

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: P644308

Luminaire Tested: CRQ4DIP-SR4F0-125D75U840-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644308
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-SR4F0-125D75U840-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 750 LUMENS PER FOOT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

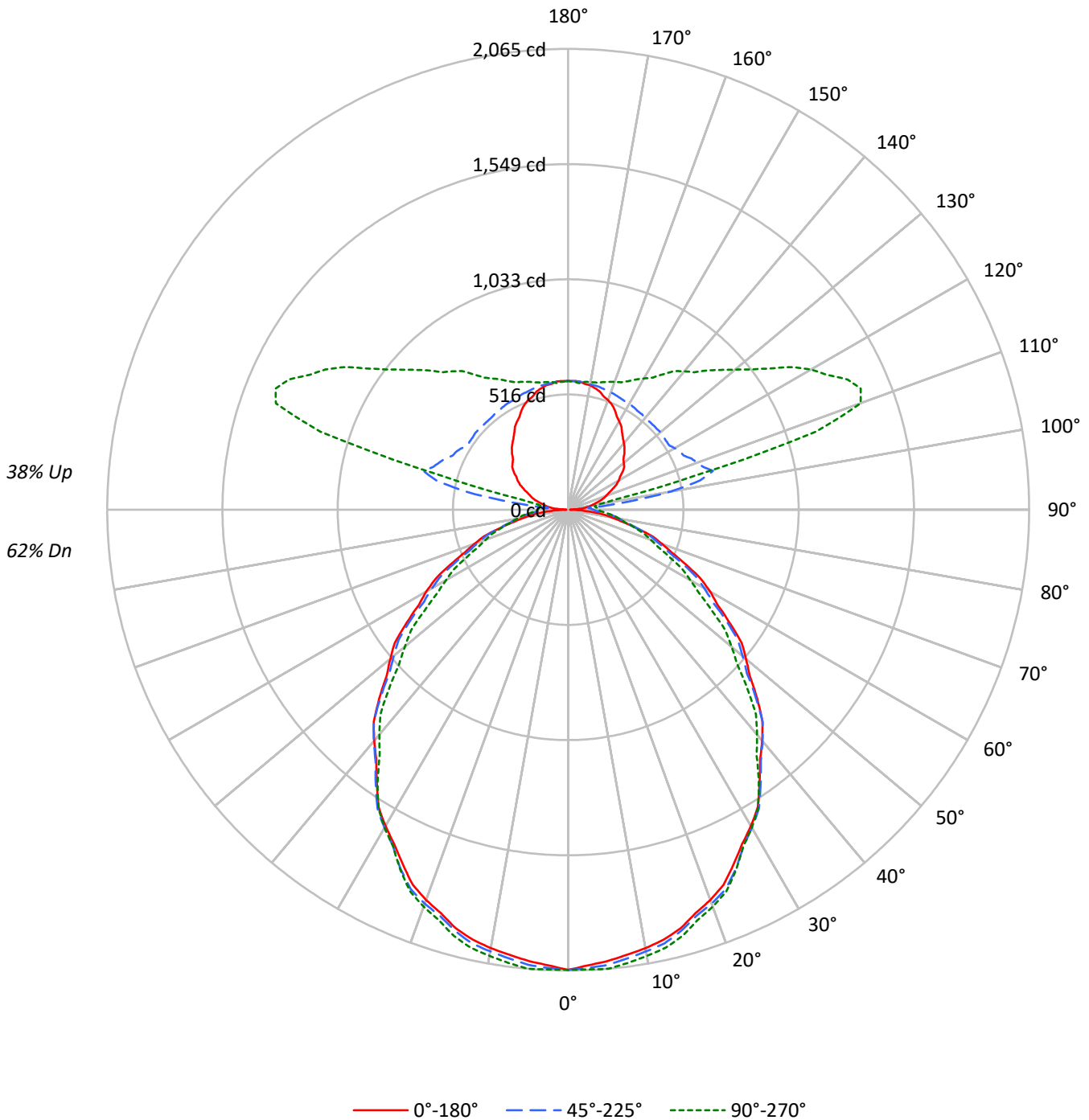
Lumens per Lamp: N/A
Luminaire Lumens: 8416.6 lumens
Efficiency: N/A
Efficacy: 138.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

