

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: P644989

Luminaire Tested: OMN4DIP-SR4F0-50D50U940-CLBOOB-1DUDD-WW

Issue Date: 2/16/2023



Test Information

Test Method: LM-79-2019
Report Number: P644989
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-SR4F0-50D50U940-CLBOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - BATWING LENS - 500 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

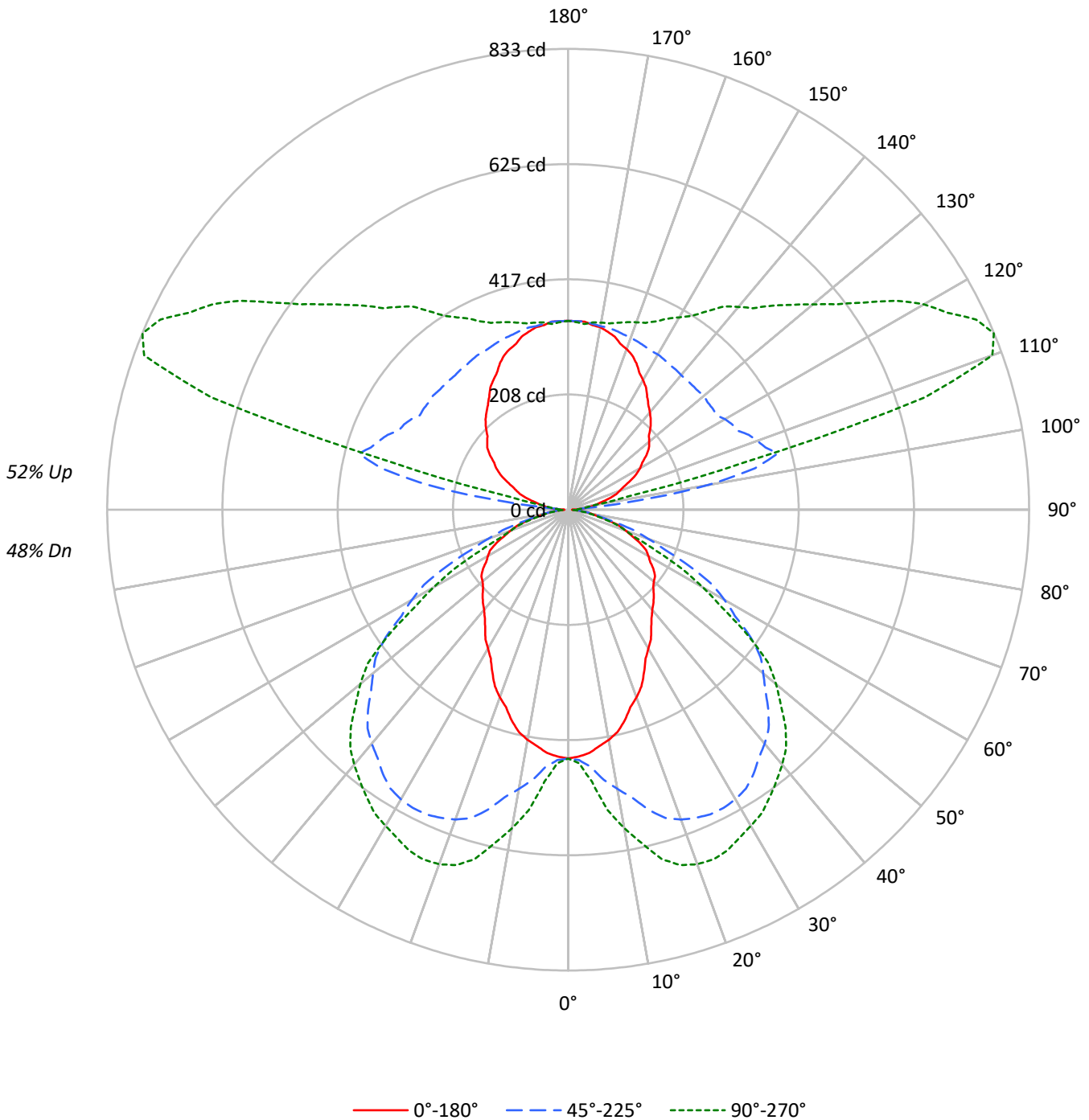
Lumens per Lamp: N/A
Luminaire Lumens: 3572.9 lumens
Efficiency: N/A
Efficacy: 123.6 lumens/watt
Spacing Criteria (0/90/45): 0.99 / 1.87 / 1.75
Luminous Opening: Rectangular (W 0.17' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 28.9
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	50	30	10	0	
RCR																						
0	107	107	107	107	98	98	98	98	82	82	82	68	68	68	55	55	55	48				48
1	98	93	89	86	90	86	83	80	72	70	68	60	58	57	48	47	46	41				41
