.6	9.0
110°-120°	1371.6	12.0
120°-130°	1113.1	9.7
130°-140°	892.9	7.8
140°-150°	703.6	6.1
150°-160°	514.5	4.5
160°-170°	319.6	2.8
170°-180°	109.0	0.9
0°-30°	1562.2	13.6
0°-40°	2499.6	21.8
0°-60°	4170.0	36.3
0°-90°	5218.8	45.5
90°-120°	2604.6	22.7
90°-150°	5314.2	46.3
90°-180°	6257.0	54.5
0°-180°	11476.0	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	64	119	144	147	13
95°	87	133	119	147	164	89
105°	253	355	1320	1693	1135	267
115°	417	490	1130	2343	2738	413
125°	581	653	1063	1853	2192	516
135°	706	784	1067	1526	1752	544
145°	836	907	1074	1330	1471	525
155°	980	1016	1096	1205	1262	450
165°	1089	1103	1125	1154	1175	306
175°	1146	1153	1146	1139	1132	108
180°	1146	1146	1146	1146	1146	



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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	79.8	128.7	145.3	145.9
90°	8.7	64.2	119.3	144.0	146.9
92.5°	35.4	68.0	117.9	148.6	159.4
95°	86.8	133.3	118.8	146.8	163.8
97.5°	137.3	222.6	468.2	186.3	172.8
100°	171.9	271.8	885.7	300.0	221.2
102.5°	204.2	309.7	1176.2	701.1	405.6
105°	252.6	355.4	1319.5	1693.3	1135.1
107.5°	301.0	374.7	1253.9	2442.4	2291.6
110°	333.3	403.7	1217.0	2560.9	2754.1



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	367.9	438.3	1182.4	2484.2	2807.1
115°	416.9	490.1	1130.5	2343.4	2738.2
117.5°	466.8	542.0	1116.9	2188.8	2594.8
120°	504.8	576.6	1091.5	2071.5	2494.4
122.5°	533.6	608.8	1062.7	1972.7	2361.8
125°	581.2	653.0	1062.7	1853.3	2191.6
127.5°	619.5	696.2	1064.1	1714.8	2048.9
130°	640.2	724.8	1069.9	1622.1	1939.3
132.5°	664.4	749.0	1067.6	1580.4	1841.3
135°	706.5	784.1	1067.0	1526.3	1751.9
137.5°	742.6	825.7	1067.0	1466.4	1659.6
140°	771.4	848.9	1067.0	1431.5	1607.7
142.5°	800.2	872.1	1072.7	1390.8	1555.8
145°	836.3	906.8	1074.2	1329.7	1470.7
147.5°	879.5	941.6	1082.8	1285.7	1394.3
150°	908.4	964.8	1088.6	1256.5	1348.1
152.5°	937.2	988.0	1088.6	1233.1	1307.8
155°	980.5	1015.7	1095.8	1205.2	1261.6
157.5°	1015.1	1048.9	1104.5	1187.6	1228.5
160°	1038.1	1066.3	1110.2	1175.9	1211.2
162.5°	1055.4	1083.6	1116.0	1169.9	1193.9
165°	1088.6	1102.7	1124.7	1154.0	1175.1
167.5°	1107.4	1120.0	1131.9	1146.6	1159.3
170°	1124.7	1131.7	1131.9	1146.4	1153.5
172.5°	1130.4	1143.1	1137.6	1140.7	1147.7
175°	1146.3	1153.3	1146.3	1138.9	1131.9
177.5°	1146.3	1151.9	1146.3	1146.2	1140.5
180°	1146.3	1146.3	1146.3	1146.3	1146.3

(END OF REPORT)