

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: P644236

Luminaire Tested: CRQ4DIP-SR4F0-100D75U840-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644236  
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-SR4F0-100D75U840-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 750 LUMENS PER FOOT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

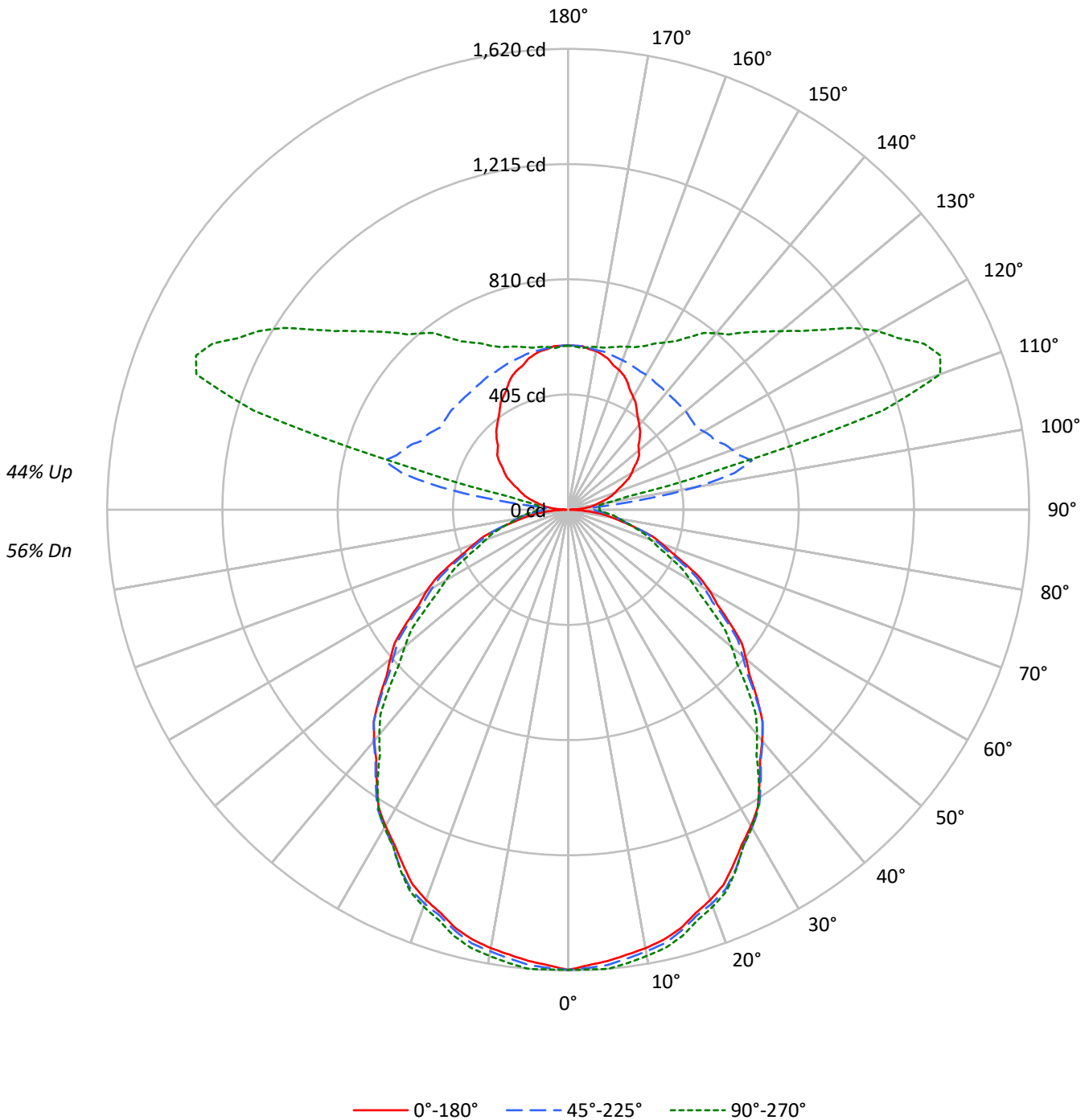
Lumens per Lamp: N/A  
Luminaire Lumens: 7271.0 lumens  
Efficiency: N/A  
Efficacy: 143.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: General Diffuse

Input Watts (W): 50.7  
Input Voltage (V): 120  
Input Current (Ain): 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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56
1	99	95	90	87	92	88	85	81	76	73	71	65	63	61	54	53	52	47
2	90	83	76	71	84	77	72	67	67	62	59	57	54	51	48	46	44	39
3	82	73	65	59	76	68	61	56	59	54	50	50	47	43	43	40	37	34
4	75	64	56	50	70	60	53	48	52	47	42	45	41	37	38	35	32	29
5	69	58	49	43	64	54	47	41	47	41	37	40	36	32	34	31	28	25
6	64	52	44	38	59	48	41	36	42	36	32	37	32	28	31	28	25	22
7	59	47	39	33	55	44	37	32	38	33	28	33	29	25	29	25	22	20
8	55	43	35	29	51	40	33	28	35	29	25	31	26	23	26	23	20	18
9	51	39	31	26	48	37	30	25	32	27	23	28	24	20	24	21	18	16
10	48	36	28	24	45	34	27	23	30	24	20	26	22	18	23	19	16	15

