

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: P645250

Luminaire Tested: OMN4DP-SR4F0-50D935-CLB-1DUDD-WW

Issue Date: 2/16/2023



**Test Information**

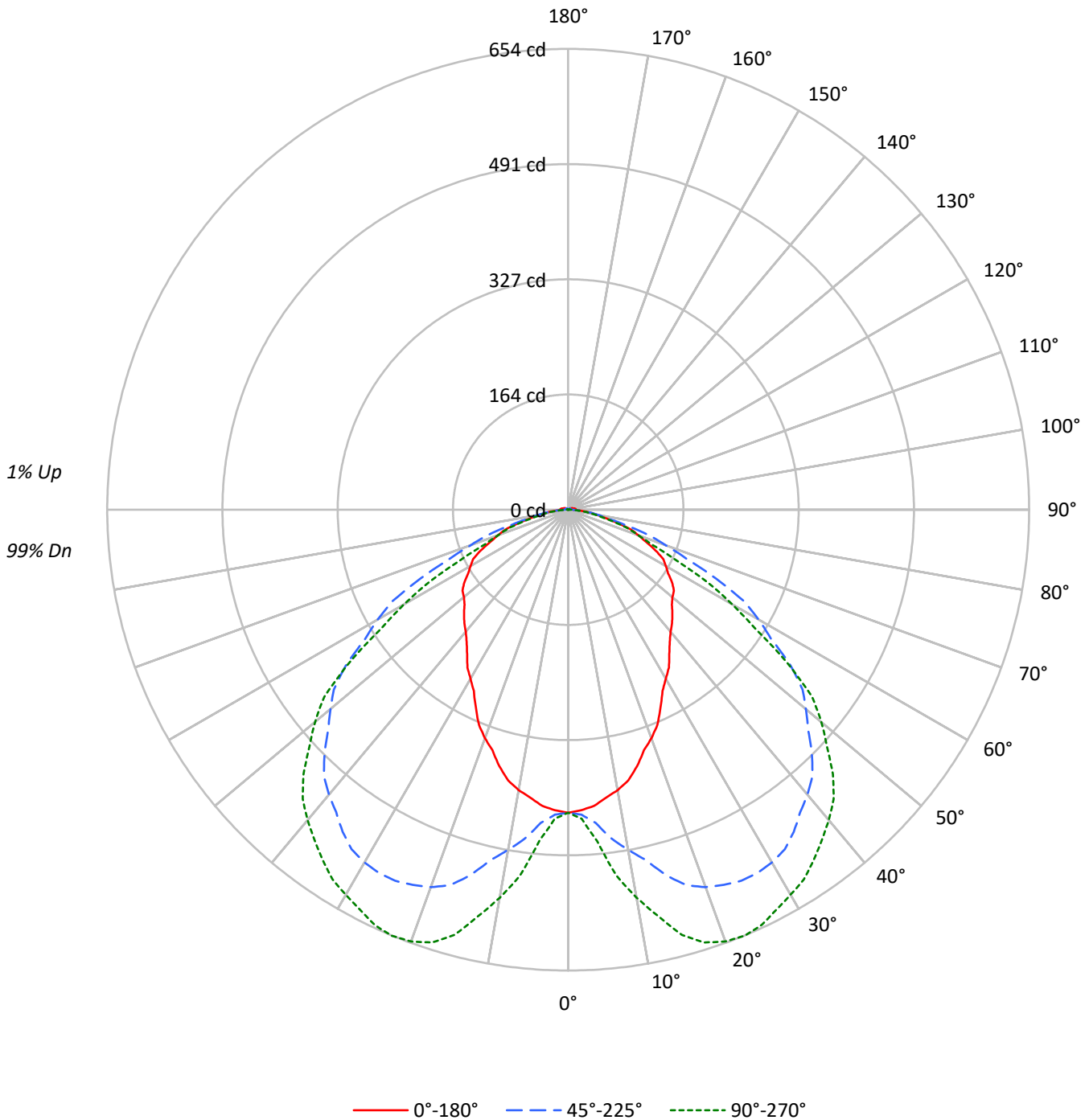
Test Method: LM-79-2019  
Report Number: P645250  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/16/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: OMN4DP-SR4F0-50D935-CLB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - BATWING LENS - 500 LUMENS PER FOOT  
DIRECT ONLY  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1663.2 lumens  
Efficiency: N/A  
Efficacy: 116.3 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): 14.3  
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	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°	6943	6943	6943
5°	6840	7229	7650
10°	6624	8034	9165
15°	6302	8976	10447
20°	5928	9794	11203
25°	5523	10350	11580
30°	5164	10776	11764
35°	4928	10998	11964
40°	4763	11129	12119
45°	4772	11166	12125
50°	4848	11052	11781
55°	5067	10838	10697
60°	5167	10075	8686
65°	5234	8825	6380
70°	5004	6939	4957
75°	4492	5178	4180
80°	3812	4091	3347
85°	3705	3335	2779

