

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: P644300

Luminaire Tested: CRQ4DIP-SR4F0-125D50U935-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644300  
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-SR4F0-125D50U935-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

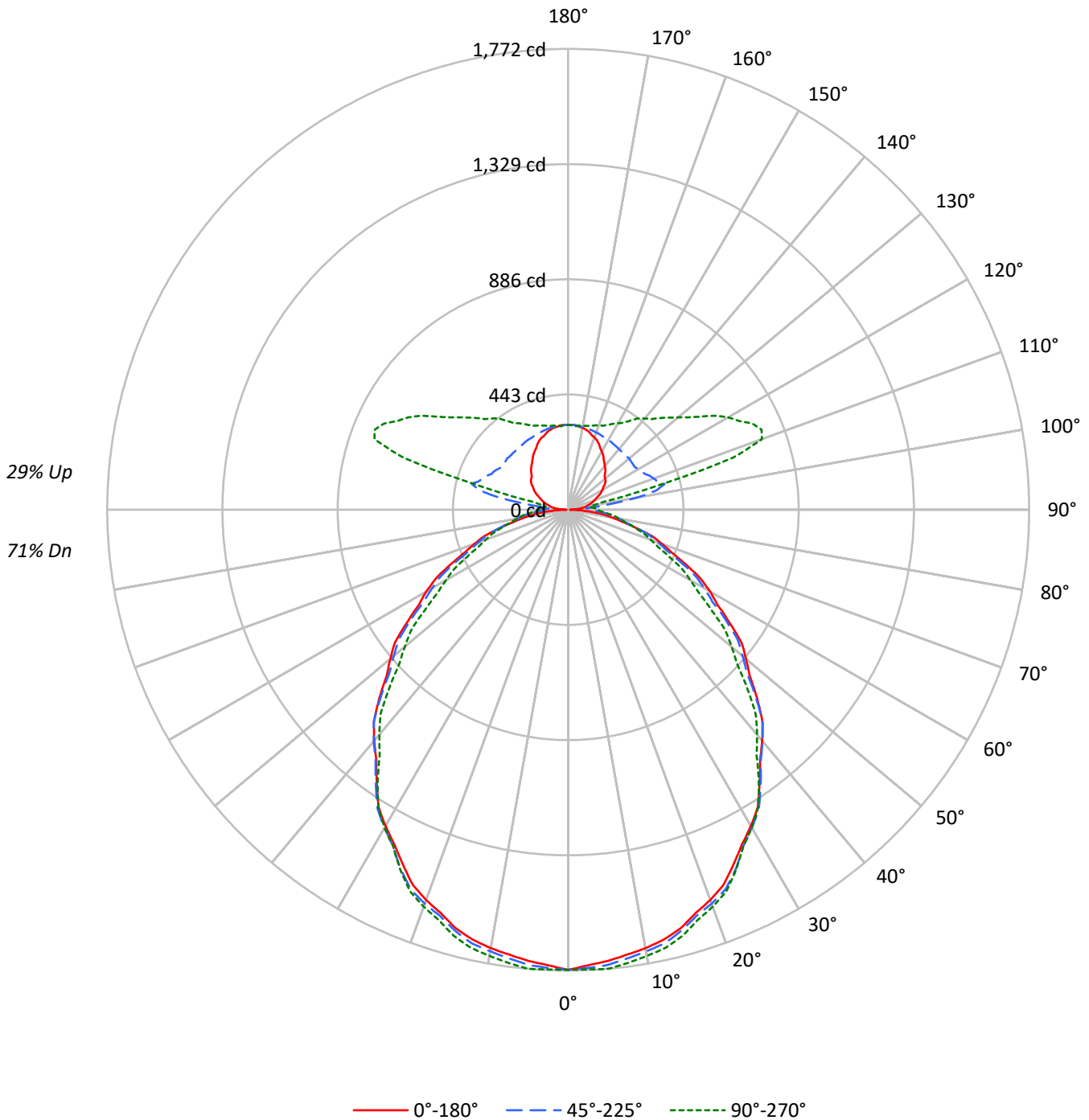
Lumens per Lamp: N/A  
Luminaire Lumens: 6314.7 lumens  
Efficiency: N/A  
Efficacy: 115.7 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: Semi-Direct

