

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: P644305

Luminaire Tested: CRQ4DIP-SR4F0-125D75U835-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644305  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-28, G2-2206-689-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/20/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: CRQ4DIP-SR4F0-125D75U835-FLLFLL-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT  
UPLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

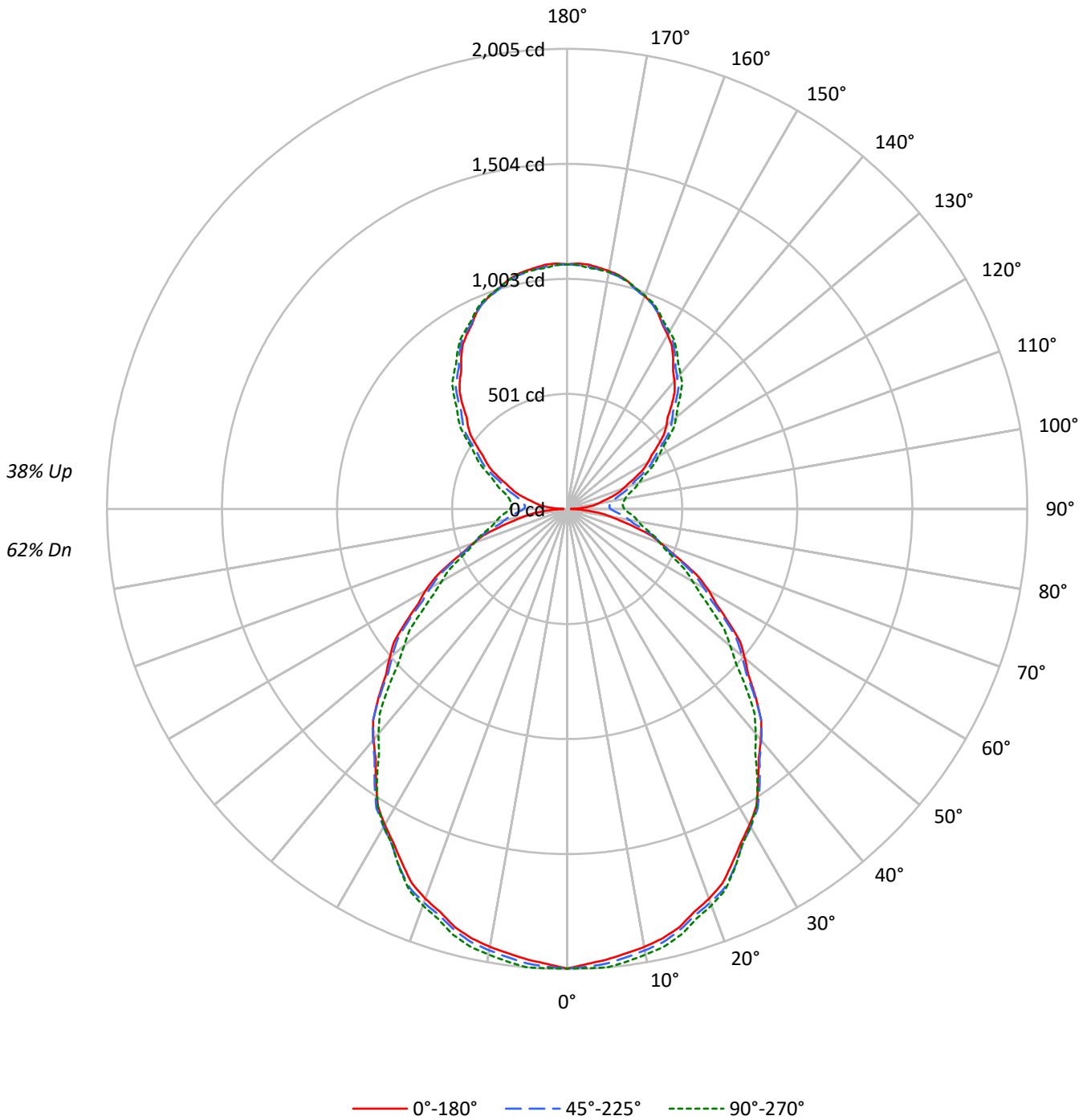
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8310.4 lumens  
Efficiency: N/A  
Efficacy: 136.7 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<sub>in</sub>): 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	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	68	68	68	62																												
1	100	95	91	87	93	89	86	82	78	76	73	68	66	64	59	57	56	51																												
2	91	83	77	71	85	78	72	68	69	64	60	60	56	54	52	49	47	43																												
3	83	73	66	59	78	69	62	57	61	55	51	53	49	45	46	43	40	36																												
4	76	65	57	50	71	61	54	48	54	48	43	47	43	39	41	38	35	31																												
5	70	58	50	43	65	55	47	41	48	42	38	43	38	34	37	33	30	27																												
6	65	52	44	38	60	49	42	36	44	38	33	39	34	30	34	30	27	24																												
7	60	47	39	33	56	45	37	32	40	34	29	35	30	26	31	27	24	21																												
8	56	43	35	30	52	41	33	28	36	30	26	32	27	24	28	24	21	19																												
9	52	39	32	26	49	37	30	25	33	28	23	30	25	21	26	22	19	17																												
10	48	36	29	24	45	34	28	23	31	25	21	28	23	19	24	20	18	16																												

