

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: P644311

Luminaire Tested: CRQ4DIP-SR4F0-125D75U935-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644311  
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-SR4F0-125D75U935-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, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

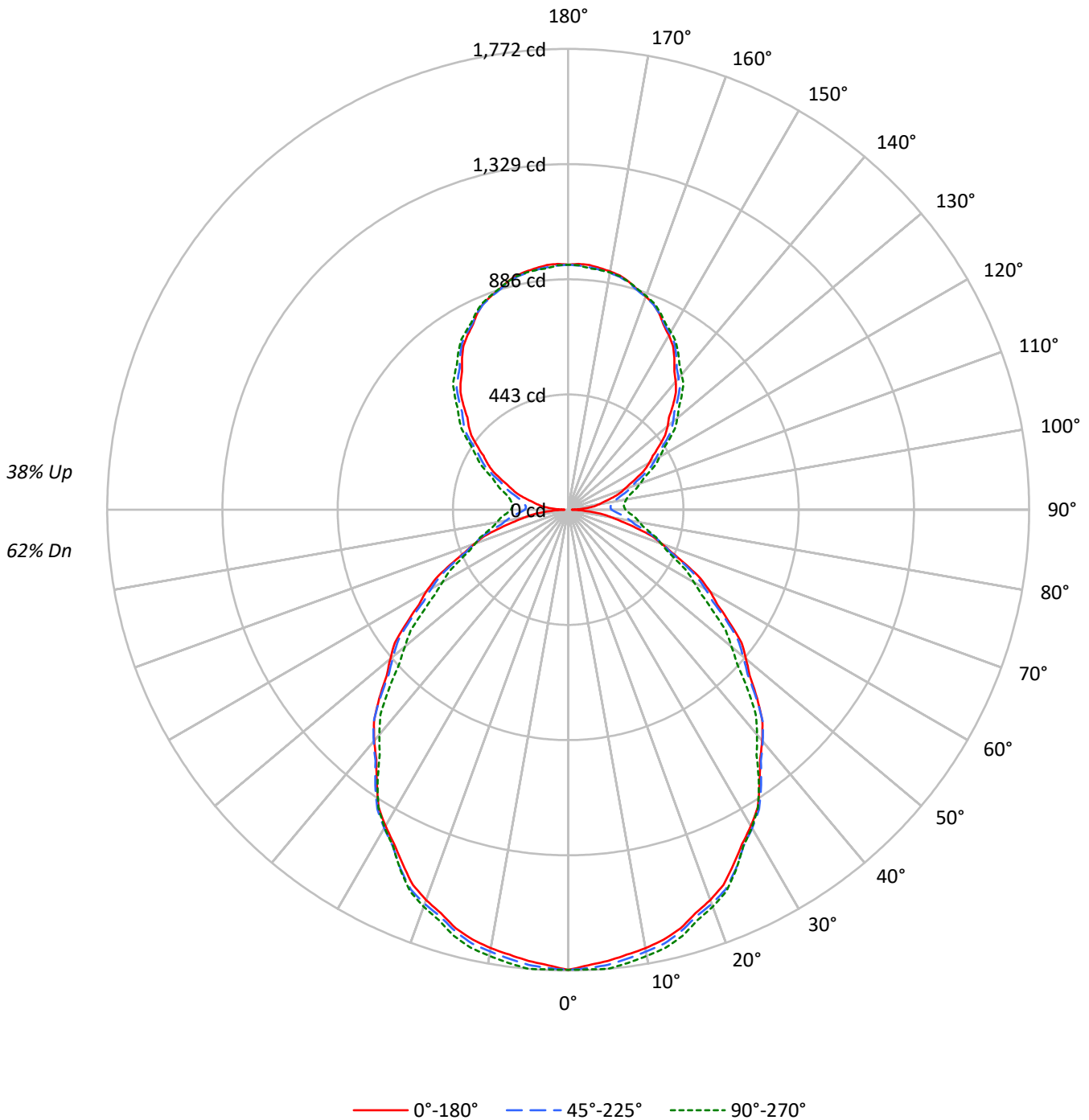
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7343.6 lumens  
Efficiency: N/A  
Efficacy: 120.8 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-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										
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	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°	28568	28568	28568
5°	28028	25224	24441
10°	27660	22455	21113
15°	27254	20109	18468
20°	26630	18040	16152
25°	25798	16099	14075
30°	24983	14246	12217
35°	23876	12540	10486
40°	22843	10963	8890
45°	21648	9423	7418
50°	20386	8001	6085
55°	19048	6727	4959
60°	17772	5535	4039
65°	16200	4476	3307
70°	14689	3595	2758
75°	12843	2918	2369
80°	10727	2409	2094
85°	7828	2092	1921

