

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: P644975

Luminaire Tested: OMN4DIP-SR4F0-50D50U930-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644975
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-SR4F0-50D50U930-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 - 500 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

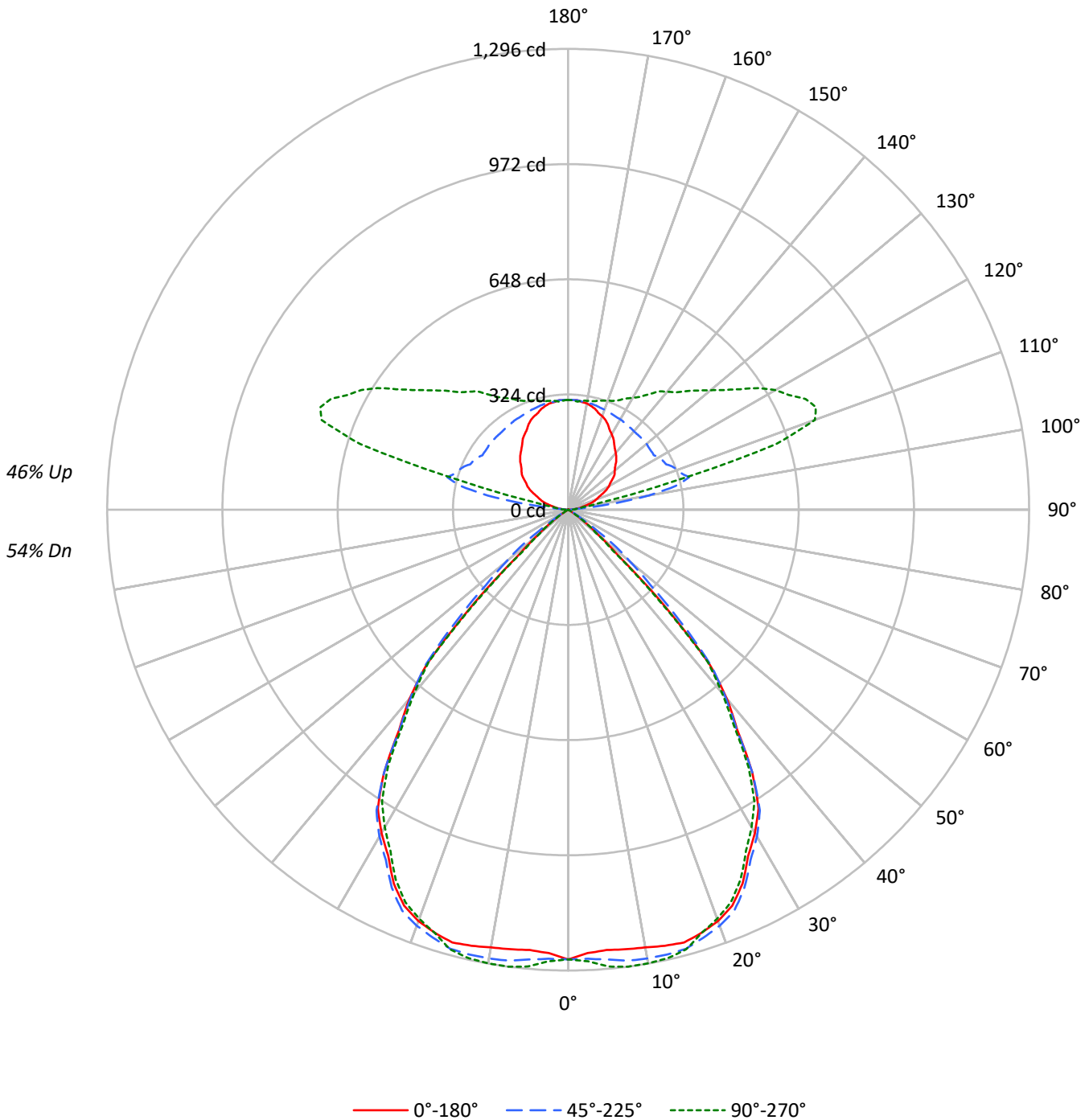
Lumens per Lamp: N/A
Luminaire Lumens: 3602.8 lumens
Efficiency: N/A
Efficacy: 109.8 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.8
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	50	30	10	0	
RCR																						
0	108	108	108	108	100	100	100	100	86	86	86	72	72	72	60	60	60	54				
1	101	97	94	91	94	91	88	86	78	76	75	67	65	64	56	55	55	50				
2	94	88	83	78	87	82	78	74	71	68	65	61	59	57	52	51	49	45				
3	87	79	73	68	81	74	69	65	65	61	58	56	54	51	48	46	45	41				
4	81	72	65	60	75	67	61	57	59	55	51	52	49	46	45	43	41	37				
5	75	65	58	53	70	61	55	51	54	50	46	48	44	41	42	39	37	34				
6	70	59	52	47	65	56	50	45	50	45	41	44	40	37	39	36	34	31				
7	65	54	47	42	61	51	45	41	46	41	37	41	37	34	36	33	31	28				
8	61	50	43	38	57	47	41	37	42	37	34	38	34	31	33	30	28	26				
9	57	46	39	35	53	44	38	33	39	34	31	35	31	28	31	28	26	24				
10	54	43	36	32	50	40	35	30	36	32	28	33	29	26	29	26	24	22				

