

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: P645218

Luminaire Tested: OMN4DP-SR4F0-100D940-CLB-1DUDD-WW

Issue Date: 2/16/2023



**Test Information**

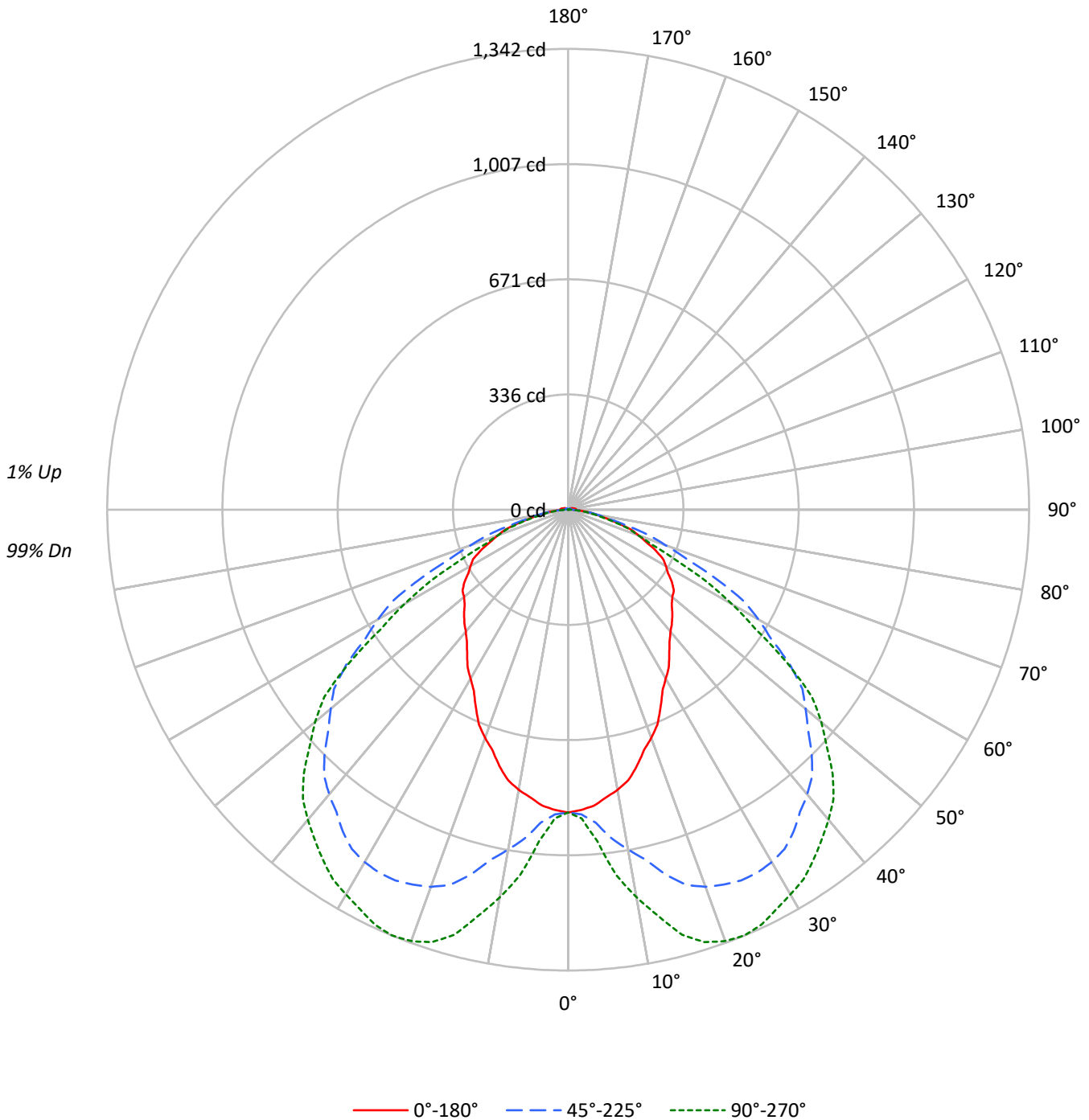
Test Method: LM-79-2019  
Report Number: P645218  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/16/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: OMN4DP-SR4F0-100D940-CLB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - BATWING LENS - 1000 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3410.0 lumens  
Efficiency: N/A  
Efficacy: 114.0 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: Direct  
  
Input Watts (W): 29.9  
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	119	119	119	119	116	116	116	116	111	111	111		106	106	106		101	101	101	99
1	109	104	100	97	106	102	98	95	98	95	92		94	91	89		90	88	86	84
2	99	91	85	79	97	89	83	78	86	81	76		82	78	74		79	76	73	70
3	91	80	72	66	88	79	71	65	75	69	64		73	67	63		70	65	62	59
4	83	71	62	56	80	70	61	55	67	60	54		65	58	53		62	57	53	50
5	76	63	54	48	74	62	54	47	60	52	47		58	51	46		56	50	46	43
6	70	57	48	41	68	56	47	41	54	46	41		52	45	40		50	45	40	38
7	65	51	42	36	63	50	42	36	49	41	36		47	41	36		46	40	35	33
8	60	47	38	32	59	46	38	32	44	37	32		43	36	32		42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	29		40	33	28		39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26		37	30	26		36	30	25	24