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 21648 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	167.0	2.3
10°-20°	474.0	6.5
20°-30°	699.9	9.5
30°-40°	805.1	11.0
40°-50°	781.2	10.6
50°-60°	656.5	8.9
60°-70°	483.9	6.6
70°-80°	319.4	4.3
80°-90°	200.9	2.7
90°-100°	167.4	2.3
100°-110°	225.1	3.1
110°-120°	317.6	4.3
120°-130°	406.9	5.5
130°-140°	458.5	6.2
140°-150°	452.8	6.2
150°-160°	383.0	5.2
160°-170°	255.0	3.5
170°-180°	89.2	1.2
0°-30°	1341.0	18.3
0°-40°	2146.1	29.2
0°-60°	3583.8	48.8
0°-90°	4588.0	62.5
90°-120°	710.1	9.7
90°-150°	2028.4	27.6
90°-180°	2756.0	37.5
0°-180°	7343.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1769	1769	1769	1769	1769	
5°	1742	1774	1757	1760	1772	165
15°	1667	1693	1678	1685	1697	469
25°	1504	1531	1524	1517	1527	693
35°	1282	1304	1292	1277	1277	803
45°	1027	1040	1021	989	975	792
55°	757	771	742	697	679	679
65°	500	508	487	465	458	497
75°	270	278	304	318	321	289
85°	82	123	201	239	247	87
90°	14	82	166	208	220	14
95°	70	88	164	206	214	68
105°	172	171	212	246	254	183
115°	292	298	321	340	345	290
125°	427	439	458	472	476	383
135°	570	583	594	609	616	440
145°	711	720	724	729	737	444
155°	830	835	831	832	837	381
165°	906	910	903	900	906	255
175°	944	948	936	932	932	90
180°	942	942	942	942	942	

TEST NUMBER: P644311

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1769.4	1769.4	1769.4	1769.4	1769.4
2.5°	1753.4	1778.8	1764.2	1767.4	1769.4
5°	1741.9	1773.6	1756.9	1759.6	1771.9
7.5°	1725.9	1756.0	1741.4	1743.7	1757.9
10°	1711.9	1741.2	1725.4	1729.6	1741.9
12.5°	1693.9	1722.8	1708.6	1713.7	1725.9
15°	1666.9	1693.3	1677.9	1684.7	1696.9
17.5°	1626.9	1654.3	1638.9	1642.2	1654.4
20°	1596.9	1622.3	1612.9	1612.2	1624.4
22.5°	1560.9	1588.3	1580.9	1574.2	1588.4
25°	1504.4	1530.8	1524.4	1517.2	1526.9
27.5°	1448.5	1470.1	1459.2	1450.6	1458.0
30°	1404.5	1428.4	1414.0	1404.7	1412.0
32.5°	1356.5	1381.2	1366.0	1354.6	1358.0
35°	1282.0	1304.5	1292.5	1277.0	1277.0
37.5°	1211.6	1228.2	1217.1	1194.9	1189.6
40°	1159.6	1178.1	1163.1	1136.9	1129.6
42.5°	1105.6	1124.2	1107.9	1078.8	1067.6
45°	1027.1	1039.8	1020.6	989.3	974.6
47.5°	946.2	960.1	934.1	899.3	881.7
50°	892.2	907.3	877.7	839.2	819.7
52.5°	840.2	852.2	822.9	780.1	763.3
55°	757.2	770.9	741.7	697.3	679.3
57.5°	679.8	692.9	660.0	622.4	607.5
60°	629.8	641.0	608.8	572.5	558.3
62.5°	573.8	585.8	556.4	528.5	515.9
65°	499.8	508.1	487.3	465.2	457.8
67.5°	430.3	436.2	423.2	413.5	409.8
70°	382.4	388.2	384.4	382.3	379.4
72.5°	338.4	343.1	350.0	354.8	353.8
75°	269.9	277.7	303.9	318.5	321.4
77.5°	209.9	216.6	265.2	288.3	293.9
80°	169.9	183.6	242.4	271.6	277.9
82.5°	134.0	154.7	224.8	258.4	264.7
85°	82.5	123.0	201.4	238.6	247.4
87.5°	38.9	97.4	180.8	221.0	231.3
90°	14.5	82.4	166.0	208.2	220.5
92.5°	36.1	81.4	162.8	204.2	215.3
95°	70.0	88.1	163.5	206.2	214.5
97.5°	101.0	104.8	172.2	210.9	219.3
100°	121.0	120.5	181.0	217.7	226.5
102.5°	141.4	138.6	192.2	227.3	235.7
105°	172.0	171.0	211.5	245.7	253.5
107.5°	206.2	206.1	238.8	269.5	276.1
110°	229.0	232.4	260.0	287.2	294.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	255.4	258.8	283.2	306.4	313.7
115°	292.5	298.4	321.0	340.1	345.0
117.5°	331.1	339.5	359.7	376.1	380.8
120°	359.5	368.3	386.5	402.1	406.0
122.5°	385.9	395.1	414.5	430.1	434.0
125°	427.0	438.7	457.5	472.1	476.0
127.5°	469.0	482.1	499.3	514.1	519.2
130°	499.0	511.7	526.5	542.1	548.0
132.5°	525.4	538.1	552.5	569.4	576.0
135°	570.0	582.7	594.0	609.2	616.0
137.5°	613.4	625.7	634.4	646.4	655.0
140°	643.0	653.8	660.0	671.2	679.0
142.5°	670.2	681.0	685.6	695.2	703.0
145°	711.0	719.8	724.0	729.2	737.0
147.5°	749.2	757.8	759.6	764.1	769.0
150°	774.0	781.8	782.0	784.1	789.0
152.5°	797.2	804.2	802.0	803.3	809.0
155°	830.0	834.9	831.0	832.1	837.0
157.5°	856.0	860.9	854.8	856.7	860.6
160°	872.0	876.9	870.0	871.1	875.0
162.5°	887.2	890.5	884.4	883.1	888.6
165°	906.0	909.9	903.0	900.1	906.0
167.5°	922.0	925.9	916.8	913.7	919.6
170°	930.0	933.9	924.0	920.1	926.0
172.5°	937.2	941.1	930.4	925.7	930.0
175°	944.0	947.9	936.0	932.0	932.0
177.5°	946.0	948.3	939.6	935.7	940.4
180°	942.0	942.0	942.0	942.0	942.0

(END OF REPORT)