

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: P644852

Luminaire Tested: OMN4DIP-SR4F0-50D100U840-CLBOOB-1DUDD-WW

Issue Date: 2/16/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644852  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/16/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: OMN4DIP-SR4F0-50D100U840-CLBOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - BATWING LENS - 500 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

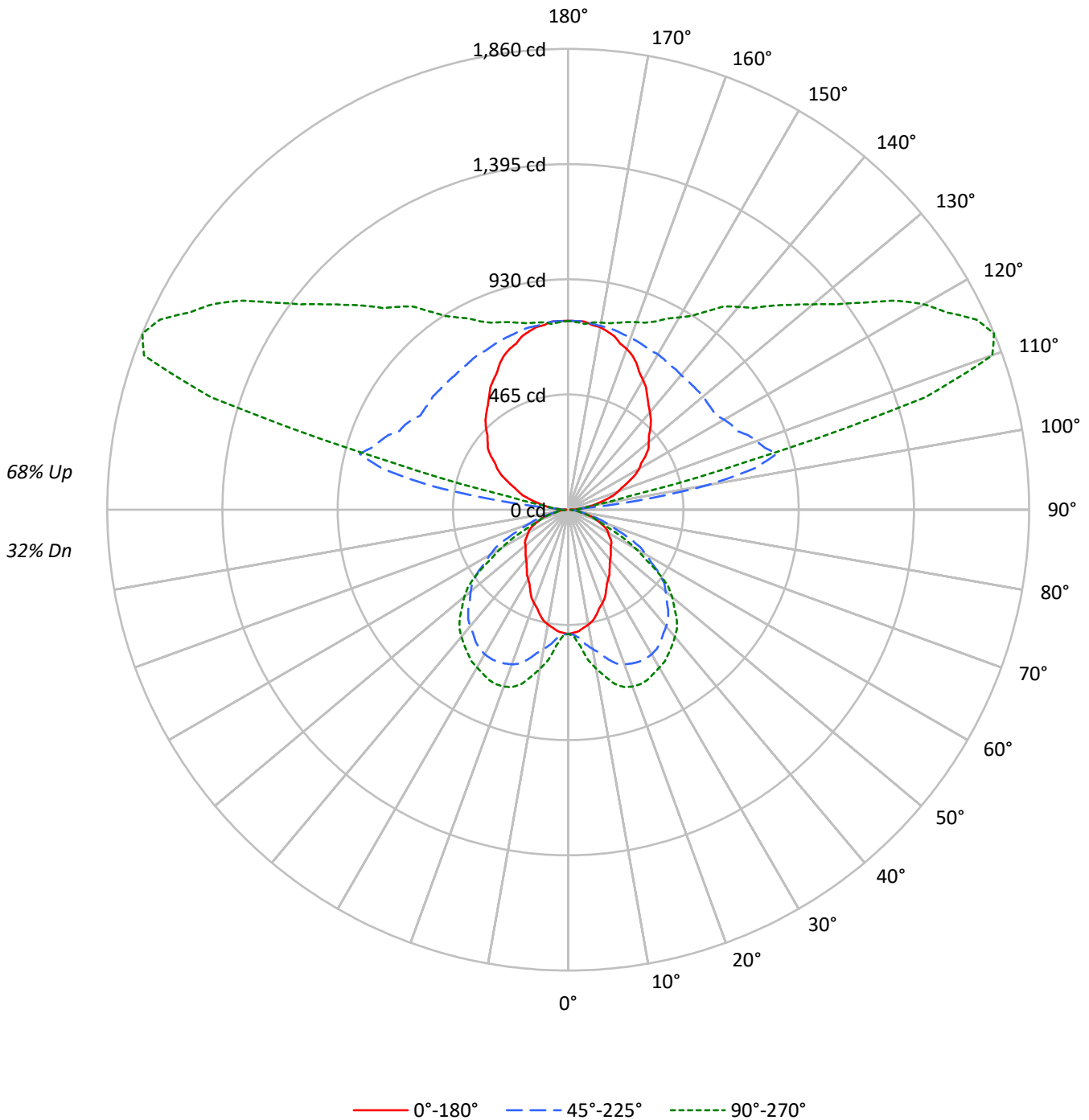
Lumens per Lamp: N/A  
Luminaire Lumens: 6033.4 lumens  
Efficiency: N/A  
Efficacy: 139.3 lumens/watt  
Spacing Criteria (0/90/45): 0.99 / 1.87 / 1.75  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 43.3  
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									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	103	103	103	103	93	93	93	93	73	73	73	56	56	56	39	39	39	39	39	39	39	39	39	32													
1	94	90	86	82	84	81	78	75	64	62	60	49	48	46	35	34	33	33	33	33	33	33	33	27													
2	85	78	72	67	77	71	66	61	56	53	50	43	41	39	31	29	28	28	28	28	28	28	28	23													
3	78	69	62	56	70	62	56	51	49	45	42	38	35	33	27	25	24	24	24	24	24	24	24	19													
4	71	61	53	47	64	55	48	43	44	39	35	34	30	28	24	22	20	20	20	20	20	20	20	16													
5	65	54	46	40	58	49	42	37	39	34	30	30	27	24	22	19	18	18	18	18	18	18	18	14													
6	60	48	40	34	53	43	37	32	35	30	26	27	23	21	20	17	15	15	15	15	15	15	15	12													
7	55	43	35	30	49	39	32	28	31	26	23	24	21	18	18	15	14	14	14	14	14	14	14	11													
8	51	39	31	26	46	35	29	24	29	24	20	22	19	16	16	14	12	12	12	12	12	12	12	9													
9	47	35	28	23	42	32	26	21	26	21	18	20	17	14	15	12	11	11	11	11	11	11	11	8													
10	44	32	25	21	40	29	23	19	24	19	16	19	15	13	14	11	10	10	10	10	10	10	10	8													