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	3.4
10°-20°	360.0	10.0
20°-30°	532.8	14.8
30°-40°	550.7	15.3
40°-50°	320.4	8.9
50°-60°	54.3	1.5
60°-70°	2.1	0.1
70°-80°	0.3	0.0
80°-90°	1.0	0.0
90°-100°	38.0	1.1
100°-110°	270.7	7.5
110°-120°	367.5	10.2
120°-130°	299.1	8.3
130°-140°	240.5	6.7
140°-150°	189.6	5.3
150°-160°	138.7	3.8
160°-170°	86.1	2.4
170°-180°	29.4	0.8
0°-30°	1014.5	28.2
0°-40°	1565.2	43.4
0°-60°	1939.9	53.8
0°-90°	1943.4	53.9
90°-120°	676.1	18.8
90°-150°	1405.3	39.0
90°-180°	1659.0	46.0
0°-180°	3602.8	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	2	4	6	6	1
95°	16	29	16	18	21	17
105°	60	92	352	449	297	63
115°	107	130	303	630	736	106
125°	154	174	286	500	591	136
135°	190	211	288	411	472	146
145°	225	244	290	358	396	142
155°	264	274	295	325	340	121
165°	293	297	303	311	317	82
175°	309	311	309	307	305	29
180°	309	309	309	309	309	



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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	1.2	0.8	1.2	1.2
90°	0.0	1.9	3.9	5.8	5.8
92.5°	4.7	6.6	8.5	12.1	13.6
95°	15.5	28.8	15.5	17.6	21.4
97.5°	27.6	55.3	114.2	33.7	29.1
100°	36.9	69.2	229.3	67.5	44.7
102.5°	46.2	80.1	310.1	178.1	97.5
105°	60.2	92.5	351.7	449.3	297.3
107.5°	74.2	98.5	335.7	653.8	612.4
110°	83.5	106.3	326.4	687.0	738.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	92.9	115.7	317.1	667.6	753.9
115°	106.9	129.7	303.1	630.0	736.4
117.5°	121.2	143.7	299.6	589.3	698.7
120°	132.1	153.0	293.4	558.3	672.3
122.5°	139.9	162.3	285.6	531.6	636.5
125°	153.5	174.4	285.6	499.5	590.7
127.5°	164.8	186.0	286.0	462.1	552.2
130°	171.0	193.8	287.6	437.2	522.7
132.5°	178.8	201.5	287.6	425.9	496.2
135°	190.4	211.3	287.6	411.3	472.1
137.5°	200.1	222.5	287.6	395.2	447.3
140°	207.9	228.8	287.6	385.8	433.3
142.5°	215.7	235.0	289.1	374.8	419.3
145°	225.4	244.4	289.5	358.4	396.4
147.5°	237.0	253.8	291.8	346.5	375.8
150°	244.8	260.0	293.4	338.6	363.3
152.5°	252.6	266.3	293.4	332.3	352.5
155°	264.2	273.7	295.3	324.8	340.0
157.5°	273.6	282.7	297.7	320.1	331.1
160°	279.8	287.4	299.2	316.9	326.4
162.5°	284.4	292.0	300.8	315.3	321.8
165°	293.4	297.2	303.1	311.0	316.7
167.5°	298.4	301.9	305.0	309.0	312.4
170°	303.1	305.0	305.0	309.0	310.9
172.5°	304.7	308.1	306.6	307.4	309.3
175°	308.9	310.8	308.9	306.9	305.0
177.5°	308.9	310.4	308.9	308.9	307.4
180°	308.9	308.9	308.9	308.9	308.9

(END OF REPORT)