

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: P644855

Luminaire Tested: OMN4DIP-SR4F0-50D100U930-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644855
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-SR4F0-50D100U930-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 - 1000 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

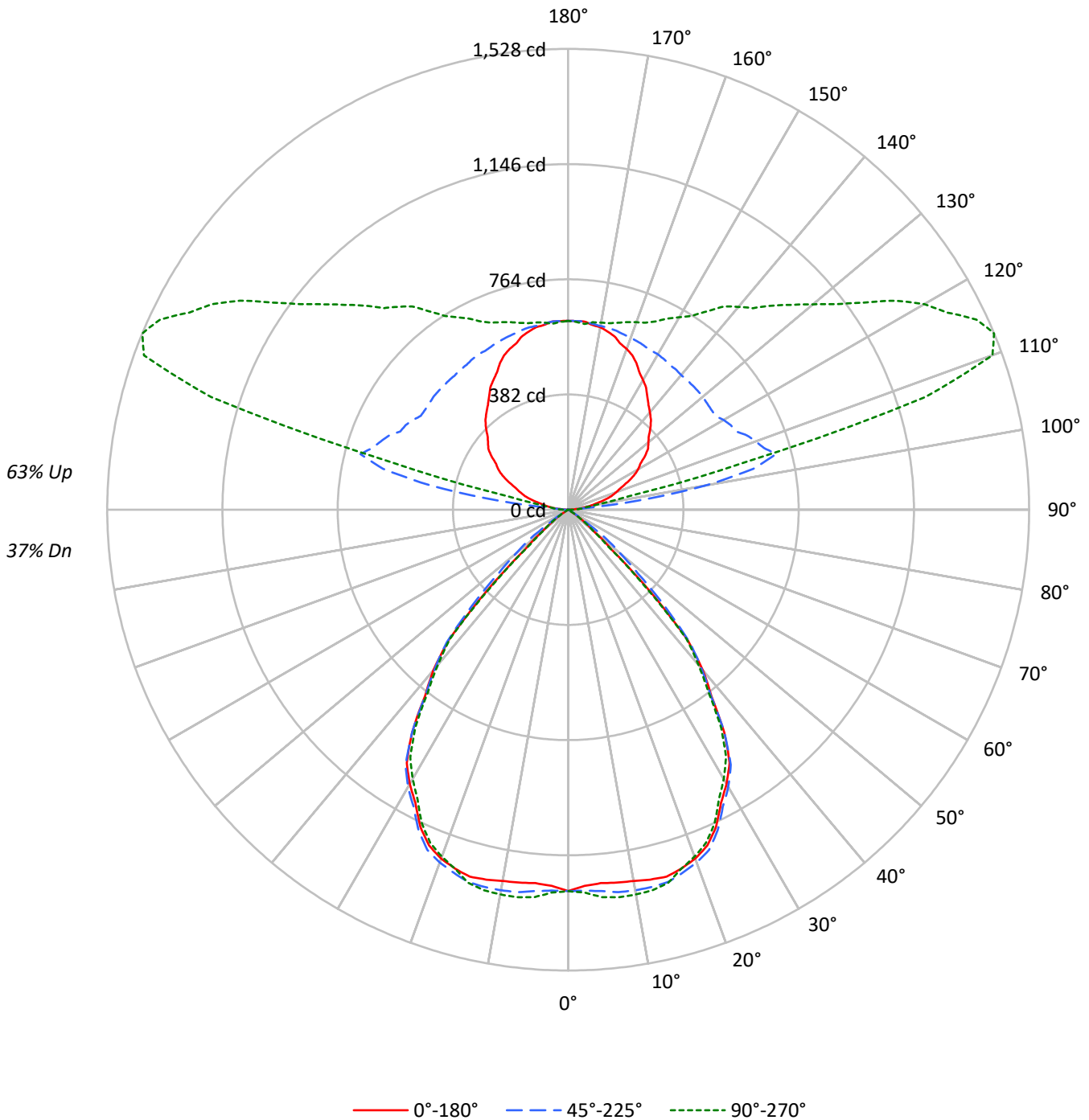
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5307.4 lumens
Efficiency: N/A
Efficacy: 112.4 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): 47.2
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	104	104	104	104	94	94	94	94	76	76	76	59	59	59	44	44	44	37				
1	96	93	89	86	87	84	81	79	69	67	65	54	53	52	41	40	40	34				
2	89	83	77	73	81	75	71	67	62	59	56	49	48	46	38	37	36	31				
3	82	74	68	63	74	68	62	58	56	52	49	45	43	41	35	34	32	28				
4	76	66	60	54	69	61	55	51	51	47	43	41	38	36	32	31	29	25				
5	70	60	53	48	64	55	49	44	46	42	38	38	35	32	30	28	27	23				
6	65	54	47	42	59	50	44	39	42	38	34	35	32	29	28	26	24	21				
7	60	49	42	37	55	46	40	35	39	34	31	32	29	26	26	24	22	19				
8	56	45	38	33	51	42	36	31	35	31	28	30	26	24	24	22	20	18				
9	53	41	35	30	48	38	32	28	33	28	25	27	24	22	22	20	18	16				
10	49	38	32	27	45	35	30	26	30	26	23	25	22	20	21	19	17	15				