2	89	81	75	70	81	75	70	65	63	60	56	53	50	47	43	41	39	34				34
3	81	71	64	58	74	66	60	54	56	51	47	46	43	40	38	35	33	29				29
4	74	63	55	49	68	58	51	46	49	44	40	41	37	34	33	31	28	25				25
5	68	56	48	42	62	52	45	39	44	38	34	37	33	29	30	27	24	21				21
6	62	50	42	36	57	46	39	34	40	34	30	33	29	25	27	24	21	18				18
7	57	45	37	31	53	42	35	30	36	30	26	30	26	22	25	21	19	16				16
8	53	41	33	28	49	38	31	26	32	27	23	27	23	20	22	19	17	14				14
9	49	37	30	25	45	35	28	23	30	24	20	25	21	18	21	17	15	13				13
10	46	34	27	22	42	32	25	21	27	22	18	23	19	16	19	16	13	12				12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7261	7261	7261
5°	7152	7559	8000
10°	6927	8402	9584
15°	6591	9387	10927
20°	6199	10242	11716
25°	5776	10824	12111
30°	5401	11270	12303
35°	5154	11503	12512
40°	4983	11639	12676
45°	4991	11677	12680
50°	5069	11560	12321
55°	5301	11336	11187
60°	5402	10537	9084
65°	5475	9230	6674
70°	5235	7256	5183
75°	4697	5415	4373
80°	3989	4277	3505
85°	3872	3483	2908