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	32329	32329	32329
5°	31717	28545	27658
10°	31302	25411	23892
15°	30843	22757	20899
20°	30137	20416	18279
25°	29195	18219	15929
30°	28272	16122	13826
35°	27019	14192	11867
40°	25850	12406	10060
45°	24500	10664	8395
50°	23069	9053	6886
55°	21556	7613	5611
60°	20111	6264	4570
65°	18332	5066	3742
70°	16621	4068	3120
75°	14532	3302	2681
80°	12142	2726	2369
85°	8852	2368	2174

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 24500 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	189.0	2.3
10°-20°	536.5	6.5
20°-30°	792.1	9.5
30°-40°	911.1	11.0
40°-50°	884.1	10.6
50°-60°	743.0	8.9
60°-70°	547.6	6.6
70°-80°	361.4	4.3
80°-90°	227.3	2.7
90°-100°	189.4	2.3
100°-110°	254.7	3.1
110°-120°	359.4	4.3
120°-130°	460.5	5.5
130°-140°	518.9	6.2
140°-150°	512.4	6.2
150°-160°	433.4	5.2
160°-170°	288.6	3.5
170°-180°	100.9	1.2
0°-30°	1517.6	18.3
0°-40°	2428.7	29.2
0°-60°	4055.7	48.8
0°-90°	5192.0	62.5
90°-120°	803.6	9.7
90°-150°	2295.4	27.6
90°-180°	3118.0	37.5
0°-180°	8310.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2002	2002	2002	2002	2002	
5°	1971	2007	1988	1991	2005	187
15°	1886	1916	1899	1906	1920	531
25°	1702	1732	1725	1717	1728	784
35°	1451	1476	1463	1445	1445	908
45°	1162	1177	1155	1120	1103	896
55°	857	872	839	789	769	768
65°	566	575	552	526	518	563
75°	305	314	344	360	364	327
85°	93	139	228	270	280	99
90°	16	93	188	236	250	16
95°	79	100	185	233	243	77
105°	195	194	239	278	287	207
115°	331	338	363	385	390	328
125°	483	496	518	534	539	433
135°	645	659	672	689	697	498
145°	805	815	819	825	834	503
155°	939	945	940	942	947	431
165°	1025	1030	1022	1019	1025	289
175°	1068	1073	1059	1055	1055	101
180°	1066	1066	1066	1066	1066	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2002.3	2002.3	2002.3	2002.3	2002.3
2.5°	1984.2	2013.0	1996.4	2000.1	2002.3
5°	1971.2	2007.2	1988.2	1991.3	2005.1
7.5°	1953.1	1987.2	1970.6	1973.3	1989.3
10°	1937.3	1970.4	1952.5	1957.4	1971.2
12.5°	1916.9	1949.6	1933.5	1939.3	1953.1
15°	1886.4	1916.2	1898.8	1906.5	1920.3
17.5°	1841.1	1872.1	1854.7	1858.4	1872.2
20°	1807.2	1835.9	1825.3	1824.5	1838.3
22.5°	1766.4	1797.4	1789.1	1781.5	1797.6
25°	1702.5	1732.4	1725.2	1716.9	1728.0
27.5°	1639.2	1663.6	1651.3	1641.6	1649.9
30°	1589.4	1616.5	1600.2	1589.6	1597.9
