

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: P644631

Luminaire Tested: OMN4DIP-SR4F0-100D50U940-FLLOOB-1DUDD-WW

Issue Date: 2/16/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644631  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-19)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/16/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: OMN4DIP-SR4F0-100D50U940-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - FLAT FROSTED LENS - 1000 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

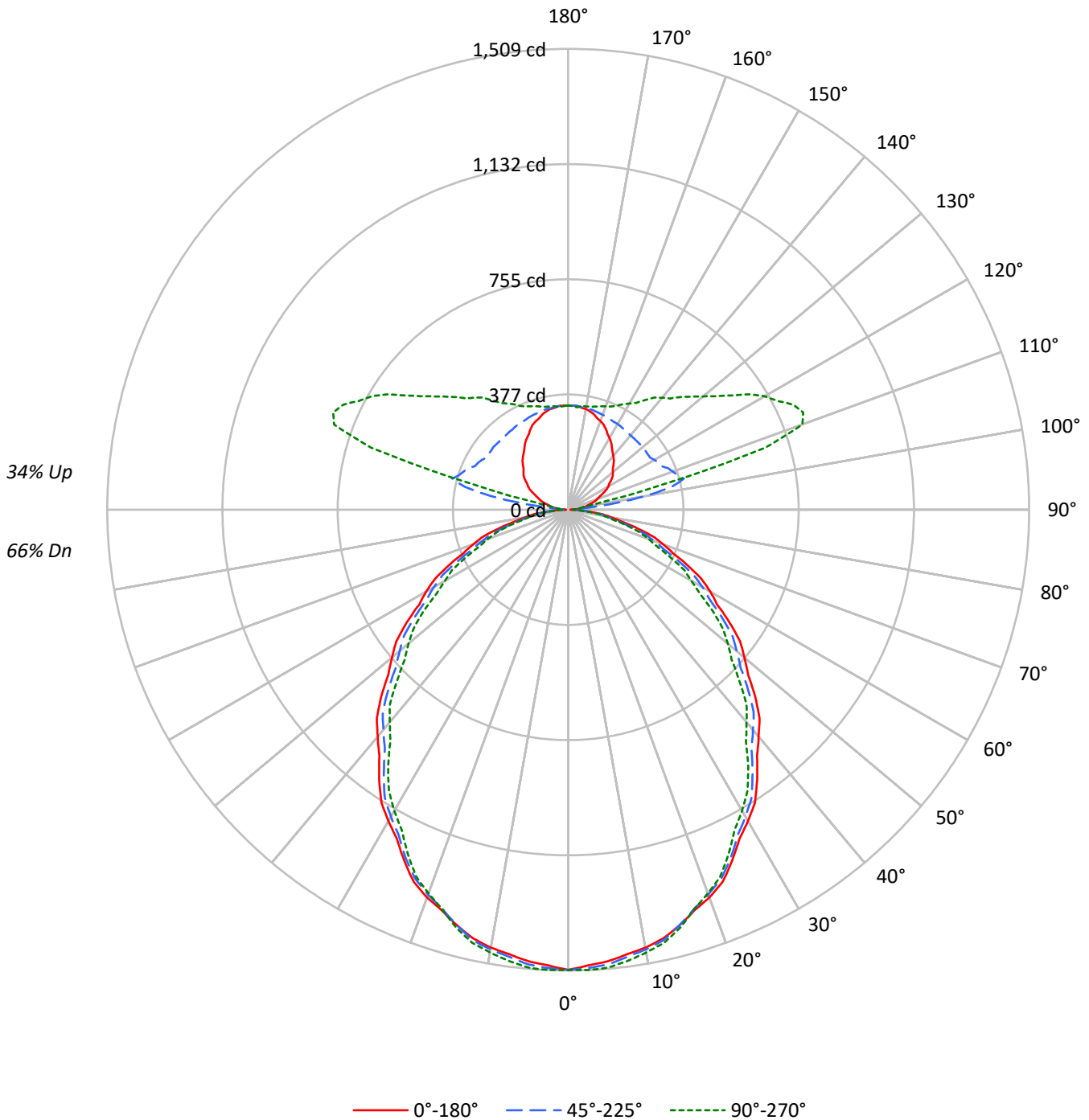
Lumens per Lamp: N/A  
Luminaire Lumens: 5509.5 lumens  
Efficiency: N/A  
Efficacy: 123.8 lumens/watt  
Spacing Criteria (0/90/45): 1.17 / 1.13 / 1.26  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 44.5  
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	111	111	111	111	105	105	105	105	92	92	92	81	81	81	71	71	71	66
1	102	97	93	90	95	92	88	85	81	79	76	72	70	68	63	62	60	56
2	93	85	79	73	87	80	75	70	71	67	63	63	60	57	56	53	51	47
3	85	75	67	61	79	71	64	59	63	58	53	56	52	48	49	46	44	40
4	78	66	58	52	73	63	56	50	56	50	46	50	45	42	44	41	38	35
5	71	59	51	45	67	56	49	43	51	44	40	45	40	36	40	36	33	30
6	66	53	45	39	62	51	43	38	46	39	35	41	36	32	36	32	29	27
7	61	48	40	35	57	46	39	33	42	35	31	37	32	28	33	29	26	24
8	57	44	36	31	53	42	35	30	38	32	28	34	29	25	31	27	23	21
9	53	40	33	28	50	39	31	27	35	29	25	32	27	23	28	24	21	19
10	50	37	30	25	47	36	29	24	32	26	22	29	24	21	26	22	19	17