Input Watts (W): 54.6  
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	0
RCR																		
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	75	75	75	71
1	102	98	93	90	97	93	89	86	83	80	78	74	72	70	66	65	63	59
2	93	85	79	74	88	81	75	70	73	68	64	65	62	59	58	56	53	50
3	85	75	68	61	80	71	65	59	64	59	54	58	54	50	52	48	46	42
4	78	67	59	52	74	64	56	50	57	51	47	52	47	43	46	43	39	36
5	72	60	51	45	68	57	49	44	52	45	40	47	41	37	42	38	34	32
6	66	54	45	39	63	51	44	38	47	40	35	42	37	33	38	34	30	28
7	61	49	40	35	58	47	39	34	42	36	31	39	33	29	35	31	27	25
8	57	44	36	31	54	42	35	30	39	33	28	35	30	26	32	28	24	22
9	53	41	33	28	50	39	32	27	36	30	25	33	27	24	30	25	22	20
10	50	37	30	25	47	36	29	24	33	27	23	30	25	22	28	23	20	18

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

	0°	45°	90°
0°	28568	28568	28568
5°	28028	25224	24441
10°	27660	22442	21113
15°	27254	20097	18468
20°	26630	18029	16152
25°	25798	16099	14075
30°	24983	14226	12217
35°	23876	12511	10486
40°	22843	10954	8890
45°	21648	9414	7418
50°	20386	7973	6085
55°	19048	6708	4908
60°	17772	5499	3923
65°	16200	4384	3105
70°	14689	3436	2452
75°	12843	2639	1934
80°	10727	1962	1506
85°	7828	1427	1144

**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	2.6
10°-20°	473.9	7.5
20°-30°	699.6	11.1
30°-40°	804.3	12.7
40°-50°	780.2	12.4
50°-60°	653.1	10.3
60°-70°	470.6	7.5
70°-80°	287.5	4.6
80°-90°	140.4	2.2
90°-100°	95.4	1.5
100°-110°	305.9	4.8
110°-120°	395.0	6.3
120°-130°	318.7	5.0
130°-140°	254.4	4.0
140°-150°	200.3	3.2
150°-160°	146.4	2.3
160°-170°	90.9	1.4
170°-180°	31.0	0.5
0°-30°	1340.5	21.2
0°-40°	2144.8	34.0
0°-60°	3578.2	56.7
0°-90°	4476.7	70.9
90°-120°	796.3	12.6
90°-150°	1569.6	24.9
90°-180°	1838.0	29.1
0°-180°	6314.7	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	1691	1677	1685	1697	469
25°	1504	1529	1524	1517	1527	693
35°	1282	1302	1290	1277	1277	803
45°	1027	1037	1020	989	975	792
55°	757	767	740	694	672	679
65°	500	502	477	442	430	497
75°	270	270	275	267	262	289
85°	82	100	137	147	147	87
90°	8	51	94	111	114	10
95°	41	53	69	89	95	39
105°	89	108	384	497	341	94
115°	130	145	325	670	783	129
125°	172	189	304	528	624	153
135°	201	223	304	434	499	155
145°	238	258	306	378	419	149
155°	279	289	312	343	359	128
165°	310	314	320	328	334	87
175°	326	328	326	324	322	31
180°	326	326	326	326	326	

