

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: P644653

Luminaire Tested: OMN4DIP-SR4F0-100D75U935-CLBOOB-1DUDD-WW

Issue Date: 2/16/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644653  
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-SR4F0-100D75U935-CLBOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - BATWING LENS - 1000 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 750 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

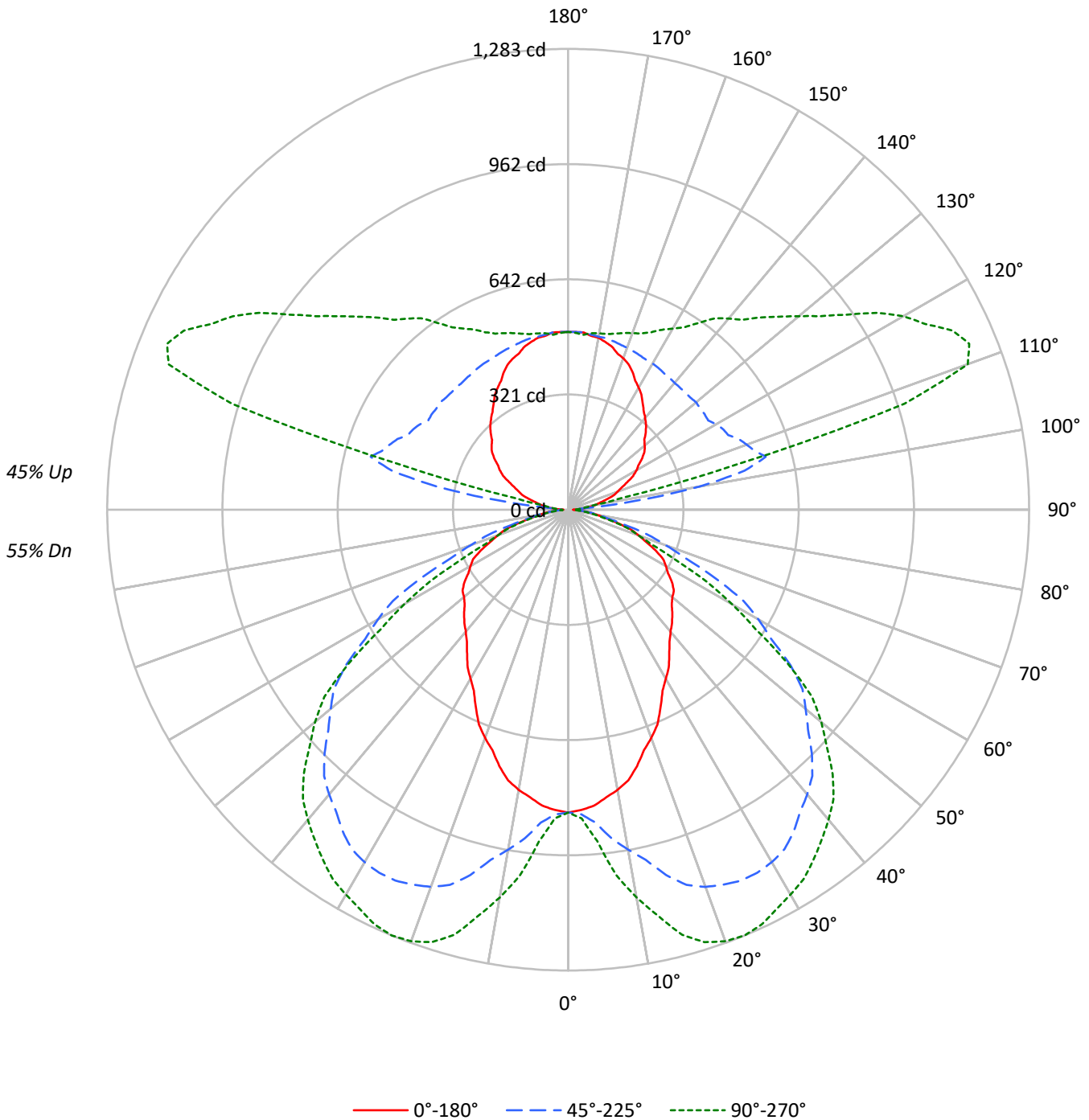
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5921.1 lumens  
Efficiency: N/A  
Efficacy: 116.8 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: 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	50	30	10	0	
RCR																						
0	108	108	108	108	100	100	100	100	86	86	86	73	73	73	60	60	60	55				
1	99	95	91	87	92	88	85	82	76	73	71	64	62	61	54	52	51	46				
2	90	83	76	71	83	77	72	67	66	62	59	56	53	51	47	45	43	39				
3	82	73	65	59	76	68	61	56	58	53	49	50	46	43	42	39	37	33				
4	75	64	56	50	69	60	53	47	52	46	42	44	40	36	37	34	31	28				
5	69	57	49	43	64	53	46	40	46	40	36	39	35	31	33	30	27	24				
6	63	51	43	37	58	48	40	35	41	35	31	35	31	27	30	26	24	21				
7	58	46	38	32	54	43	36	30	37	31	27	32	27	24	27	24	21	18				
8	54	42	34	28	50	39	32	27	34	28	24	29	25	21	25	21	19	16				
9	50	38	30	25	47	35	29	24	31	25	21	27	22	19	23	19	17	14				
10	47	35	27	22	43	33	26	21	28	23	19	25	20	17	21	18	15	13				

