

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: P644555

Luminaire Tested: OMN4DIP-SR4F0-100D150U930-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644555
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-SR4F0-100D150U930-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 - 1500 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

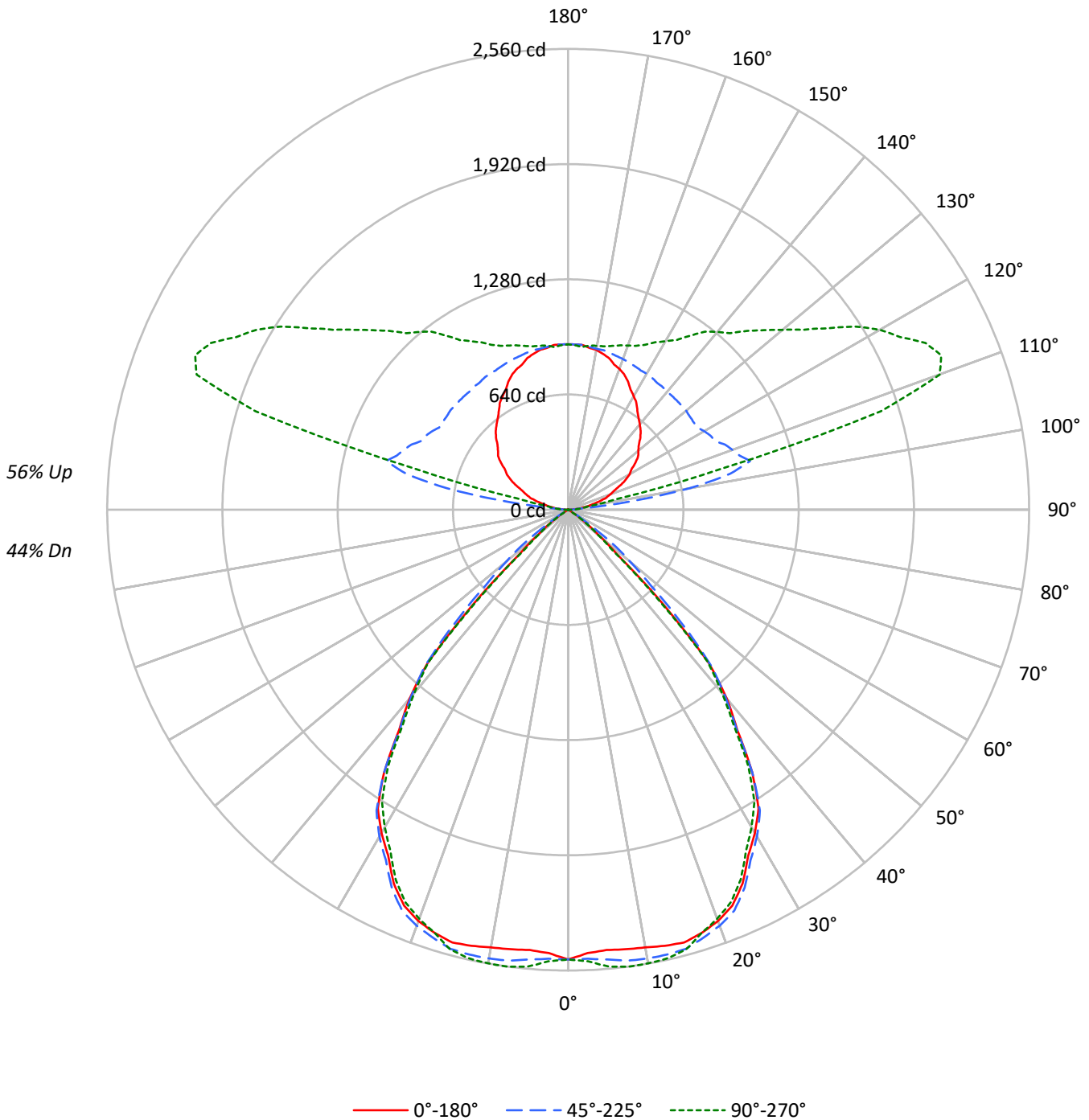
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8775.0 lumens
Efficiency: N/A
Efficacy: 101.2 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: General Diffuse