TEST NUMBER: P644300

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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	1763.4	1767.4	1769.4
5°	1741.9	1773.6	1756.9	1759.6	1771.9
7.5°	1725.9	1755.2	1740.4	1743.7	1757.9
10°	1711.9	1741.2	1724.4	1729.6	1741.9
12.5°	1693.9	1721.2	1708.4	1713.7	1725.9
15°	1666.9	1691.3	1676.9	1684.7	1696.9
17.5°	1626.9	1653.3	1637.9	1642.2	1654.4
20°	1596.9	1621.4	1611.9	1612.2	1624.4
22.5°	1560.9	1587.3	1579.9	1574.2	1588.4
25°	1504.4	1528.9	1524.4	1517.2	1526.9
27.5°	1448.5	1466.6	1458.0	1450.6	1458.0
30°	1404.5	1426.5	1412.0	1404.7	1412.0
32.5°	1356.5	1378.5	1364.0	1354.6	1358.0
35°	1282.0	1301.6	1289.5	1277.0	1277.0
37.5°	1211.6	1224.3	1216.1	1194.9	1189.6
40°	1159.6	1174.2	1162.1	1136.9	1129.6
42.5°	1105.6	1120.3	1106.1	1078.8	1067.6
45°	1027.1	1036.9	1019.6	989.3	974.6
47.5°	946.2	956.4	932.7	899.3	881.7
50°	892.2	904.4	874.7	839.2	819.7
52.5°	840.2	848.5	820.7	779.3	761.7
55°	757.2	767.0	739.7	694.2	672.3
57.5°	679.8	689.0	656.8	613.4	596.3
60°	629.8	637.1	604.8	559.4	542.3
62.5°	573.8	581.1	550.8	511.4	494.3
65°	499.8	502.3	477.3	442.1	429.8
67.5°	430.3	430.3	409.4	383.1	373.4
70°	382.4	382.4	367.4	347.2	337.4
72.5°	338.4	336.4	327.4	313.2	305.4
75°	269.9	269.9	274.9	267.3	262.4
77.5°	209.9	206.0	227.4	226.4	223.9
80°	169.9	169.9	197.4	202.4	199.9
82.5°	134.0	137.9	173.4	180.4	177.9
85°	82.5	99.6	137.4	147.4	147.4
87.5°	37.5	67.7	108.8	122.2	122.7
90°	7.5	51.0	94.1	111.2	113.6
92.5°	20.4	44.4	83.0	101.8	107.8
95°	41.4	53.0	68.9	88.6	95.0
97.5°	59.1	73.3	158.6	88.1	86.3
100°	69.0	86.0	272.1	113.9	94.7
102.5°	76.8	95.4	349.5	222.6	140.5
105°	88.6	108.0	383.9	497.0	341.4
107.5°	100.4	111.9	361.6	704.5	663.2
110°	108.2	120.1	349.7	735.6	792.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	118.1	129.9	339.9	711.1	804.6
115°	130.3	144.6	325.1	670.3	782.6
117.5°	142.5	159.4	320.9	624.3	739.8
120°	152.0	169.2	312.3	589.6	709.9
122.5°	160.2	177.1	304.1	561.4	672.2
125°	172.1	189.3	304.1	527.5	623.8
127.5°	181.0	201.5	304.5	488.0	583.1
130°	185.6	209.6	306.2	461.7	551.9
132.5°	189.8	213.8	304.2	449.8	524.0
135°	201.1	223.1	303.7	434.4	498.6
137.5°	211.3	235.0	303.7	417.4	472.3
140°	219.5	241.6	303.7	407.4	457.6
142.5°	227.8	248.2	305.3	395.8	442.8
145°	238.0	258.1	305.7	378.4	418.6
147.5°	250.3	268.0	308.2	365.9	396.8
150°	258.5	274.6	309.8	357.6	383.7
152.5°	266.7	281.2	309.8	350.9	372.2
155°	279.0	289.1	311.9	343.0	359.1
157.5°	288.9	298.5	314.3	338.0	349.6
160°	295.5	303.5	316.0	334.7	344.7
162.5°	300.4	308.4	317.6	333.0	339.8
165°	309.8	313.8	320.1	328.4	334.4
167.5°	315.2	318.8	322.1	326.3	329.9
170°	320.1	322.1	322.1	326.3	328.3
172.5°	321.7	325.3	323.8	324.6	326.7
175°	326.2	328.2	326.2	324.1	322.1
177.5°	326.2	327.8	326.2	326.2	324.6
180°	326.2	326.2	326.2	326.2	326.2

(END OF REPORT)