

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: P644548

Luminaire Tested: OMN4DIP-SR4F0-100D150U835-CLBOOB-1DUDD-WW

Issue Date: 2/16/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644548  
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-SR4F0-100D150U835-CLBOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - BATWING LENS - 1000 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

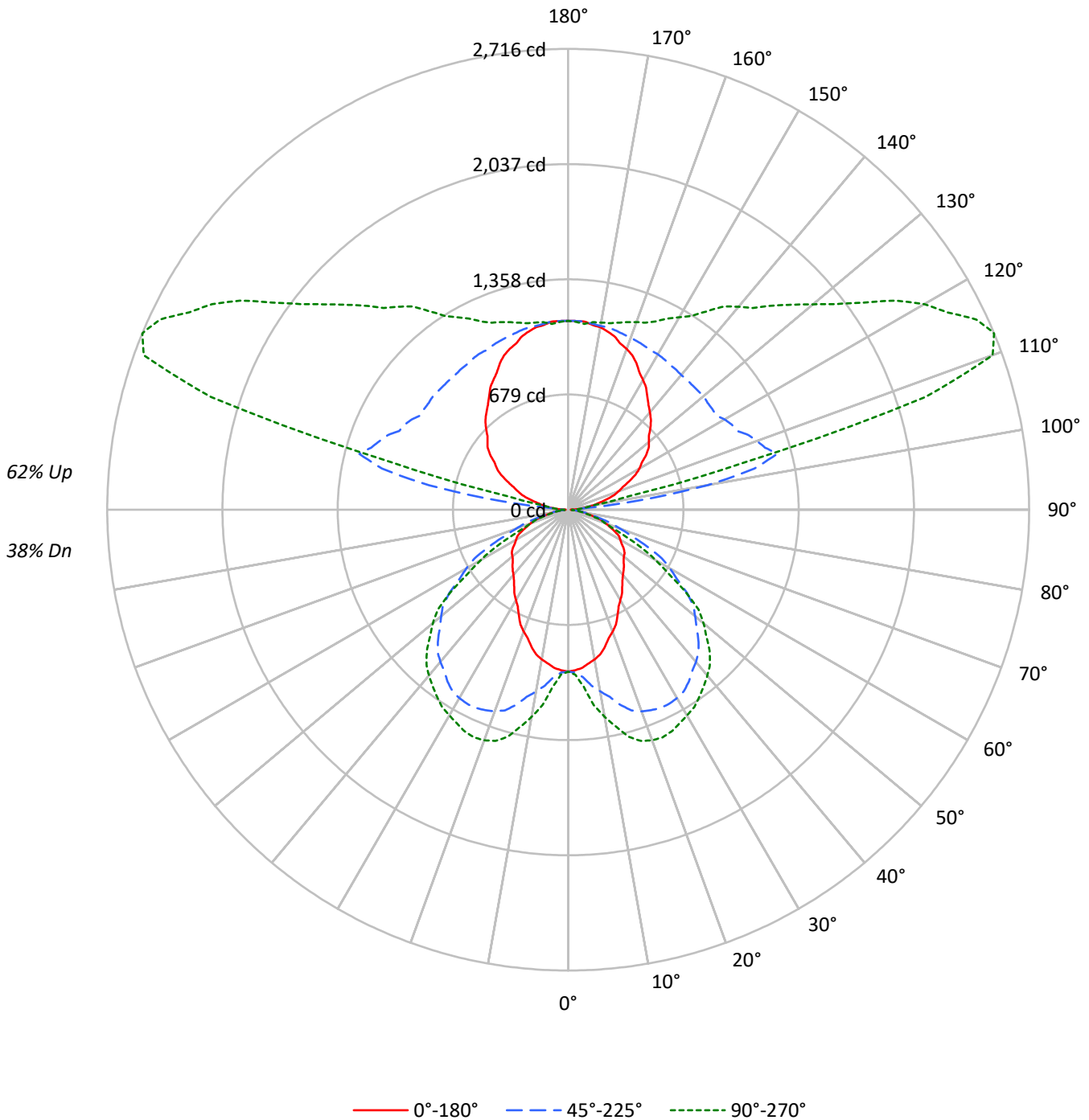
Lumens per Lamp: N/A  
Luminaire Lumens: 9671.6 lumens  
Efficiency: N/A  
Efficacy: 123.2 lumens/watt  
Spacing Criteria (0/90/45): 0.99 / 1.87 / 1.75  
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')  
CIE Type: Semi-Indirect