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

	0°	45°	90°
0°	14236	14236	14236
5°	14024	14822	15686
10°	13580	16472	18792
15°	12921	18404	21421
20°	12155	20081	22969
25°	11323	21223	23742
30°	10590	22095	24121
35°	10104	22551	24532
40°	9767	22818	24850
45°	9784	22893	24859
50°	9939	22662	24154
55°	10390	22221	21931
60°	10595	20657	17809
65°	10732	18094	13081
70°	10258	14228	10164
75°	9208	10618	8571
80°	7820	8387	6862
85°	7595	6836	5706

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 24859 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.4	2.7
10°-20°	300.5	8.8
20°-30°	499.2	14.6
30°-40°	629.8	18.5
40°-50°	673.2	19.7
50°-60°	594.2	17.4
60°-70°	381.3	11.2
70°-80°	169.1	5.0
80°-90°	43.8	1.3
90°-100°	11.5	0.3
100°-110°	7.4	0.2
110°-120°	5.6	0.2
120°-130°	3.6	0.1
130°-140°	0.4	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	890.1	26.1
0°-40°	1519.9	44.6
0°-60°	2787.3	81.7
0°-90°	3381.6	99.2
90°-120°	24.5	0.7
90°-150°	28.5	0.8
90°-180°	28.0	0.8
0°-180°	3410.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	882	882	882	882	882	
5°	865	891	914	946	968	81
15°	773	891	1101	1233	1282	216
25°	636	862	1191	1303	1333	293
35°	513	787	1144	1218	1245	322
45°	428	673	1003	1065	1089	331
55°	369	530	789	793	779	327
65°	281	355	474	384	342	275
75°	148	164	170	145	137	158
85°	41	35	37	33	31	43
90°	14	14	12	12	8	10
95°	23	14	10	6	4	17
105°	14	12	6	2	0	16
115°	10	8	6	2	0	11
125°	6	6	6	2	0	6
135°	0	0	0	0	0	1
145°	0	0	0	0	0	0
155°	0	0	0	0	0	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	881.7	881.7	881.7	881.7	881.7
2.5°	875.1	887.9	888.2	893.3	899.7
5°	865.3	891.3	914.5	945.7	967.8
7.5°	844.8	891.3	965.3	1037.9	1074.0
10°	828.3	892.5	1004.7	1102.0	1146.2
12.5°	807.0	892.0	1044.0	1161.2	1211.8
15°	773.0	891.3	1101.0	1233.4	1281.5
17.5°	733.6	887.6	1145.7	1278.3	1320.4
20°	707.4	883.8	1168.7	1294.7	1336.8
22.5°	677.9	875.1	1181.8	1302.9	1341.8
25°	635.6	862.2	1191.3	1302.7	1332.7
27.5°	594.2	843.6	1191.7	1286.2	1311.8
30°	568.0	828.6	1185.1	1269.7	1293.8
32.5°	545.0	812.0	1172.0	1250.1	1275.7
35°	512.6	787.2	1144.1	1218.5	1244.6
37.5°	484.7	759.0	1108.8	1181.3	1211.8
40°	463.4	736.0	1082.6	1154.9	1179.0
42.5°	447.0	711.6	1051.4	1122.0	1142.9
45°	428.5	673.1	1002.6	1064.7	1088.7
47.5°	408.8	633.4	946.4	1005.0	1020.7
50°	395.7	604.2	902.2	955.6	961.6
52.5°	387.5	573.6	859.5	893.2	894.4
55°	369.1	529.5	789.4	793.2	779.1
57.5°	344.5	478.0	700.4	680.4	646.7
60°	328.1	442.3	639.7	599.7	551.5
62.5°	311.7	408.3	575.7	510.9	454.8
65°	280.9	355.1	473.6	384.5	342.4
67.5°	245.2	296.5	371.9	287.6	259.6
70°	217.3	257.4	301.4	235.3	215.3
72.5°	191.1	218.4	244.0	194.5	184.1
75°	147.6	163.7	170.2	145.4	137.4
77.5°	108.7	109.5	118.1	102.4	98.4
80°	84.1	80.1	90.2	77.8	73.8
82.5°	64.4	58.8	65.6	56.5	54.1
85°	41.0	35.0	36.9	32.8	30.8
87.5°	24.2	19.4	18.9	17.2	14.8
90°	14.4	14.4	12.3	12.2	8.2
92.5°	19.3	14.5	10.7	8.9	4.9
95°	22.6	14.5	10.3	6.1	4.1
97.5°	20.1	14.1	7.8	4.1	2.1
100°	18.5	12.4	6.2	4.1	2.1
102.5°	16.8	12.4	6.2	2.4	0.4
105°	14.4	12.3	6.2	2.0	0.0
107.5°	13.9	10.3	6.2	2.0	0.0
110°	12.3	10.3	6.2	2.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	12.3	10.3	6.2	2.0	0.0
115°	10.3	8.2	6.2	2.0	0.0
117.5°	9.8	8.2	6.2	2.0	0.0
120°	8.2	8.2	6.2	2.0	0.0
122.5°	8.2	6.6	4.5	2.0	0.0
125°	6.2	6.2	6.2	2.0	0.0
127.5°	4.1	5.7	4.1	1.6	0.0
130°	4.1	4.1	4.1	0.0	0.0
132.5°	0.8	0.8	0.8	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)