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 90°
 Vertical Angle: 45°
 Luminance: 12680 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	46.1	1.3
10°-20°	153.3	4.3
20°-30°	254.6	7.1
30°-40°	321.2	9.0
40°-50°	343.4	9.6
50°-60°	303.1	8.5
60°-70°	194.5	5.4
70°-80°	86.3	2.4
80°-90°	23.1	0.6
90°-100°	47.8	1.3
100°-110°	302.7	8.5
110°-120°	408.7	11.4
120°-130°	332.1	9.3
130°-140°	265.8	7.4
140°-150°	209.4	5.9
150°-160°	153.1	4.3
160°-170°	95.1	2.7
170°-180°	32.4	0.9
0°-30°	454.0	12.7
0°-40°	775.2	21.7
0°-60°	1421.7	39.8
0°-90°	1725.6	48.3
90°-120°	759.2	21.2
90°-150°	1566.6	43.8
90°-180°	1847.0	51.7
0°-180°	3572.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	450	450	450	450	450	
5°	441	455	466	482	494	41
15°	394	455	562	629	654	110
25°	324	440	608	664	680	149
35°	262	402	584	622	635	164
45°	219	343	511	543	555	169
55°	188	270	403	405	397	167
65°	143	181	242	196	175	140
75°	75	84	87	74	70	80
85°	21	18	19	17	16	22
90°	7	9	11	13	11	6
95°	29	39	22	22	26	28
105°	74	108	392	497	328	78
115°	123	147	338	697	813	123
125°	173	196	319	553	652	153
135°	210	233	318	454	522	162
145°	249	270	320	396	438	156
155°	292	302	326	359	376	134
165°	324	328	335	344	350	91
175°	341	343	341	339	337	32
180°	341	341	341	341	341	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	449.7	449.7	449.7	449.7	449.7
2.5°	446.4	452.9	453.1	455.6	458.9
5°	441.3	454.6	466.4	482.4	493.6
7.5°	430.9	454.6	492.4	529.4	547.8
10°	422.5	455.2	512.5	562.1	584.6
12.5°	411.6	455.0	532.5	592.3	618.1
15°	394.3	454.6	561.6	629.1	653.7
17.5°	374.2	452.7	584.4	652.1	673.5
20°	360.8	450.8	596.1	660.4	681.9
22.5°	345.8	446.4	602.8	664.6	684.4
25°	324.2	439.8	607.6	664.5	679.8
27.5°	303.1	430.3	607.8	656.0	669.1
30°	289.7	422.6	604.5	647.7	659.9
32.5°	278.0	414.2	597.8	637.6	650.7
35°	261.5	401.6	583.6	621.5	634.8
37.5°	247.2	387.1	565.6	602.6	618.1
40°	236.4	375.4	552.2	589.1	601.4
42.5°	228.0	363.0	536.3	572.3	583.0
45°	218.6	343.3	511.4	543.1	555.3
47.5°	208.5	323.1	482.8	512.6	520.6
50°	201.8	308.2	460.2	487.4	490.5
52.5°	197.7	292.6	438.4	455.6	456.2
55°	188.3	270.1	402.7	404.6	397.4
57.5°	175.7	243.8	357.3	347.0	329.9
60°	167.3	225.6	326.3	305.9	281.3
62.5°	159.0	208.3	293.7	260.6	232.0
65°	143.3	181.1	241.6	196.1	174.7
67.5°	125.1	151.3	189.7	146.7	132.4
70°	110.9	131.3	153.7	120.0	109.8
72.5°	97.5	111.4	124.5	99.2	93.9
75°	75.3	83.5	86.8	74.2	70.1
77.5°	55.4	55.8	60.2	52.2	50.2
80°	42.9	40.8	46.0	39.7	37.7
82.5°	32.8	30.0	33.5	28.8	27.6
85°	20.9	17.8	18.8	16.7	15.7
87.5°	12.3	10.3	10.5	10.0	8.8
90°	7.3	9.4	10.6	12.7	10.6
92.5°	15.0	14.6	14.9	17.9	17.5
95°	28.7	39.3	22.4	22.5	25.7
97.5°	40.7	68.3	130.2	39.3	33.2
100°	50.2	82.8	256.4	76.6	50.4
102.5°	59.6	94.7	345.6	197.9	107.9
105°	73.8	108.5	391.5	497.2	328.3
107.5°	89.1	114.1	374.0	723.2	676.4
110°	98.5	122.7	363.6	759.8	815.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	108.8	133.0	353.3	738.4	832.6
115°	123.3	147.4	337.9	696.8	813.3
117.5°	138.9	162.9	334.0	651.8	771.7
120°	150.1	173.2	327.2	617.6	742.5
122.5°	158.7	182.6	317.7	588.2	703.0
125°	172.7	195.7	318.6	552.7	652.4
127.5°	184.1	208.4	318.0	511.2	609.9
130°	190.9	216.1	319.7	482.8	577.2
132.5°	197.8	223.0	318.0	470.4	548.1
135°	210.3	233.4	317.6	454.3	521.5
137.5°	221.0	245.8	317.6	436.5	494.0
140°	229.6	252.7	317.6	426.1	478.5
142.5°	238.2	259.6	319.3	414.0	463.1
145°	248.9	269.9	319.7	395.8	437.8
147.5°	261.8	280.3	322.3	382.7	415.0
150°	270.4	287.2	324.0	374.0	401.3
152.5°	279.0	294.1	324.0	367.0	389.3
155°	291.8	302.3	326.2	358.7	375.5
157.5°	302.1	312.2	328.8	353.5	365.7
160°	309.0	317.4	330.5	350.0	360.5
162.5°	314.2	322.6	332.2	348.2	355.4
165°	324.0	328.2	334.8	343.5	349.8
167.5°	329.6	333.4	336.9	341.3	345.1
170°	334.8	336.9	336.9	341.2	343.3
172.5°	336.5	340.3	338.6	339.5	341.6
175°	341.2	343.3	341.2	339.0	336.9
177.5°	341.2	342.9	341.2	341.2	339.5
180°	341.2	341.2	341.2	341.2	341.2

(END OF REPORT)