Input Watts (W): 78.5  
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	50	30	10	0	
RCR																						
0	104	104	104	104	95	95	95	95	77	77	77	60	60	60	45	45	45	38				
1	95	91	87	84	86	83	79	77	67	65	63	53	52	50	40	39	38	32				
2	87	79	73	68	78	72	67	63	59	55	52	46	44	42	35	33	32	27				
3	79	70	62	57	71	63	57	52	52	47	44	41	38	35	31	29	27	23				
4	72	61	54	48	65	56	49	44	46	41	37	36	33	30	28	25	23	19				
5	66	55	47	41	60	50	43	38	41	36	32	32	29	26	25	22	20	17				
6	61	49	41	35	55	45	38	32	37	31	27	29	25	22	22	20	18	14				
7	56	44	36	30	51	40	33	28	33	28	24	26	23	20	20	18	15	13				
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	18	16	14	11				
9	48	36	29	24	44	33	26	22	27	22	19	22	18	15	17	14	12	10				
10	45	33	26	21	41	30	24	20	25	20	17	20	16	14	16	13	11	9				

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

	0°	45°	90°
0°	15403	15403	15403
5°	15175	16037	16973
10°	14695	17823	20333
15°	13981	19915	23178
20°	13151	21728	24854
25°	12253	22963	25691
30°	11458	23909	26099
35°	10933	24402	26544
40°	10568	24689	26888
45°	10588	24772	26900
50°	10756	24521	26136
55°	11240	24045	23733
60°	11464	22352	19272
65°	11610	19580	14155
70°	11103	15394	10999
75°	9963	11485	9270
80°	8461	9075	7429
85°	8225	7392	6169

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 26900 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	97.8	1.0
10°-20°	325.1	3.4
20°-30°	540.2	5.6
30°-40°	681.4	7.0
40°-50°	728.4	7.5
50°-60°	642.9	6.6
60°-70°	412.6	4.3
70°-80°	183.0	1.9
80°-90°	49.9	0.5
90°-100°	149.3	1.5
100°-110°	983.2	10.2
110°-120°	1330.0	13.8
120°-130°	1081.4	11.2
130°-140°	867.1	9.0
140°-150°	683.3	7.1
150°-160°	499.6	5.2
160°-170°	310.3	3.2
170°-180°	105.8	1.1
0°-30°	963.2	10.0
0°-40°	1644.6	17.0
0°-60°	3016.0	31.2
0°-90°	3661.5	37.9
90°-120°	2462.5	25.5
90°-150°	5094.3	52.7
90°-180°	6010.0	62.1
0°-180°	9671.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	954	954	954	954	954	
5°	936	964	990	1023	1047	88
15°	836	964	1191	1335	1387	234
25°	688	933	1289	1410	1442	317
35°	555	852	1238	1318	1347	348
45°	464	728	1085	1152	1178	358
55°	399	573	854	858	843	354
65°	304	384	512	416	370	297
75°	160	177	184	157	149	171
85°	44	38	40	35	33	47
90°	16	22	27	34	30	13
95°	80	120	67	70	81	81
105°	232	347	1274	1621	1071	246
115°	396	476	1099	2272	2653	394
125°	560	635	1036	1802	2128	497
135°	686	761	1036	1482	1701	528
145°	812	880	1043	1291	1428	510
155°	952	986	1064	1170	1225	437
165°	1057	1071	1092	1121	1141	297
175°	1113	1120	1113	1106	1099	105
180°	1113	1113	1113	1113	1113	