Input Watts (W): 86.7
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	106	106	106	106	97	97	97	97	80	80	80	64	64	64	50	50	50	44				
1	98	94	91	88	90	87	84	82	72	71	69	59	58	57	47	46	46	40				
2	91	85	79	75	83	78	74	70	66	63	60	54	52	51	44	43	41	37				
3	84	76	70	65	77	70	65	61	60	56	53	50	47	45	40	39	37	33				
4	78	69	62	57	71	64	58	53	54	50	47	46	43	40	37	36	34	30				
5	72	62	55	50	66	58	52	47	49	45	41	42	39	36	35	33	31	28				
6	67	56	49	44	62	53	46	42	45	41	37	39	35	33	32	30	28	25				
7	62	51	44	39	57	48	42	37	42	37	33	36	32	29	30	27	26	23				
8	58	47	40	35	54	44	38	34	38	34	30	33	29	27	28	25	23	21				
9	54	43	37	32	50	41	35	30	35	31	27	31	27	25	26	23	22	20				
10	51	40	33	29	47	38	32	28	33	28	25	28	25	22	24	22	20	18				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	32270	32270	32270
5°	31837	32520	33026
10°	32385	33203	33561
15°	33278	33773	33825
20°	33430	33805	33243
25°	32660	33021	32298
30°	30922	31271	30368
35°	28109	28109	27524
40°	23119	22888	22394
45°	13823	16245	13181
50°	4467	9053	4194
55°	1581	3031	1581
60°	101	858	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: 16245 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	240.3	2.7
10°-20°	711.2	8.1
20°-30°	1052.5	12.0
30°-40°	1087.9	12.4
40°-50°	633.0	7.2
50°-60°	107.2	1.2
60°-70°	4.2	0.0
70°-80°	0.6	0.0
80°-90°	2.6	0.0
90°-100°	113.0	1.3
100°-110°	805.0	9.2
110°-120°	1092.8	12.5
120°-130°	889.4	10.1
130°-140°	715.4	8.2
140°-150°	564.0	6.4
150°-160°	412.4	4.7
160°-170°	256.1	2.9
170°-180°	87.3	1.0
0°-30°	2004.0	22.8
0°-40°	3091.9	35.2
0°-60°	3832.1	43.7
0°-90°	3839.6	43.8
90°-120°	2010.7	22.9
90°-150°	4179.5	47.6
90°-180°	4935.0	56.2
0°-180°	8775.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2498	2498	2498	2498	2498	
5°	2455	2520	2508	2515	2547	235
15°	2489	2576	2526	2512	2530	700
25°	2292	2368	2317	2247	2266	1047
35°	1783	1811	1783	1738	1746	1092
45°	757	881	889	859	722	585
55°	70	82	135	76	70	77
65°	2	2	2	0	0	2
75°	0	2	0	0	0	1
85°	2	2	0	0	0	1
90°	0	6	12	17	17	2
95°	46	86	46	52	64	52
105°	179	275	1046	1336	884	189
115°	318	386	901	1874	2190	315
125°	456	519	849	1486	1757	406
135°	566	628	855	1223	1404	436
145°	670	727	861	1066	1179	421
155°	786	814	878	966	1011	361
165°	872	884	901	925	942	245
175°	919	924	919	913	907	87
180°	919	919	919	919	919	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2498.3	2498.3	2498.3	2498.3	2498.3
2.5°	2465.6	2514.4	2496.8	2498.6	2510.8
5°	2455.4	2520.2	2508.1	2514.7	2547.1
7.5°	2462.8	2528.4	2526.8	2528.7	2560.3
10°	2469.1	2537.7	2531.5	2530.2	2558.8
12.5°	2481.5	2556.3	2531.5	2528.5	2552.5
15°	2488.6	2576.3	2525.6	2512.4	2529.5
17.5°	2464.8	2562.4	2493.6	2458.3	2465.2
20°	2432.0	2531.2	2459.3	2406.9	2418.4
22.5°	2380.5	2475.1	2410.9	2346.1	2360.6
25°	2291.6	2367.9	2316.9	2247.2	2266.2
27.5°	2165.2	2225.5	2193.3	2125.7	2137.5
30°	2073.2	2122.7	2096.6	2030.4	2036.1
32.5°	1967.1	2009.0	1981.1	1924.1	1923.8
35°	1782.6	1811.2	1782.6	1737.9	1745.5
37.5°	1541.1	1562.9	1533.7	1506.9	1510.7
40°	1371.1	1388.2	1357.4	1332.0	1328.1
42.5°	1158.9	1206.5	1176.4	1141.8	1147.2
45°	756.7	880.7	889.3	858.9	721.6
47.5°	381.5	516.9	619.0	469.7	336.6
50°	222.3	304.3	450.5	248.7	208.7
52.5°	145.9	180.6	314.8	157.2	138.5
55°	70.2	81.7	134.6	75.9	70.2
57.5°	24.2	37.2	59.7	38.0	26.9
60°	3.9	15.3	33.2	11.5	2.0
62.5°	2.3	4.6	20.7	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	2.7	2.3	3.5	3.5
90°	0.0	5.7	11.6	17.3	17.3
92.5°	13.9	19.5	25.4	35.9	40.4
95°	46.2	85.8	46.2	52.3	63.6
97.5°	82.1	164.5	339.8	100.2	86.7
100°	109.8	205.8	681.9	200.7	132.9
102.5°	137.5	238.1	922.2	529.6	290.1
105°	179.1	275.2	1045.9	1336.1	884.1
107.5°	220.7	293.1	998.5	1944.5	1821.4
110°	248.5	316.3	970.8	2043.3	2195.8