32.5°	1535.1	1563.1	1545.9	1532.9	1536.8
35°	1450.8	1476.3	1462.7	1445.2	1445.2
37.5°	1371.1	1389.9	1377.3	1352.3	1346.2
40°	1312.2	1333.3	1316.2	1286.6	1278.3
42.5°	1251.2	1272.2	1253.8	1220.9	1208.2
45°	1162.4	1176.7	1155.0	1119.6	1103.0
47.5°	1070.7	1086.5	1057.0	1017.7	997.8
50°	1009.6	1026.8	993.2	949.7	927.6
52.5°	950.8	964.4	931.2	882.8	863.8
55°	856.9	872.4	839.4	789.1	768.7
57.5°	769.2	784.2	746.9	704.4	687.5
60°	712.7	725.4	688.9	647.8	631.8
62.5°	649.3	662.9	629.7	598.1	583.8
65°	565.6	575.0	551.5	526.4	518.1
67.5°	487.0	493.6	478.9	467.9	463.7
70°	432.7	439.3	435.0	432.6	429.3
72.5°	382.9	388.2	396.1	401.5	400.4
75°	305.4	314.3	343.9	360.4	363.7
77.5°	237.6	245.1	300.1	326.3	332.6
80°	192.3	207.8	274.3	307.3	314.5
82.5°	151.6	175.0	254.4	292.4	299.6
85°	93.3	139.2	228.0	270.1	280.0
87.5°	44.0	110.3	204.6	250.1	261.7
90°	16.4	93.3	187.8	235.7	249.5
92.5°	40.8	92.1	184.2	231.1	243.6
95°	79.2	99.7	185.0	233.3	242.7
97.5°	114.3	118.6	194.9	238.6	248.2
100°	136.9	136.4	204.8	246.3	256.3
102.5°	160.0	156.8	217.5	257.2	266.7
105°	194.6	193.5	239.3	278.0	286.9
107.5°	233.3	233.2	270.2	305.0	312.4
110°	259.1	263.0	294.2	325.0	333.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	289.0	292.9	320.5	346.7	355.0
115°	331.0	337.6	363.3	384.9	390.4
117.5°	374.7	384.2	407.1	425.6	430.9
120°	406.8	416.8	437.4	455.0	459.5
122.5°	436.7	447.1	469.1	486.7	491.1
125°	483.2	496.5	517.7	534.2	538.7
127.5°	530.7	545.6	565.0	581.8	587.6
130°	564.7	579.1	595.8	613.5	620.2
132.5°	594.6	609.0	625.2	644.3	651.8
135°	645.0	659.4	672.2	689.4	697.1
137.5°	694.2	708.1	717.9	731.5	741.2
140°	727.7	739.8	746.9	759.5	768.4
142.5°	758.4	770.6	775.9	786.7	795.6
145°	804.6	814.6	819.3	825.2	834.0
147.5°	847.8	857.6	859.6	864.7	870.2
150°	875.9	884.8	885.0	887.3	892.9
152.5°	902.2	910.1	907.6	909.1	915.5
155°	939.3	944.8	940.4	941.7	947.2
157.5°	968.7	974.2	967.3	969.5	973.9
160°	986.8	992.3	984.5	985.8	990.2
162.5°	1004.0	1007.8	1000.8	999.4	1005.6
165°	1025.3	1029.7	1021.9	1018.6	1025.3
167.5°	1043.4	1047.8	1037.5	1034.0	1040.7
170°	1052.4	1056.9	1045.7	1041.3	1047.9
172.5°	1060.6	1065.0	1052.9	1047.6	1052.4
175°	1068.3	1072.7	1059.2	1054.7	1054.7
177.5°	1070.6	1073.2	1063.3	1058.9	1064.2
180°	1066.0	1066.0	1066.0	1066.0	1066.0

(END OF REPORT)