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

	0°	45°	90°
0°	8091	8091	8091
5°	7971	8425	8916
10°	7719	9361	10681
15°	7345	10460	12176
20°	6909	11414	13055
25°	6437	12063	13495
30°	6018	12558	13711
35°	5744	12818	13943
40°	5552	12969	14124
45°	5562	13013	14129
50°	5649	12881	13730
55°	5906	12631	12467
60°	6022	11741	10123
65°	6101	10285	7435
70°	5830	8087	5778
75°	5234	6032	4872
80°	4444	4770	3905
85°	4316	3890	3242

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 14129 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	51.4	0.9
10°-20°	170.8	2.8
20°-30°	283.7	4.7
30°-40°	357.9	5.9
40°-50°	382.6	6.3
50°-60°	337.7	5.6
60°-70°	216.8	3.6
70°-80°	96.1	1.6
80°-90°	26.6	0.4
90°-100°	100.2	1.7
100°-110°	671.8	11.1
110°-120°	909.6	15.1
120°-130°	739.8	12.3
130°-140°	593.5	9.8
140°-150°	467.8	7.8
150°-160°	342.0	5.7
160°-170°	212.4	3.5
170°-180°	72.4	1.2
0°-30°	505.9	8.4
0°-40°	863.9	14.3
0°-60°	1584.2	26.3
0°-90°	1923.7	31.9
90°-120°	1681.7	27.9
90°-150°	3482.8	57.7
90°-180°	4110.0	68.1
0°-180°	6033.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	501	501	501	501	501	
5°	492	507	520	538	550	46
15°	439	507	626	701	728	123
25°	361	490	677	740	758	166
35°	291	448	650	693	707	183
45°	244	383	570	605	619	188
55°	210	301	449	451	443	186
65°	160	202	269	219	195	156
75°	84	93	97	83	78	90
85°	23	20	21	19	18	25
90°	8	13	17	21	19	7
95°	51	79	44	47	55	52
105°	157	235	871	1109	733	166
115°	269	324	751	1555	1816	268
125°	382	434	708	1233	1457	340
135°	470	521	709	1015	1165	362
145°	556	603	714	884	978	349
155°	652	675	728	801	839	299
165°	724	733	748	767	781	203
175°	762	767	762	757	752	72
180°	762	762	762	762	762	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	501.1	501.1	501.1	501.1	501.1
2.5°	497.4	504.7	504.9	507.7	511.4
5°	491.8	506.6	519.8	537.5	550.1
7.5°	480.1	506.6	548.7	589.9	610.4
10°	470.8	507.3	571.0	626.4	651.5
12.5°	458.7	507.0	593.4	660.0	688.8
15°	439.4	506.6	625.8	701.0	728.4
17.5°	417.0	504.5	651.2	726.6	750.5
20°	402.1	502.3	664.3	735.9	759.8
22.5°	385.3	497.4	671.7	740.5	762.6
25°	361.3	490.0	677.1	740.4	757.5
27.5°	337.7	479.5	677.3	731.0	745.6
30°	322.8	471.0	673.6	721.7	735.4
