

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: P644915

Luminaire Tested: OMN4DIP-SR4F0-50D150U930-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644915
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-SR4F0-50D150U930-BBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - BLACK BAFFLE WITH MEDIUM OPTIC - 500 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

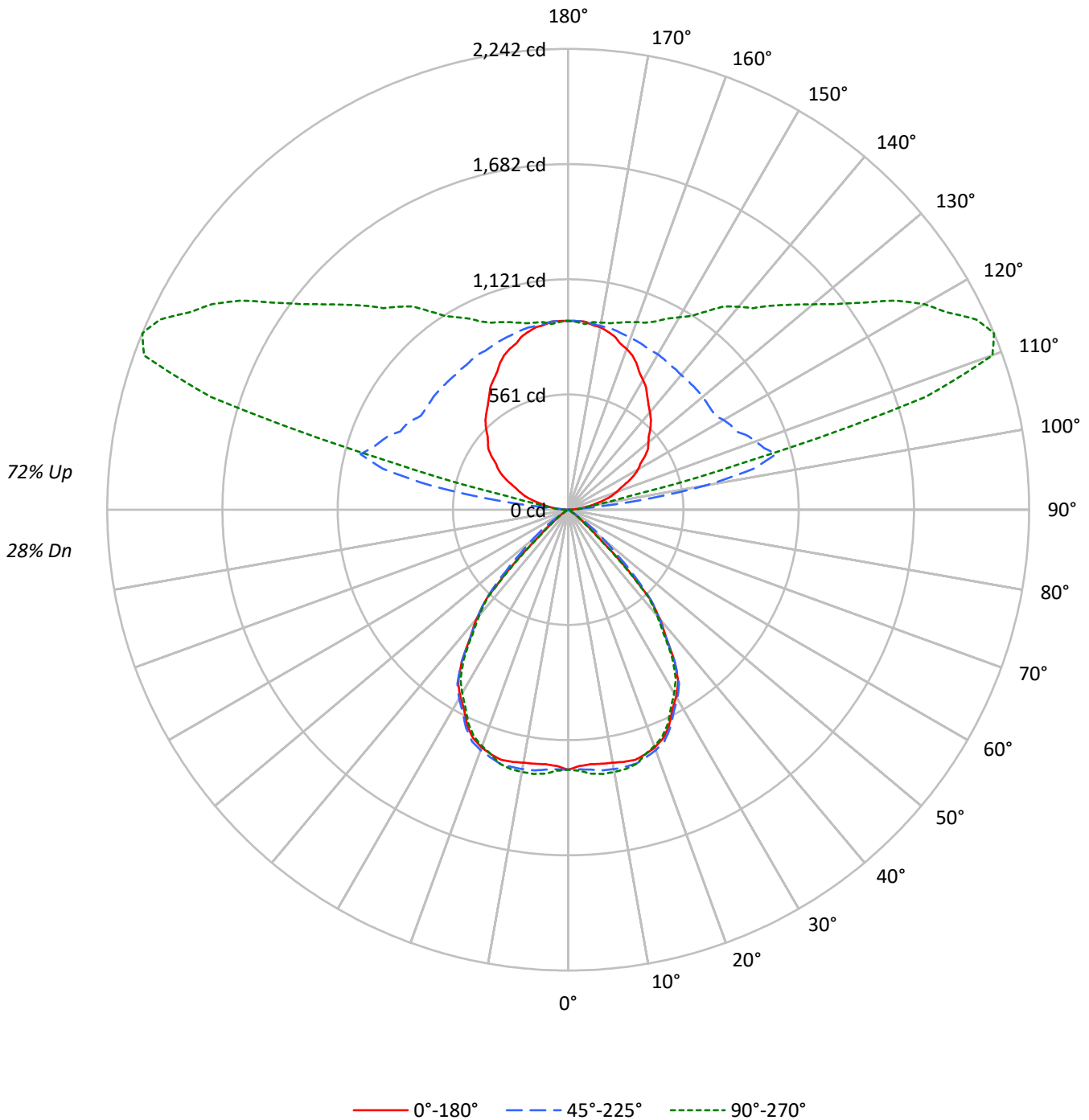
Lumens per Lamp: N/A
Luminaire Lumens: 6880.1 lumens
Efficiency: N/A
Efficacy: 103.0 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 66.8
Input Voltage (V): 120
Input Current (A_{in}): 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	102	102	102	102	91	91	91	91	71	71	71	53	53	53	36	36	36	28
1	94	90	87	84	84	81	78	76	64	62	61	48	47	46	34	33	33	26
2	87	80	75	70	77	72	68	64	57	54	52	44	42	40	31	30	29	24
3	80	71	65	60	71	65	59	55	52	48	45	40	37	36	29	27	26	22
4	73	64	57	52	66	58	52	48	47	43	39	36	34	31	26	25	24	20
5	68	57	50	45	61	52	46	42	42	38	35	33	30	28	24	23	21	18
6	63	52	45	40	56	47	41	37	38	34	31	30	27	25	22	21	19	16
7	58	47	40	35	52	43	37	32	35	31	27	28	25	23	21	19	18	15
8	54	43	36	31	49	39	33	29	32	28	25	26	23	20	19	18	16	14
9	50	39	32	28	45	36	30	26	30	25	22	24	21	19	18	16	15	13
10	47	36	29	25	43	33	27	23	27	23	20	22	19	17	17	15	14	12

