

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: P644591

Luminaire Tested: OMN4DIP-SR4F0-100D25U935-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644591
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-23)
Test Lab: INNOVATION CENTER
Issue Date: 9/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: OMN4DIP-SR4F0-100D25U935-BBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - BLACK BAFFLE WITH MEDIUM OPTIC - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 250 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

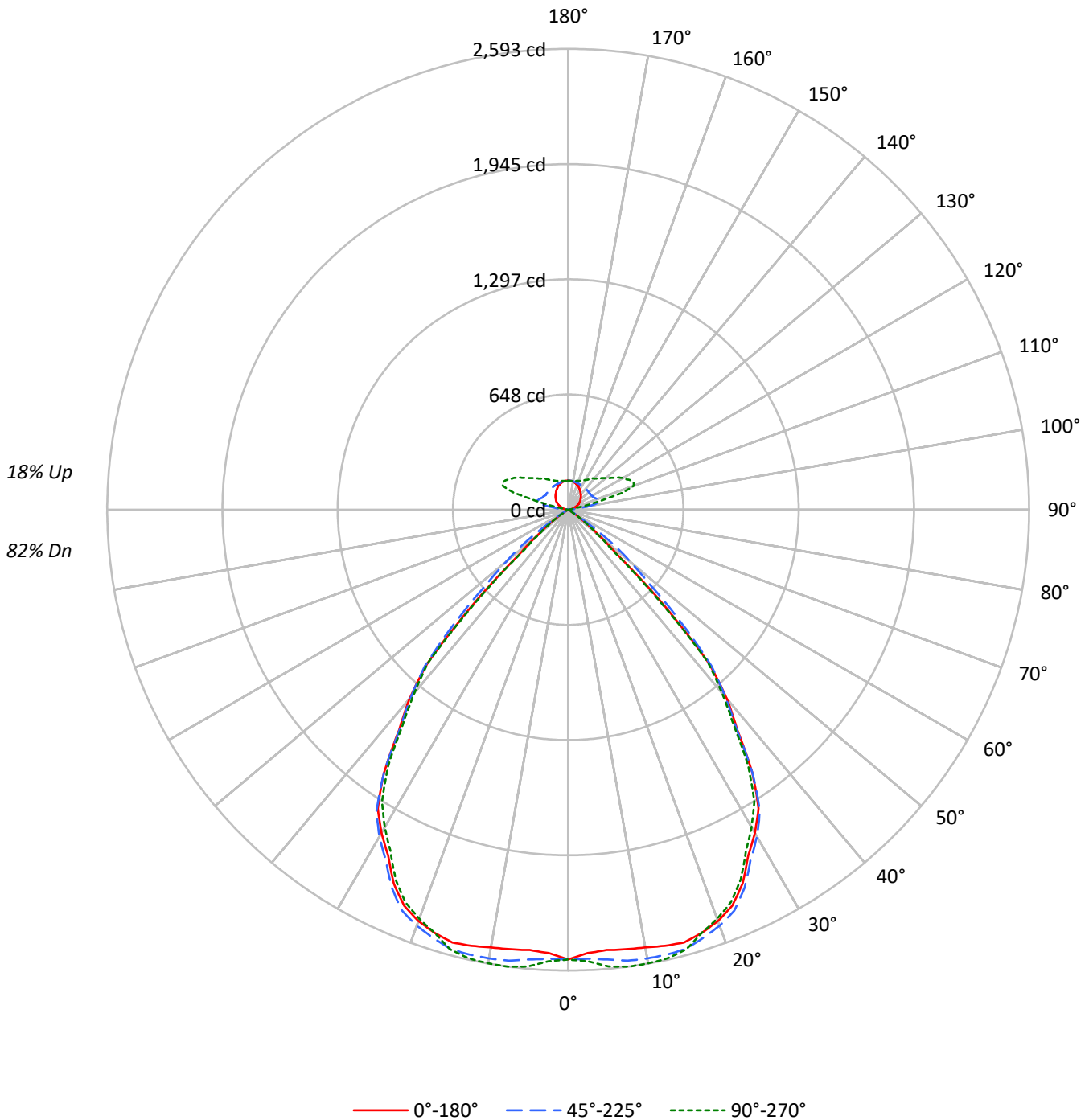
Lumens per Lamp: N/A
Luminaire Lumens: 4766.5 lumens
Efficiency: N/A
Efficacy: 102.7 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 46.4
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	115	115	115	115	110	110	110	110	101	101	101		93	93	93		85	85	85	82
1	108	105	102	99	104	101	98	96	93	91	90		86	85	84		80	79	78	75
2	101	96	91	87	97	92	88	84	86	83	80		80	78	75		75	73	71	68
3	95	87	81	77	91	84	79	75	79	75	71		74	71	68		70	67	65	62
4	89	80	73	68	85	77	72	67	73	68	64		69	65	62		65	61	59	57
5	83	73	66	61	80	71	65	60	67	62	58		63	59	56		60	56	54	52
6	78	67	60	55	75	65	59	54	62	57	53		59	54	51		56	52	49	47
7	73	62	55	50	70	60	54	49	57	52	48		55	50	46		52	48	45	43
8	68	57	51	46	66	56	50	45	53	48	44		51	46	43		48	44	41	40
9	64	53	46	42	62	52	46	41	50	44	40		47	43	39		45	41	38	36
10	61	50	43	39	59	48	42	38	46	41	37		44	40	36		42	38	35	34