Input Watts (W): 60.8
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										
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	50	30	10	0														
RCR																																						
0	110	110	110	110	103	103	103	103	90	90	90	78	78	78	67	67	67	62																				
1	100	96	92	88	94	90	86	83	79	76	74	68	66	65	59	58	56	52																				
2	91	84	77	72	85	79	73	68	69	65	61	60	57	54	52	50	47	43																				
3	83	74	66	60	78	69	63	57	61	56	51	53	49	46	46	43	41	37																				
4	76	65	57	51	71	62	54	49	54	49	44	48	43	39	41	38	35	32																				
5	70	58	50	44	66	55	48	42	49	43	38	43	38	34	37	34	31	28																				
6	65	53	44	38	61	50	42	37	44	38	33	39	34	30	34	30	27	24																				
7	60	48	39	34	56	45	38	32	40	34	30	35	31	27	31	27	24	22																				
8	56	43	35	30	52	41	34	29	37	31	26	32	28	24	29	25	22	19																				
9	52	40	32	27	49	38	31	26	34	28	24	30	25	22	26	23	20	18																				
10	49	36	29	24	46	35	28	23	31	25	21	28	23	20	25	21	18	16																				

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	2.3
10°-20°	552.3	6.6
20°-30°	815.3	9.7
30°-40°	937.4	11.1
40°-50°	909.3	10.8
50°-60°	761.2	9.0
60°-70°	548.4	6.5
70°-80°	335.1	4.0
80°-90°	164.1	1.9
90°-100°	135.4	1.6
100°-110°	528.9	6.3
110°-120°	694.4	8.3
120°-130°	561.9	6.7
130°-140°	449.7	5.3
140°-150°	354.2	4.2
150°-160°	259.0	3.1
160°-170°	160.9	1.9
170°-180°	54.9	0.7
0°-30°	1562.2	18.6
0°-40°	2499.6	29.7
0°-60°	4170.0	49.5
0°-90°	5217.5	62.0
90°-120°	1358.6	16.1
90°-150°	2724.4	32.4
90°-180°	3199.0	38.0
0°-180°	8416.6	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	61	112	133	136	12
95°	58	80	90	114	124	57
105°	142	185	671	865	587	150
115°	220	251	572	1182	1381	218
125°	298	332	536	933	1103	265
135°	356	395	537	768	882	274
145°	421	456	541	669	740	264
155°	494	511	552	607	635	227
165°	548	555	566	581	592	154
175°	577	580	577	573	570	55
180°	577	577	577	577	577	

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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	79.1	127.3	143.2	143.7
90°	8.7	60.7	112.1	133.3	136.1
92.5°	26.8	55.9	102.2	126.4	134.3
95°	58.2	80.1	90.2	114.4	124.4
97.5°	86.5	120.6	257.6	124.2	119.1
100°	103.9	144.3	463.1	175.7	138.8
102.5°	119.0	162.2	604.8	372.9	225.9
105°	141.6	184.9	671.4	865.4	587.2
107.5°	164.3	193.1	635.2	1237.5	1163.0
110°	179.3	207.7	615.5	1294.9	1393.5

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	196.8	225.1	598.0	1253.9	1417.9
115°	220.0	251.2	571.9	1182.4	1381.1
117.5°	243.3	277.2	564.8	1102.9	1307.3
120°	261.3	294.7	550.9	1042.7	1255.6
122.5°	275.8	309.7	536.3	992.9	1188.8
125°	298.3	331.7	536.3	932.8	1103.2
127.5°	315.9	353.3	537.1	863.1	1031.3
130°	325.2	367.7	540.0	816.5	976.2
132.5°	335.0	377.6	537.6	795.5	926.8
135°	355.6	394.7	537.1	768.3	881.8
137.5°	373.8	415.6	537.1	738.1	835.4
140°	388.3	427.3	537.1	720.5	809.2
142.5°	402.8	439.0	540.0	700.1	783.1
145°	420.9	456.4	540.7	669.3	740.3
147.5°	442.7	473.9	545.0	647.2	701.8
150°	457.2	485.6	548.0	632.5	678.6
152.5°	471.7	497.3	548.0	620.7	658.3
155°	493.5	511.3	551.6	606.7	635.0
157.5°	510.9	528.0	555.9	597.8	618.3
160°	522.5	536.7	558.8	591.9	609.6
162.5°	531.3	545.5	561.7	588.9	600.9
165°	548.0	555.0	566.1	580.9	591.5
167.5°	557.4	563.8	569.7	577.1	583.5
170°	566.1	569.6	569.7	577.1	580.6
172.5°	569.0	575.4	572.6	574.2	577.7
175°	577.0	580.5	577.0	573.3	569.7
177.5°	577.0	579.8	577.0	576.9	574.1
180°	577.0	577.0	577.0	577.0	577.0

(END OF REPORT)