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

	0°	45°	90°
0°	13611	13611	13611
5°	13408	14172	14997
10°	12985	15749	17967
15°	12354	17598	20481
20°	11622	19201	21962
25°	10826	20291	22702
30°	10125	21127	23064
35°	9660	21561	23455
40°	9339	21817	23760
45°	9355	21891	23770
50°	9505	21667	23096
55°	9934	21247	20971
60°	10130	19753	17031
65°	10262	17303	12508
70°	9810	13605	9720
75°	8808	10150	8197
80°	7476	8024	6564
85°	7262	6539	5446

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°

Vertical Angle: 45°

Luminance: 23770 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.5	1.5
10°-20°	287.3	4.9
20°-30°	477.3	8.1
30°-40°	602.1	10.2
40°-50°	643.7	10.9
50°-60°	568.1	9.6
60°-70°	364.6	6.2
70°-80°	161.7	2.7
80°-90°	43.0	0.7
90°-100°	71.9	1.2
100°-110°	440.8	7.4
110°-120°	594.2	10.0
120°-130°	482.7	8.2
130°-140°	385.8	6.5
140°-150°	303.9	5.1
150°-160°	222.2	3.8
160°-170°	138.0	2.3
170°-180°	47.1	0.8
0°-30°	851.1	14.4
0°-40°	1453.2	24.5
0°-60°	2665.1	45.0
0°-90°	3234.4	54.6
90°-120°	1106.9	18.7
90°-150°	2279.4	38.5
90°-180°	2687.0	45.4
0°-180°	5921.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	843	843	843	843	843	
5°	827	852	874	904	925	78
15°	739	852	1053	1179	1225	207
25°	608	824	1139	1246	1274	280
35°	490	753	1094	1165	1190	308
45°	410	644	959	1018	1041	317
55°	353	506	755	758	745	313
65°	269	340	453	368	327	263
75°	141	156	163	139	131	151
85°	39	34	35	31	29	41
90°	14	17	18	21	17	10
95°	46	60	35	34	38	44
105°	110	160	570	722	476	117
115°	181	216	492	1012	1180	180
125°	252	285	464	802	947	224
135°	305	339	461	659	757	235
145°	361	392	464	574	635	227
155°	424	439	473	521	545	194
165°	470	476	486	498	508	132
175°	495	498	495	492	489	47
180°	495	495	495	495	495	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	843.0	843.0	843.0	843.0	843.0
2.5°	836.7	849.0	849.3	854.1	860.3
5°	827.3	852.2	874.4	904.3	925.3
7.5°	807.7	852.2	923.0	992.4	1026.9
10°	792.0	853.4	960.6	1053.7	1095.9
12.5°	771.6	852.9	998.3	1110.3	1158.6
15°	739.1	852.2	1052.8	1179.3	1225.3
17.5°	701.5	848.7	1095.5	1222.3	1262.5
20°	676.4	845.1	1117.5	1238.0	1278.2
22.5°	648.1	836.8	1130.0	1245.7	1282.9
25°	607.7	824.4	1139.0	1245.6	1274.3
27.5°	568.1	806.6	1139.4	1229.8	1254.3