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 90°  
 Vertical Angle: 45°  
 Luminance: 12125 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	44.1	2.7
10°-20°	146.6	8.8
20°-30°	243.5	14.6
30°-40°	307.1	18.5
40°-50°	328.3	19.7
50°-60°	289.8	17.4
60°-70°	186.0	11.2
70°-80°	82.5	5.0
80°-90°	21.4	1.3
90°-100°	5.6	0.3
100°-110°	3.6	0.2
110°-120°	2.7	0.2
120°-130°	1.7	0.1
130°-140°	0.2	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°	434.1	26.1
0°-40°	741.3	44.6
0°-60°	1359.4	81.7
0°-90°	1649.3	99.2
90°-120°	12.0	0.7
90°-150°	13.9	0.8
90°-180°	14.0	0.8
0°-180°	1663.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	430	430	430	430	430	
5°	422	435	446	461	472	40
15°	377	435	537	602	625	106
25°	310	420	581	635	650	143
35°	250	384	558	594	607	157
45°	209	328	489	519	531	161
55°	180	258	385	387	380	160
65°	137	173	231	188	167	134
75°	72	80	83	71	67	77
85°	20	17	18	16	15	21
90°	7	7	6	6	4	5
95°	11	7	5	3	2	8
105°	7	6	3	1	0	8
115°	5	4	3	1	0	5
125°	3	3	3	1	0	3
135°	0	0	0	0	0	0
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°	430.0	430.0	430.0	430.0	430.0
2.5°	426.8	433.1	433.2	435.7	438.8
5°	422.0	434.7	446.0	461.2	472.0
7.5°	412.0	434.7	470.8	506.2	523.8
10°	404.0	435.3	490.0	537.5	559.0
12.5°	393.6	435.1	509.2	566.4	591.0
15°	377.0	434.7	537.0	601.5	625.0
17.5°	357.8	432.9	558.8	623.5	644.0
20°	345.0	431.0	570.0	631.5	652.0
22.5°	330.6	426.8	576.4	635.4	654.4
25°	310.0	420.5	581.0	635.3	650.0
27.5°	289.8	411.4	581.2	627.3	639.8
30°	277.0	404.1	578.0	619.3	631.0
32.5°	265.8	396.0	571.6	609.7	622.2
35°	250.0	384.0	558.0	594.3	607.0
37.5°	236.4	370.2	540.8	576.1	591.0
40°	226.0	359.0	528.0	563.3	575.0
42.5°	218.0	347.1	512.8	547.2	557.4
45°	209.0	328.3	489.0	519.3	531.0
47.5°	199.4	308.9	461.6	490.2	497.8
50°	193.0	294.7	440.0	466.1	469.0
52.5°	189.0	279.7	419.2	435.6	436.2
55°	180.0	258.2	385.0	386.8	380.0
57.5°	168.0	233.1	341.6	331.8	315.4
60°	160.0	215.7	312.0	292.5	269.0
62.5°	152.0	199.1	280.8	249.2	221.8
65°	137.0	173.2	231.0	187.5	167.0
67.5°	119.6	144.6	181.4	140.3	126.6
70°	106.0	125.6	147.0	114.8	105.0
72.5°	93.2	106.5	119.0	94.9	89.8
75°	72.0	79.8	83.0	70.9	67.0
77.5°	53.0	53.4	57.6	50.0	48.0
80°	41.0	39.0	44.0	38.0	36.0
82.5°	31.4	28.7	32.0	27.6	26.4
85°	20.0	17.1	18.0	16.0	15.0
87.5°	11.8	9.5	9.2	8.4	7.2
90°	7.0	7.0	6.0	6.0	4.0
92.5°	9.4	7.1	5.2	4.4	2.4
95°	11.0	7.1	5.0	3.0	2.0
97.5°	9.8	6.9	3.8	2.0	1.0
100°	9.0	6.1	3.0	2.0	1.0
102.5°	8.2	6.0	3.0	1.2	0.2
105°	7.0	6.0	3.0	1.0	0.0
107.5°	6.8	5.0	3.0	1.0	0.0
110°	6.0	5.0	3.0	1.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	6.0	5.0	3.0	1.0	0.0
115°	5.0	4.0	3.0	1.0	0.0
117.5°	4.8	4.0	3.0	1.0	0.0
120°	4.0	4.0	3.0	1.0	0.0
122.5°	4.0	3.2	2.2	1.0	0.0
125°	3.0	3.0	3.0	1.0	0.0
127.5°	2.0	2.8	2.0	0.8	0.0
130°	2.0	2.0	2.0	0.0	0.0
132.5°	0.4	0.4	0.4	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)