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	276.2	344.0	943.0	1985.5	2242.0
115°	317.8	385.6	901.4	1873.6	2190.0
117.5°	360.6	427.2	891.0	1752.5	2077.9
120°	392.9	455.1	872.5	1660.3	1999.3
122.5°	416.0	482.7	849.4	1581.1	1893.0
125°	456.5	518.6	849.4	1485.5	1756.7
127.5°	490.0	553.3	850.6	1374.4	1642.2
130°	508.5	576.3	855.2	1300.2	1554.4
132.5°	531.6	599.4	855.2	1266.8	1475.8
135°	566.3	628.4	855.2	1223.4	1404.2
137.5°	595.2	661.9	855.2	1175.4	1330.2
140°	618.3	680.4	855.2	1147.3	1288.6
142.5°	641.4	699.0	859.8	1114.8	1247.0
145°	670.3	726.8	861.0	1065.8	1178.8
147.5°	705.0	754.7	867.9	1030.5	1117.6
150°	728.1	773.3	872.5	1007.1	1080.6
152.5°	751.2	791.9	872.5	988.3	1048.2
155°	785.9	814.1	878.3	966.0	1011.2
157.5°	813.6	840.7	885.3	951.9	984.7
160°	832.1	854.7	889.9	942.5	970.8
162.5°	846.0	868.6	894.5	937.7	956.9
165°	872.5	883.8	901.4	924.9	941.9
167.5°	887.6	897.7	907.2	919.0	929.2
170°	901.4	907.1	907.2	918.9	924.6
172.5°	906.1	916.2	911.8	914.3	919.9
175°	918.8	924.4	918.8	912.9	907.2
177.5°	918.8	923.3	918.8	918.7	914.2
180°	918.8	918.8	918.8	918.8	918.8

(END OF REPORT)