

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: P645010

Luminaire Tested: OMN4DIP-SR4F0-50D75U930-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



**Test Information**

Test Method: LM-79-2019  
Report Number: P645010  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-27)  
Test Lab: INNOVATION CENTER  
Issue Date: 9/2/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: OMN4DIP-SR4F0-50D75U930-WBMOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE  
DOWNLIGHT - WHITE BAFFLE WITH MEDIUM OPTIC - 500 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 750 LUMENS PER FOOT  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

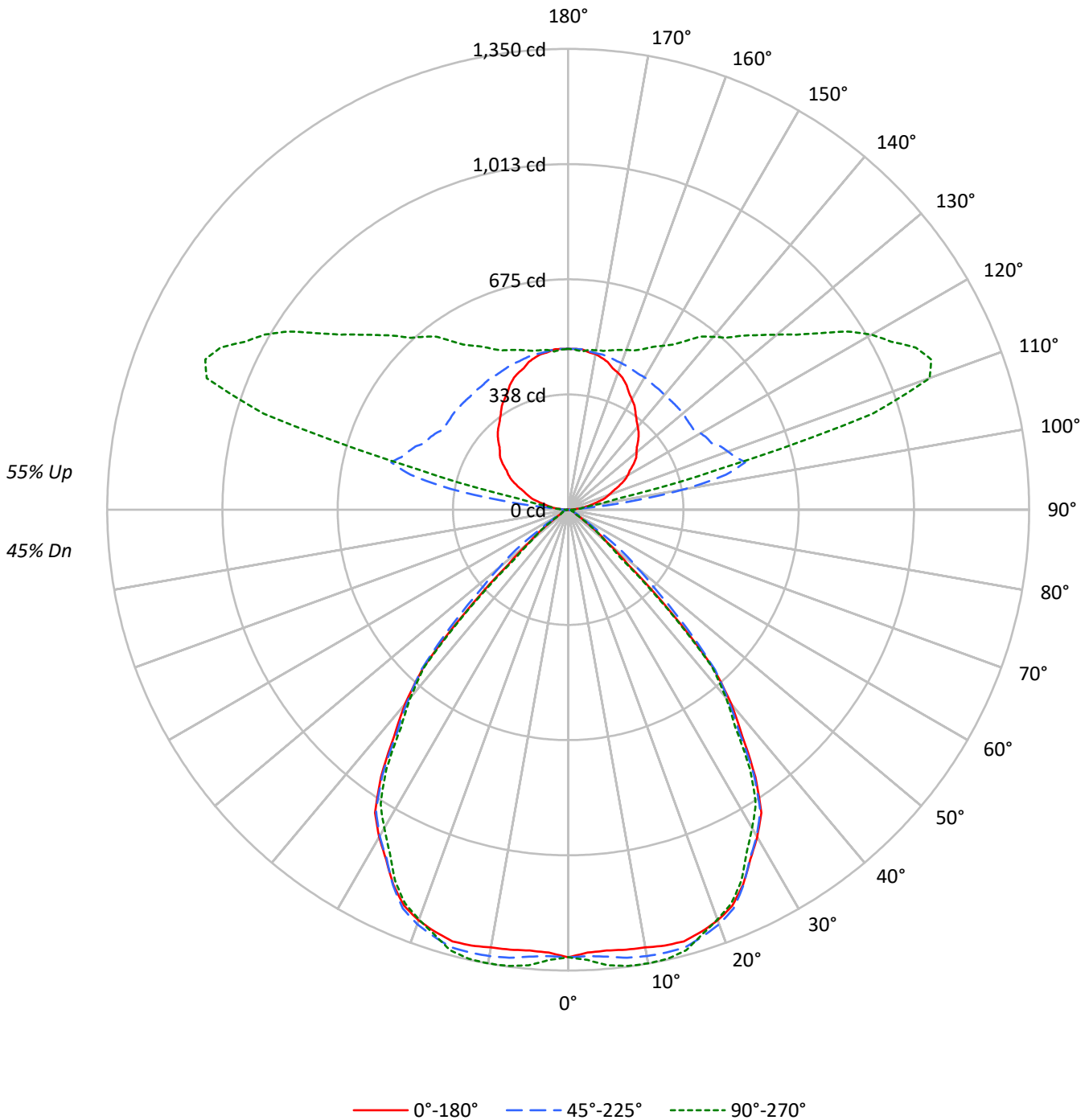
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4641.4 lumens  
Efficiency: N/A  
Efficacy: 119.0 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19  
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 39  
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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45
1	98	95	91	88	90	87	84	82	73	71	70	60	59	58	48	48	47	41
2	91	85	79	75	84	78	74	70	66	63	60	55	53	51	45	43	42	38
3	84	76	70	65	77	70	65	61	60	56	53	50	48	45	41	40	38	34
4	78	68	62	56	72	64	58	53	54	50	47	46	43	40	38	36	34	31
5	72	62	55	50	66	58	51	47	50	45	41	42	39	36	35	33	31	28
6	67	56	49	44	62	53	46	42	45	41	37	39	35	33	33	30	28	25
7	62	51	44	39	58	48	42	37	42	37	33	36	32	30	30	28	26	23
8	58	47	40	35	54	44	38	33	38	34	30	33	29	27	28	26	24	21
9	54	43	36	32	50	41	34	30	35	31	27	31	27	24	26	24	22	20
10	51	40	33	29	47	37	32	27	33	28	25	29	25	22	24	22	20	18