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	32686	32686	32686
5°	32248	32939	33451
10°	32802	33631	33994
15°	33706	34209	34261
20°	33861	34241	33670
25°	33080	33447	32714
30°	31320	31673	30759
35°	28470	28470	27879
40°	23416	23183	22684
45°	14002	16455	13351
50°	4525	9169	4248
55°	1601	3069	1601
60°	103	868	52
65°	61	61	0
70°	76	0	0
75°	0	0	0
80°	0	0	0
85°	296	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 16455 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.4	5.1
10°-20°	720.4	15.1
20°-30°	1066.0	22.4
30°-40°	1101.9	23.1
40°-50°	641.1	13.5
50°-60°	108.6	2.3
60°-70°	4.3	0.1
70°-80°	0.6	0.0
80°-90°	0.9	0.0
90°-100°	20.1	0.4
100°-110°	143.4	3.0
110°-120°	194.7	4.1
120°-130°	158.4	3.3
130°-140°	127.4	2.7
140°-150°	100.5	2.1
150°-160°	73.5	1.5
160°-170°	45.6	1.0
170°-180°	15.6	0.3
0°-30°	2029.9	42.6
0°-40°	3131.8	65.7
0°-60°	3881.5	81.4
0°-90°	3887.3	81.6
90°-120°	358.2	7.5
90°-150°	744.5	15.6
90°-180°	879.0	18.4
0°-180°	4766.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2530	2530	2530	2530	2530	
5°	2487	2553	2540	2547	2580	238
15°	2521	2610	2558	2545	2562	709
25°	2321	2398	2347	2276	2295	1060
35°	1806	1834	1806	1760	1768	1106
45°	766	892	901	870	731	593
55°	71	83	136	77	71	78
65°	2	2	2	0	0	2
75°	0	2	0	0	0	1
85°	2	2	0	0	0	1
90°	0	1	2	3	3	1
95°	8	15	8	9	11	9
105°	32	49	186	238	158	34
115°	57	69	161	334	390	56
125°	81	92	151	265	313	72
135°	101	112	152	218	250	78
145°	119	130	153	190	210	75
155°	140	145	156	172	180	64
165°	155	157	161	165	168	44
175°	164	165	164	163	162	15
180°	164	164	164	164	164	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2530.5	2530.5	2530.5	2530.5	2530.5
2.5°	2497.3	2546.8	2528.9	2530.8	2543.2
5°	2487.1	2552.7	2540.4	2547.1	2579.9
7.5°	2494.6	2561.0	2559.4	2561.3	2593.3
10°	2500.9	2570.4	2564.1	2562.8	2591.8
12.5°	2513.5	2589.2	2564.1	2561.1	2585.4
15°	2520.6	2609.5	2558.2	2544.7	2562.1
17.5°	2496.5	2595.4	2525.8	2490.0	2496.9
20°	2463.4	2563.8	2491.0	2437.9	2449.5
22.5°	2411.2	2507.0	2442.0	2376.4	2391.1
25°	2321.1	2398.4	2346.8	2276.1	2295.4
27.5°	2193.1	2254.1	2221.6	2153.1	2165.1
30°	2099.9	2150.1	2123.6	2056.5	2062.3
32.5°	1992.4	2034.9	2006.6	1948.9	1948.6
35°	1805.5	1834.5	1805.5	1760.3	1768.0
37.5°	1561.0	1583.0	1553.5	1526.3	1530.2
40°	1388.7	1406.1	1374.9	1349.1	1345.3
42.5°	1173.8	1222.1	1191.6	1156.5	1161.9
45°	766.5	892.0	900.8	870.0	730.9
47.5°	386.4	523.5	627.0	475.8	341.0
50°	225.2	308.3	456.3	251.9	211.4
52.5°	147.8	182.9	318.8	159.2	140.3
55°	71.1	82.7	136.3	76.9	71.1
57.5°	24.5	37.6	60.4	38.5	27.3
60°	4.0	15.5	33.6	11.6	2.0
62.5°	2.4	4.7	20.9	2.3	0.4
65°	2.0	2.0	2.0	0.0	0.0
67.5°	2.0	2.0	0.0	0.0	0.0
70°	2.0	2.0	0.0	0.0	0.0
72.5°	2.0	2.0	0.0	0.0	0.0
75°	0.0	1.9	0.0	0.0	0.0
77.5°	0.0	1.9	0.0	0.0	0.0
80°	0.0	1.9	0.0	0.0	0.0
82.5°	0.0	1.9	0.0	0.0	0.0
85°	2.0	2.0	0.0	0.0	0.0
87.5°	1.6	1.8	0.4	0.6	0.6
90°	0.0	1.0	2.1	3.1	3.1
92.5°	2.5	3.5	4.5	6.4	7.2
95°	8.2	15.3	8.2	9.3	11.3
97.5°	14.6	29.3	60.5	17.9	15.4
100°	19.6	36.7	121.5	35.8	23.7
102.5°	24.5	42.4	164.3	94.3	51.7
105°	31.9	49.0	186.3	238.0	157.5
107.5°	39.3	52.2	177.9	346.4	324.4
110°	44.3	56.3	172.9	364.0	391.1