32.5°	309.8	461.5	666.1	710.5	725.1
35°	291.4	447.5	650.3	692.6	707.4
37.5°	275.5	431.4	630.2	671.4	688.8
40°	263.4	418.4	615.3	656.4	670.1
42.5°	254.1	404.5	597.6	637.7	649.6
45°	243.6	382.6	569.9	605.2	618.8
47.5°	232.4	360.0	537.9	571.2	580.1
50°	224.9	343.4	512.8	543.2	546.6
52.5°	220.3	326.0	488.5	507.7	508.3
55°	209.8	300.9	448.7	450.8	442.9
57.5°	195.8	271.7	398.1	386.7	367.6
60°	186.5	251.4	363.6	340.8	313.5
62.5°	177.1	232.1	327.2	290.4	258.5
65°	159.7	201.8	269.2	218.6	194.6
67.5°	139.4	168.6	211.4	163.5	147.5
70°	123.5	146.3	171.3	133.8	122.4
72.5°	108.6	124.1	138.7	110.6	104.7
75°	83.9	93.0	96.7	82.6	78.1
77.5°	61.8	62.2	67.1	58.2	55.9
80°	47.8	45.5	51.3	44.2	42.0
82.5°	36.6	33.4	37.3	32.1	30.8
85°	23.3	19.9	21.0	18.6	17.5
87.5°	13.8	12.0	12.6	12.6	11.3
90°	8.2	12.8	16.6	21.3	19.0
92.5°	22.5	24.4	27.1	34.9	36.3
95°	51.2	79.4	44.2	46.8	55.1
97.5°	79.5	144.5	286.2	85.4	73.1
100°	101.6	177.8	569.0	168.8	111.4
102.5°	123.6	204.5	768.4	440.7	240.8
105°	156.7	235.3	871.0	1109.3	733.3
107.5°	191.0	248.9	831.7	1614.0	1510.7
110°	213.1	268.2	808.7	1695.9	1821.3



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	236.1	291.2	785.7	1648.0	1859.6
115°	269.4	324.5	751.2	1555.2	1816.5
117.5°	304.7	359.0	742.5	1454.7	1723.5
120°	330.6	382.1	727.2	1378.3	1658.3
122.5°	349.7	404.1	707.1	1312.6	1570.1
125°	382.1	433.7	708.0	1233.2	1457.0
127.5°	408.8	462.2	707.8	1140.9	1362.1
130°	424.1	480.3	711.7	1078.4	1289.3
132.5°	441.4	497.6	709.8	1050.7	1224.1
135°	469.7	521.2	709.3	1014.7	1164.6
137.5°	493.7	549.0	709.3	974.9	1103.3
140°	512.8	564.4	709.3	951.6	1068.8
142.5°	532.0	579.8	713.2	924.6	1034.3
145°	556.0	602.8	714.1	884.0	977.7
147.5°	584.7	626.0	719.9	854.8	926.9
150°	603.9	641.4	723.7	835.3	896.2
152.5°	623.1	656.8	723.7	819.7	869.4
155°	651.8	675.2	728.5	801.2	838.7
157.5°	674.8	697.3	734.3	789.5	816.7
160°	690.2	708.9	738.1	781.8	805.2
162.5°	701.7	720.4	741.9	777.7	793.7
165°	723.7	733.1	747.7	767.2	781.2
167.5°	736.2	744.6	752.5	762.2	770.7
170°	747.7	752.4	752.5	762.2	766.8
172.5°	751.5	759.9	756.3	758.3	763.0
175°	762.1	766.7	762.1	757.2	752.5
177.5°	762.1	765.8	762.1	762.0	758.2
180°	762.1	762.1	762.1	762.1	762.1

(END OF REPORT)