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

	0°	45°	90°
0°	26118	26118	26118
5°	25624	23060	22345
10°	25286	20517	19302
15°	24916	18374	16883
20°	24346	16483	14767
25°	23586	14718	12868
30°	22840	13006	11170
35°	21829	11438	9587
40°	20883	10014	8127
45°	19792	8607	6782
50°	18638	7290	5563
55°	17415	6133	4486
60°	16248	5027	3586
65°	14809	4009	2839
70°	13429	3142	2242
75°	11744	2413	1768
80°	9812	1794	1377
85°	7154	1305	1047

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 19792 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	152.7	2.1
10°-20°	433.3	6.0
20°-30°	639.6	8.8
30°-40°	735.3	10.1
40°-50°	713.3	9.8
50°-60°	597.1	8.2
60°-70°	430.2	5.9
70°-80°	262.9	3.6
80°-90°	129.0	1.8
90°-100°	121.5	1.7
100°-110°	523.8	7.2
110°-120°	692.7	9.5
120°-130°	561.2	7.7
130°-140°	449.6	6.2
140°-150°	354.2	4.9
150°-160°	259.0	3.6
160°-170°	160.9	2.2
170°-180°	54.9	0.8
0°-30°	1225.5	16.9
0°-40°	1960.8	27.0
0°-60°	3271.3	45.0
0°-90°	4093.4	56.3
90°-120°	1338.0	18.4
90°-150°	2702.9	37.2
90°-180°	3178.0	43.7
0°-180°	7271.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1618	1618	1618	1618	1618	
5°	1592	1622	1606	1609	1620	151
15°	1524	1546	1533	1540	1551	429
25°	1375	1398	1394	1387	1396	634
35°	1172	1190	1179	1168	1168	734
45°	939	948	932	904	891	724
55°	692	701	676	635	615	621
65°	457	459	436	404	393	454
75°	247	247	251	244	240	264
85°	75	91	126	135	135	80
90°	7	48	90	107	109	10
95°	52	74	77	97	106	52
105°	135	182	668	860	580	143
115°	216	249	571	1181	1380	214
125°	296	330	536	933	1103	263
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°	1617.6	1617.6	1617.6	1617.6	1617.6
2.5°	1603.0	1626.2	1612.1	1615.8	1617.6
5°	1592.5	1621.5	1606.2	1608.7	1619.9
7.5°	1577.8	1604.6	1591.1	1594.1	1607.1
10°	1565.0	1591.9	1576.5	1581.3	1592.5
12.5°	1548.6	1573.6	1561.8	1566.7	1577.8
15°	1523.9	1546.3	1533.1	1540.2	1551.3
17.5°	1487.4	1511.5	1497.4	1501.3	1512.5
20°	1459.9	1482.3	1473.7	1473.9	1485.1
22.5°	1427.0	1451.2	1444.4	1439.2	1452.2
25°	1375.4	1397.8	1393.7	1387.0	1396.0
27.5°	1324.2	1340.8	1332.9	1326.2	1332.9
30°	1284.0	1304.1	1290.9	1284.2	1290.9
32.5°	1240.2	1260.3	1247.0	1238.4	1241.5
35°	1172.1	1189.9	1178.9	1167.5	1167.5
37.5°	1107.6	1119.3	1111.8	1092.5	1087.5
40°	1060.1	1073.5	1062.4	1039.4	1032.7
42.5°	1010.8	1024.2	1011.2	986.3	976.0
45°	939.0	948.0	932.2	904.5	891.0
47.5°	865.0	874.4	852.7	822.1	806.1
50°	815.7	826.8	799.7	767.3	749.4
52.5°	768.1	775.7	750.3	712.5	696.4
55°	692.3	701.2	676.3	634.7	614.6
57.5°	621.4	629.9	600.4	560.8	545.1
60°	575.8	582.5	552.9	511.4	495.8
62.5°	524.6	531.3	503.6	467.6	451.9
65°	456.9	459.2	436.4	404.1	393.0
67.5°	393.4	393.4	374.2	350.3	341.3
70°	349.6	349.6	335.9	317.4	308.4
72.5°	309.4	307.6	299.3	286.3	279.2
75°	246.8	246.8	251.3	244.4	239.9
77.5°	191.9	188.3	207.9	206.9	204.7
80°	155.4	155.4	180.5	185.0	182.8
82.5°	122.5	126.0	158.6	164.9	162.7
85°	75.4	91.0	125.7	134.8	134.8
87.5°	34.3	62.2	100.2	112.8	113.2
90°	6.9	48.4	89.5	106.9	109.1
92.5°	22.9	46.5	83.6	104.0	110.9
95°	51.9	74.5	77.0	96.8	106.2
97.5°	78.9	116.9	248.1	111.0	105.2
100°	96.4	141.0	455.6	165.0	126.9
102.5°	112.0	159.5	599.3	364.2	216.4
105°	135.3	182.3	668.2	859.7	580.3
107.5°	158.7	191.2	633.5	1234.0	1158.9
110°	174.3	205.7	614.2	1292.3	1390.4

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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	191.7	223.1	596.8	1252.4	1415.7
115°	215.6	249.2	570.7	1181.2	1379.9
117.5°	239.7	275.3	563.7	1102.4	1306.7
120°	258.2	292.7	550.2	1042.7	1255.6
122.5°	272.7	308.3	535.7	992.9	1188.8
125°	295.8	330.4	535.7	932.8	1103.2
127.5°	314.1	352.1	536.4	863.1	1031.3
130°	323.9	366.5	539.3	816.5	976.2
132.5°	334.8	377.3	537.5	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)