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16336	16336	16336
5°	16117	16462	16718
10°	16394	16808	16989
15°	16847	17097	17123
20°	16922	17113	16827
25°	16534	16716	16350
30°	15653	15829	15373
35°	14229	14229	13933
40°	11704	11586	11336
45°	6998	8224	6673
50°	2261	4584	2122
55°	799	1534	799
60°	52	434	26
65°	31	31	0
70°	38	0	0
75°	0	0	0
80°	0	0	0
85°	148	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 8224 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.7	1.8
10°-20°	360.0	5.2
20°-30°	532.8	7.7
30°-40°	550.7	8.0
40°-50°	320.4	4.7
50°-60°	54.3	0.8
60°-70°	2.1	0.0
70°-80°	0.3	0.0
80°-90°	2.4	0.0
90°-100°	113.0	1.6
100°-110°	805.0	11.7
110°-120°	1092.8	15.9
120°-130°	889.4	12.9
130°-140°	715.4	10.4
140°-150°	564.0	8.2
150°-160°	412.4	6.0
160°-170°	256.1	3.7
170°-180°	87.3	1.3
0°-30°	1014.5	14.7
0°-40°	1565.2	22.7
0°-60°	1939.9	28.2
0°-90°	1944.7	28.3
90°-120°	2010.7	29.2
90°-150°	4179.5	60.7
90°-180°	4935.0	71.7
0°-180°	6880.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1265	1265	1265	1265	1265	
5°	1243	1276	1270	1273	1289	119
15°	1260	1304	1278	1272	1280	354
25°	1160	1199	1173	1138	1147	530
35°	902	917	902	880	884	553
45°	383	446	450	435	365	296
55°	36	41	68	38	36	39
65°	1	1	1	0	0	1
75°	0	1	0	0	0	0
85°	1	1	0	0	0	0
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°	1264.7	1264.7	1264.7	1264.7	1264.7
2.5°	1248.1	1272.8	1263.9	1264.8	1271.0
5°	1243.0	1275.8	1269.6	1273.0	1289.4
7.5°	1246.7	1279.9	1279.1	1280.1	1296.1
10°	1249.9	1284.6	1281.5	1280.8	1295.3
12.5°	1256.2	1294.1	1281.5	1280.0	1292.1
15°	1259.8	1304.2	1278.5	1271.8	1280.5
17.5°	1247.7	1297.1	1262.3	1244.4	1247.9
20°	1231.1	1281.3	1245.0	1218.4	1224.2
22.5°	1205.1	1253.0	1220.5	1187.7	1195.0
25°	1160.1	1198.7	1172.9	1137.6	1147.2
27.5°	1096.1	1126.6	1110.3	1076.1	1082.1
30°	1049.5	1074.6	1061.3	1027.8	1030.7
32.5°	995.8	1017.0	1002.9	974.0	973.9
35°	902.4	916.9	902.4	879.8	883.6
37.5°	780.1	791.2	776.4	762.8	764.7
40°	694.1	702.7	687.1	674.3	672.3
42.5°	586.6	610.8	595.5	578.0	580.7
45°	383.1	445.8	450.2	434.8	365.3
47.5°	193.1	261.7	313.4	237.8	170.4
50°	112.5	154.1	228.1	125.9	105.6
52.5°	73.8	91.4	159.3	79.6	70.1
55°	35.5	41.3	68.1	38.4	35.5
57.5°	12.2	18.8	30.2	19.2	13.6
60°	2.0	7.8	16.8	5.8	1.0
62.5°	1.2	2.3	10.5	1.2	0.2
65°	1.0	1.0	1.0	0.0	0.0
67.5°	1.0	1.0	0.0	0.0	0.0
70°	1.0	1.0	0.0	0.0	0.0
72.5°	1.0	1.0	0.0	0.0	0.0
75°	0.0	1.0	0.0	0.0	0.0
77.5°	0.0	1.0	0.0	0.0	0.0
80°	0.0	1.0	0.0	0.0	0.0
82.5°	0.0	1.0	0.0	0.0	0.0
85°	1.0	1.0	0.0	0.0	0.0
87.5°	0.8	1.9	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)