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

	0°	45°	90°
0°	16935	16935	16935
5°	16808	17039	17371
10°	17080	17417	17701
15°	17506	17744	17863
20°	17601	17764	17560
25°	17265	17306	17095
30°	16506	16463	16065
35°	15070	14945	14633
40°	12518	12336	12102
45°	7864	8945	7502
50°	3016	5297	2797
55°	1423	2223	1446
60°	690	1121	612
65°	633	663	575
70°	634	634	559
75°	639	639	544
80°	662	588	513
85°	726	578	445

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 8945 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	126.3	2.7
10°-20°	373.5	8.0
20°-30°	554.9	12.0
30°-40°	580.8	12.5
40°-50°	351.8	7.6
50°-60°	81.2	1.7
60°-70°	22.3	0.5
70°-80°	13.1	0.3
80°-90°	5.6	0.1
90°-100°	57.9	1.2
100°-110°	413.0	8.9
110°-120°	560.7	12.1
120°-130°	456.3	9.8
130°-140°	367.0	7.9
140°-150°	289.3	6.2
150°-160°	211.6	4.6
160°-170°	131.4	2.8
170°-180°	44.8	1.0
0°-30°	1054.7	22.7
0°-40°	1635.4	35.2
0°-60°	2068.3	44.6
0°-90°	2109.3	45.4
90°-120°	1031.6	22.2
90°-150°	2144.3	46.2
90°-180°	2532.0	54.6
0°-180°	4641.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1311	1311	1311	1311	1311	
5°	1296	1326	1314	1320	1340	124
15°	1309	1349	1327	1316	1336	369
25°	1211	1247	1214	1183	1200	555
35°	956	970	948	926	928	587
45°	430	489	490	472	411	331
55°	63	72	99	68	64	66
65°	21	22	22	20	19	21
75°	13	13	13	12	11	14
85°	5	5	4	4	3	5
90°	0	3	6	9	9	1
95°	24	44	24	27	33	27
105°	92	141	537	686	454	97
115°	163	198	462	961	1124	162
125°	234	266	436	762	901	208
135°	290	322	439	628	720	224
145°	344	373	442	547	605	216
155°	403	418	451	496	519	185
165°	448	454	462	474	483	126
175°	471	474	471	468	465	45
180°	471	471	471	471	471	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1311.1	1311.1	1311.1	1311.1	1311.1
2.5°	1298.5	1321.6	1308.7	1309.8	1320.6
5°	1296.3	1326.2	1314.1	1319.5	1339.7
7.5°	1299.8	1331.1	1323.9	1325.8	1348.0
10°	1302.2	1335.0	1327.9	1327.4	1349.6
12.5°	1307.7	1342.1	1328.7	1325.8	1347.2
15°	1309.1	1348.7	1326.9	1316.5	1335.8
17.5°	1296.3	1339.9	1310.5	1288.9	1304.4
20°	1280.5	1324.9	1292.3	1262.1	1277.5
22.5°	1256.0	1299.6	1264.7	1232.1	1248.3
25°	1211.4	1247.1	1214.3	1183.1	1199.5
27.5°	1154.9	1180.0	1152.0	1122.3	1131.6