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	49.2	61.3	168.0	353.7	399.4
115°	56.6	68.7	160.6	333.8	390.1
117.5°	64.2	76.1	158.7	312.2	370.1
120°	70.0	81.1	155.4	295.8	356.1
122.5°	74.1	86.0	151.3	281.7	337.2
125°	81.3	92.4	151.3	264.6	312.9
127.5°	87.3	98.6	151.5	244.8	292.5
130°	90.6	102.7	152.3	231.6	276.9
132.5°	94.7	106.8	152.3	225.7	262.9
135°	100.9	111.9	152.3	217.9	250.1
137.5°	106.0	117.9	152.3	209.4	237.0
140°	110.1	121.2	152.3	204.4	229.5
142.5°	114.3	124.5	153.2	198.6	222.1
145°	119.4	129.5	153.4	189.9	210.0
147.5°	125.6	134.4	154.6	183.6	199.1
150°	129.7	137.7	155.4	179.4	192.5
152.5°	133.8	141.1	155.4	176.1	186.7
155°	140.0	145.0	156.5	172.1	180.1
157.5°	144.9	149.8	157.7	169.6	175.4
160°	148.2	152.3	158.5	167.9	172.9
162.5°	150.7	154.7	159.3	167.0	170.5
165°	155.4	157.4	160.6	164.8	167.8
167.5°	158.1	159.9	161.6	163.7	165.5
170°	160.6	161.6	161.6	163.7	164.7
172.5°	161.4	163.2	162.4	162.9	163.9
175°	163.7	164.7	163.7	162.6	161.6
177.5°	163.7	164.5	163.7	163.6	162.8
180°	163.7	163.7	163.7	163.7	163.7

(END OF REPORT)