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

	0°	45°	90°
0°	24332	24332	24332
5°	24060	24225	24392
10°	23868	23968	24137
15°	23545	23545	23682
20°	23216	23039	22969
25°	22611	22427	22135
30°	21942	21636	21216
35°	21258	20731	20247
40°	20440	19835	19144
45°	19758	19009	18071
50°	18902	18078	17151
55°	18182	17258	16220
60°	17347	16420	15029
65°	16451	15274	14101
70°	15583	14134	13166
75°	14579	12919	12277
80°	13343	11818	11251
85°	12542	11023	10263

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 19758 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	141.8	2.6
10°-20°	397.8	7.2
20°-30°	578.4	10.5
30°-40°	658.0	11.9
40°-50°	641.5	11.6
50°-60°	547.6	9.9
60°-70°	398.0	7.2
70°-80°	225.0	4.1
80°-90°	70.1	1.3
90°-100°	50.7	0.9
100°-110°	303.8	5.5
110°-120°	408.8	7.4
120°-130°	332.0	6.0
130°-140°	265.8	4.8
140°-150°	209.4	3.8
150°-160°	153.1	2.8
160°-170°	95.1	1.7
170°-180°	32.4	0.6
0°-30°	1118.0	20.3
0°-40°	1776.0	32.2
0°-60°	2965.1	53.8
0°-90°	3658.2	66.4
90°-120°	763.3	13.9
90°-150°	1570.6	28.5
90°-180°	1851.0	33.6
0°-180°	5509.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1507	1507	1507	1507	1507	
5°	1484	1506	1495	1493	1505	141
15°	1409	1427	1409	1407	1417	397
25°	1269	1281	1259	1236	1242	584
35°	1078	1082	1052	1027	1027	673
45°	865	861	832	804	791	666
55°	646	644	613	584	576	576
65°	431	427	400	375	369	427
75°	234	226	207	199	197	248
85°	68	60	60	57	55	73
90°	8	12	17	17	17	9
95°	34	40	23	26	28	32
105°	77	108	392	498	328	82
115°	124	147	337	696	813	124
125°	174	197	318	552	652	154
135°	210	233	318	454	522	162
145°	249	270	320	396	438	156
155°	292	302	326	359	376	134
165°	324	328	335	344	350	91
175°	341	343	341	339	337	32
180°	341	341	341	341	341	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1507.0	1507.0	1507.0	1507.0	1507.0
2.5°	1493.9	1513.1	1502.1	1502.2	1508.7
5°	1484.5	1506.5	1494.7	1492.9	1505.0
7.5°	1468.9	1490.5	1476.7	1474.6	1490.2
10°	1455.8	1475.8	1461.9	1458.1	1472.2
12.5°	1437.7	1457.8	1443.9	1438.4	1452.5
15°	1408.6	1426.6	1408.6	1406.8	1416.8
17.5°	1375.8	1391.4	1370.5	1363.7	1371.3
20°	1351.2	1365.2	1340.9	1330.8	1336.8
22.5°	1320.0	1334.1	1308.1	1293.1	1300.8
25°	1269.2	1281.2	1258.9	1236.5	1242.5
27.5°	1214.6	1223.9	1201.5	1178.6	1180.6