TEST NUMBER: P644548

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	954.0	954.0	954.0	954.0	954.0
2.5°	946.9	960.8	961.1	966.6	973.5
5°	936.3	964.5	989.5	1023.3	1047.2
7.5°	914.1	964.4	1044.5	1123.1	1162.1
10°	896.3	965.7	1087.1	1192.5	1240.2
12.5°	873.2	965.2	1129.7	1256.5	1311.2
15°	836.4	964.4	1191.4	1334.6	1386.6
17.5°	793.8	960.4	1239.8	1383.2	1428.8
20°	765.4	956.3	1264.6	1401.0	1446.5
22.5°	733.5	946.9	1278.8	1409.8	1451.9
25°	687.8	932.9	1289.0	1409.6	1442.1
27.5°	643.0	912.8	1289.5	1391.7	1419.5
30°	614.6	896.6	1282.4	1373.9	1399.9
32.5°	589.7	878.7	1268.2	1352.6	1380.4
35°	554.7	851.8	1238.0	1318.5	1346.7
37.5°	524.5	821.2	1199.8	1278.2	1311.2
40°	501.4	796.4	1171.4	1249.7	1275.7
42.5°	483.7	770.0	1137.7	1214.1	1236.6
45°	463.7	728.3	1084.9	1152.0	1178.1
47.5°	442.4	685.4	1024.1	1087.5	1104.4
50°	428.2	653.8	976.2	1034.0	1040.5
52.5°	419.3	620.6	930.0	966.5	967.8
55°	399.3	572.9	854.2	858.3	843.1
57.5°	372.7	517.2	757.9	736.2	699.7
60°	355.0	478.6	692.2	648.9	596.8
62.5°	337.2	441.8	623.0	552.8	492.1
65°	303.9	384.2	512.5	416.1	370.5
67.5°	265.3	320.9	402.5	311.2	280.9
70°	235.2	278.6	326.1	254.6	233.0
72.5°	206.8	236.3	264.0	210.5	199.2
75°	159.7	177.1	184.1	157.3	148.6
77.5°	117.6	118.5	127.8	110.8	106.5
80°	91.0	86.6	97.6	84.2	79.9
82.5°	69.7	63.6	71.0	61.2	58.6
85°	44.4	37.9	39.9	35.4	33.3
87.5°	26.2	22.3	23.2	22.8	20.2
90°	15.5	22.4	27.3	34.2	29.9
92.5°	37.7	39.3	42.3	53.2	54.3
95°	80.4	119.6	67.1	69.9	81.4
97.5°	121.2	214.6	420.1	125.8	107.2
100°	153.0	262.8	832.7	247.5	163.2
102.5°	184.8	301.9	1124.0	644.3	351.9
105°	232.5	346.7	1273.8	1620.9	1071.1
107.5°	282.5	366.2	1216.4	2358.0	2206.6
110°	314.3	394.3	1182.8	2477.6	2660.2



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CATALOG NUMBER: OMN4DIP-SR4F0-100D150U835-CLBOOB-1DUDD-WW

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	347.9	427.9	1149.2	2407.6	2716.2
115°	396.1	476.1	1098.8	2272.1	2653.2
117.5°	447.5	526.5	1086.2	2125.3	2517.4
120°	484.9	560.2	1063.8	2013.7	2422.2
122.5°	512.9	592.0	1034.0	1917.7	2293.4
125°	559.7	635.0	1035.7	1801.8	2128.2
127.5°	598.1	676.5	1034.9	1666.9	1989.6
130°	620.5	702.6	1040.5	1575.1	1883.2
132.5°	644.9	727.1	1037.0	1534.7	1788.0
135°	686.1	761.4	1036.1	1482.1	1701.2
137.5°	721.1	801.8	1036.1	1424.0	1611.5
140°	749.1	824.4	1036.1	1390.0	1561.1
142.5°	777.1	846.9	1041.7	1350.6	1510.7
145°	812.1	880.5	1043.1	1291.2	1428.1
147.5°	854.1	914.3	1051.5	1248.5	1353.9
150°	882.1	936.8	1057.1	1220.1	1309.1
152.5°	910.1	959.4	1057.1	1197.4	1269.9
155°	952.1	986.3	1064.1	1170.3	1225.1
157.5°	985.7	1018.5	1072.5	1153.2	1192.9
160°	1008.1	1035.5	1078.1	1141.9	1176.1
162.5°	1024.9	1052.3	1083.7	1136.0	1159.3
165°	1057.1	1070.8	1092.1	1120.6	1141.1
167.5°	1075.3	1087.6	1099.1	1113.4	1125.7
170°	1092.1	1098.9	1099.1	1113.3	1120.1
172.5°	1097.7	1110.0	1104.7	1107.7	1114.5
175°	1113.1	1119.9	1113.1	1105.9	1099.1
177.5°	1113.1	1118.6	1113.1	1113.0	1107.5
180°	1113.1	1113.1	1113.1	1113.1	1113.1

(END OF REPORT)