30°	543.1	792.3	1133.2	1214.1	1237.1
32.5°	521.1	776.4	1120.6	1195.3	1219.8
35°	490.1	752.7	1093.9	1165.1	1190.0
37.5°	463.5	725.7	1060.2	1129.5	1158.6
40°	443.1	703.8	1035.1	1104.3	1127.3
42.5°	427.4	680.4	1005.3	1072.8	1092.8
45°	409.7	643.6	958.7	1018.0	1041.0
47.5°	390.9	605.6	905.0	961.0	975.9
50°	378.4	577.7	862.6	913.7	919.5
52.5°	370.5	548.4	821.8	854.0	855.2
55°	352.9	506.2	754.8	758.4	745.0
57.5°	329.4	457.0	669.7	650.5	618.3
60°	313.7	422.9	611.7	573.4	527.4
62.5°	298.0	390.4	550.5	488.5	434.8
65°	268.6	339.5	452.9	367.7	327.4
67.5°	234.5	283.5	355.6	275.0	248.2
70°	207.8	246.1	288.2	225.0	205.9
72.5°	182.7	208.8	233.3	186.0	176.1
75°	141.2	156.5	162.7	139.0	131.4
77.5°	103.9	104.7	112.9	97.9	94.1
80°	80.4	76.5	86.3	74.4	70.6
82.5°	61.6	56.2	62.7	54.1	51.8
85°	39.2	33.5	35.3	31.3	29.4
87.5°	23.1	19.1	19.3	18.3	16.0
90°	13.7	16.8	18.0	21.0	17.2
92.5°	25.9	24.3	23.9	27.9	26.5
95°	46.5	60.1	34.7	34.0	38.2
97.5°	63.4	102.1	190.5	57.9	48.7
100°	76.8	122.8	373.3	112.0	73.6
102.5°	90.2	140.2	502.8	287.7	156.7
105°	110.3	160.1	569.5	721.9	476.4
107.5°	132.3	167.8	543.9	1049.8	981.5
110°	145.7	180.3	529.0	1103.0	1183.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	160.6	195.2	514.1	1071.8	1208.1
115°	181.1	215.7	491.6	1011.5	1180.1
117.5°	203.7	238.1	486.0	946.3	1119.7
120°	219.6	253.1	476.1	896.6	1077.4
122.5°	232.0	266.4	462.0	853.9	1020.1
125°	251.9	285.4	463.6	802.4	946.6
127.5°	268.0	303.6	462.3	742.2	884.9
130°	277.9	314.5	464.8	700.6	837.6
132.5°	287.3	323.8	461.6	682.6	795.3
135°	305.2	338.6	460.8	659.2	756.7
137.5°	320.7	356.6	460.8	633.4	716.8
140°	333.2	366.7	460.8	618.3	694.4
142.5°	345.6	376.7	463.3	600.7	672.0
145°	361.2	391.6	464.0	574.3	635.2
147.5°	379.9	406.7	467.7	555.3	602.2
150°	392.3	416.7	470.2	542.7	582.3
152.5°	404.8	426.7	470.2	532.6	564.8
155°	423.5	438.7	473.3	520.6	544.9
157.5°	438.4	453.0	477.0	512.9	530.6
160°	448.4	460.6	479.5	507.9	523.1
162.5°	455.9	468.0	482.0	505.3	515.6
165°	470.2	476.3	485.8	498.4	507.5
167.5°	478.3	483.8	488.9	495.2	500.7
170°	485.8	488.8	488.9	495.2	498.2
172.5°	488.2	493.7	491.4	492.7	495.7
175°	495.1	498.1	495.1	491.9	488.9
177.5°	495.1	497.5	495.1	495.0	492.6
180°	495.1	495.1	495.1	495.1	495.1

(END OF REPORT)