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	2.3
10°-20°	360.0	6.8
20°-30°	532.8	10.0
30°-40°	550.7	10.4
40°-50°	320.4	6.0
50°-60°	54.3	1.0
60°-70°	2.1	0.0
70°-80°	0.3	0.0
80°-90°	1.7	0.0
90°-100°	77.0	1.5
100°-110°	548.6	10.3
110°-120°	744.7	14.0
120°-130°	606.1	11.4
130°-140°	487.5	9.2
140°-150°	384.3	7.2
150°-160°	281.0	5.3
160°-170°	174.6	3.3
170°-180°	59.5	1.1
0°-30°	1014.5	19.1
0°-40°	1565.2	29.5
0°-60°	1939.9	36.6
0°-90°	1944.1	36.6
90°-120°	1370.3	25.8
90°-150°	2848.3	53.7
90°-180°	3363.0	63.4
0°-180°	5307.4	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	4	8	12	12	1
95°	32	58	32	36	43	35
105°	122	188	713	910	602	129
115°	217	263	614	1277	1492	215
125°	311	353	579	1012	1197	276
135°	386	428	583	834	957	297
145°	457	495	587	726	803	287
155°	536	555	599	658	689	246
165°	595	602	614	630	642	167
175°	626	630	626	622	618	59
180°	626	626	626	626	626	



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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	1.6	1.6	2.4	2.4
90°	0.0	3.9	7.9	11.8	11.8
92.5°	9.5	13.3	17.3	24.5	27.6
95°	31.5	58.5	31.5	35.6	43.3
97.5°	55.9	112.1	231.5	68.3	59.1
100°	74.8	140.3	464.7	136.8	90.6
102.5°	93.7	162.3	628.5	360.9	197.7
105°	122.1	187.5	712.8	910.5	602.5
107.5°	150.4	199.7	680.5	1325.2	1241.2
110°	169.3	215.5	661.6	1392.4	1496.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	188.2	234.4	642.7	1353.1	1527.9
115°	216.6	262.8	614.3	1276.8	1492.5
117.5°	245.7	291.2	607.2	1194.3	1416.1
120°	267.8	310.1	594.6	1131.5	1362.5
122.5°	283.5	329.0	578.9	1077.5	1290.0
125°	311.1	353.4	578.9	1012.3	1197.1
127.5°	333.9	377.1	579.7	936.6	1119.1
130°	346.5	392.7	582.8	886.0	1059.3
132.5°	362.3	408.5	582.8	863.3	1005.7
135°	385.9	428.3	582.8	833.7	956.9
137.5°	405.6	451.0	582.8	801.0	906.5
140°	421.4	463.7	582.8	781.9	878.1
142.5°	437.1	476.4	586.0	759.7	849.8
145°	456.8	495.3	586.7	726.3	803.3
147.5°	480.4	514.3	591.5	702.3	761.6
150°	496.2	527.0	594.6	686.3	736.4
152.5°	511.9	539.6	594.6	673.5	714.3
155°	535.6	554.8	598.6	658.3	689.1
157.5°	554.5	572.9	603.3	648.7	671.0
160°	567.1	582.5	606.4	642.3	661.6
162.5°	576.5	591.9	609.6	639.0	652.1
165°	594.6	602.3	614.3	630.3	641.9
167.5°	604.9	611.8	618.2	626.3	633.2
170°	614.3	618.2	618.2	626.2	630.1
172.5°	617.5	624.4	621.4	623.1	626.9
175°	626.1	630.0	626.1	622.1	618.2
177.5°	626.1	629.2	626.1	626.1	623.0
180°	626.1	626.1	626.1	626.1	626.1

(END OF REPORT)