30°	1176.9	1182.9	1160.5	1136.0	1138.0
32.5°	1137.5	1142.0	1117.9	1091.6	1092.0
35°	1078.5	1082.5	1051.8	1027.2	1027.2
37.5°	1015.8	1018.2	985.4	958.7	955.9
40°	969.8	973.8	941.1	914.3	908.3
42.5°	927.2	928.0	898.5	871.6	864.0
45°	865.3	861.2	832.5	803.5	791.4
47.5°	798.4	798.4	765.6	736.6	725.4
50°	752.5	752.5	719.7	690.8	682.8
52.5°	709.8	708.2	677.0	648.1	636.8
55°	645.9	643.9	613.1	584.2	576.2
57.5°	578.2	578.2	549.5	518.5	509.7
60°	537.2	537.2	508.5	477.5	465.4
62.5°	492.9	491.3	462.6	434.9	427.7
65°	430.6	426.6	399.8	375.1	369.1
67.5°	371.1	367.1	338.7	318.9	314.9
70°	330.1	326.1	299.4	282.9	278.9
72.5°	290.7	285.1	261.6	248.4	244.4
75°	233.7	225.7	207.1	198.8	196.8
77.5°	179.6	166.0	158.3	152.5	150.5
80°	143.5	131.5	127.1	123.0	121.0
82.5°	112.4	100.3	99.2	96.7	94.7
85°	67.7	59.6	59.5	57.4	55.4
87.5°	29.5	25.5	26.3	26.3	26.3
90°	8.2	12.3	16.6	16.7	16.7
92.5°	19.9	17.6	18.5	21.9	22.0
95°	33.6	40.2	23.3	25.5	27.7
97.5°	44.8	69.4	131.9	40.9	34.2
100°	55.1	84.8	257.3	76.6	51.4
102.5°	63.8	95.1	346.6	198.7	108.1
105°	76.8	108.4	392.5	498.2	328.3
107.5°	91.8	115.1	374.9	724.1	676.4
110°	100.5	123.6	364.6	760.8	815.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	110.8	133.9	354.3	739.4	832.6
115°	124.2	147.3	336.8	695.8	813.3
117.5°	140.1	162.8	332.9	650.8	771.7
120°	152.1	173.1	326.1	616.6	742.5
122.5°	159.0	183.4	317.5	587.2	703.0
125°	173.6	196.7	317.5	551.6	652.4
127.5°	184.0	209.1	317.9	510.4	609.9
130°	190.9	216.1	319.6	482.8	577.2
132.5°	197.8	223.0	318.0	470.4	548.1
135°	210.3	233.4	317.6	454.3	521.5
137.5°	221.0	245.8	317.6	436.5	494.0
140°	229.6	252.7	317.6	426.1	478.5
142.5°	238.2	259.6	319.3	414.0	463.1
145°	248.9	269.9	319.7	395.8	437.8
147.5°	261.8	280.3	322.3	382.7	415.0
150°	270.4	287.2	324.0	374.0	401.3
152.5°	279.0	294.1	324.0	367.0	389.3
155°	291.8	302.3	326.2	358.7	375.5
157.5°	302.1	312.2	328.8	353.5	365.7
160°	309.0	317.4	330.5	350.0	360.5
162.5°	314.2	322.6	332.2	348.2	355.4
165°	324.0	328.2	334.8	343.5	349.8
167.5°	329.6	333.4	336.9	341.3	345.1
170°	334.8	336.9	336.9	341.2	343.3
172.5°	336.5	340.3	338.6	339.5	341.6
175°	341.2	343.3	341.2	339.0	336.9
177.5°	341.2	342.9	341.2	341.2	339.5
180°	341.2	341.2	341.2	341.2	341.2

(END OF REPORT)