30°	1106.7	1131.8	1103.8	1073.3	1077.1
32.5°	1053.0	1074.3	1046.9	1019.5	1022.6
35°	955.7	970.2	947.8	926.1	928.0
37.5°	837.2	839.1	824.0	804.2	804.6
40°	742.4	748.2	731.6	715.8	717.7
42.5°	629.5	652.3	636.0	621.8	622.2
45°	430.5	489.3	489.7	472.5	410.7
47.5°	237.7	305.9	349.7	271.2	204.8
50°	150.1	193.5	263.6	158.5	139.2
52.5°	107.4	126.9	192.5	112.1	102.1
55°	63.2	71.9	98.7	68.0	64.2
57.5°	38.5	46.0	57.7	45.5	38.7
60°	26.7	33.4	43.4	30.5	23.7
62.5°	23.5	25.6	34.0	24.2	22.1
65°	20.7	21.7	21.7	19.7	18.8
67.5°	18.4	19.3	18.4	17.4	16.4
70°	16.8	17.7	16.8	15.8	14.8
72.5°	15.2	16.2	15.2	14.2	13.2
75°	12.8	12.8	12.8	11.8	10.9
77.5°	10.5	10.5	10.3	9.5	8.5
80°	8.9	8.9	7.9	7.9	6.9
82.5°	7.3	7.3	6.3	6.3	5.3
85°	4.9	4.9	3.9	3.9	3.0
87.5°	2.4	2.9	2.8	3.3	2.6
90°	0.0	2.9	5.9	8.9	8.9
92.5°	7.1	10.0	13.0	18.4	20.8
95°	23.7	44.0	23.7	26.8	32.6
97.5°	42.1	84.4	174.3	51.4	44.5
100°	56.3	105.6	349.8	103.0	68.2
102.5°	70.6	122.2	473.2	271.7	148.8
105°	91.9	141.2	536.6	685.5	453.6
107.5°	113.2	150.4	512.3	997.6	934.5
110°	127.5	162.3	498.1	1048.3	1126.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	141.7	176.5	483.8	1018.7	1150.3
115°	163.1	197.8	462.5	961.3	1123.6
117.5°	185.0	219.2	457.1	899.1	1066.1
120°	201.6	233.5	447.7	851.8	1025.8
122.5°	213.5	247.7	435.8	811.2	971.2
125°	234.2	266.1	435.8	762.1	901.2
127.5°	251.4	283.9	436.4	705.1	842.5
130°	260.9	295.7	438.8	667.0	797.5
132.5°	272.7	307.5	438.8	649.9	757.2
135°	290.5	322.4	438.8	627.6	720.4
137.5°	305.4	339.6	438.8	603.0	682.5
140°	317.2	349.1	438.8	588.6	661.1
142.5°	329.1	358.6	441.1	571.9	639.8
145°	343.9	372.9	441.7	546.8	604.8
147.5°	361.7	387.2	445.3	528.7	573.4
150°	373.5	396.7	447.7	516.7	554.4
152.5°	385.4	406.3	447.7	507.1	537.8
155°	403.2	417.7	450.6	495.6	518.8
157.5°	417.4	431.3	454.2	488.4	505.2
160°	426.9	438.5	456.6	483.6	498.1
162.5°	434.0	445.6	458.9	481.1	490.9
165°	447.7	453.5	462.5	474.5	483.2
167.5°	455.4	460.6	465.4	471.5	476.7
170°	462.5	465.4	465.4	471.4	474.3
172.5°	464.9	470.1	467.8	469.1	472.0
175°	471.4	474.3	471.4	468.3	465.4
177.5°	471.4	473.7	471.4	471.3	469.0
180°	471.4	471.4	471.4	471.4	471.4

(END OF REPORT)