

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: P644860

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

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644860
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-27)
Test Lab: INNOVATION CENTER
Issue Date: 9/2/2020
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: OMN4DIP-SR4F0-50D100U930-WBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - WHITE 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

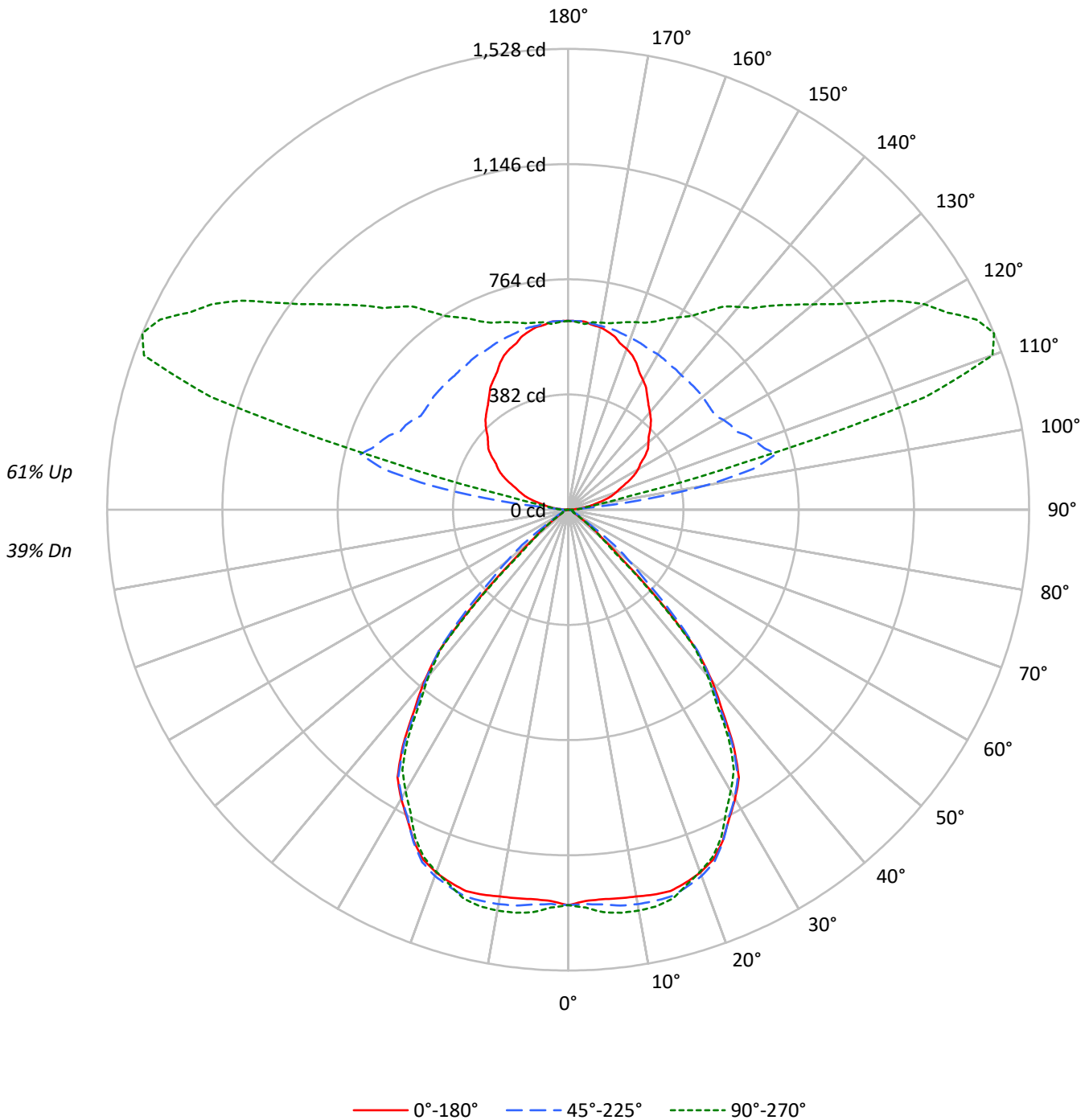
Lumens per Lamp: N/A
Luminaire Lumens: 5473.0 lumens
Efficiency: N/A
Efficacy: 116.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 47.2
Input Voltage (V): 120
Input Current (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	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39				
1	97	93	90	87	88	85	82	79	69	68	66	55	54	53	42	42	41	35				
2	89	83	78	73	81	76	71	68	63	59	57	50	48	47	39	38	37	32				
3	82	74	68	63	75	68	63	58	56	53	50	46	43	41	36	34	33	29				
4	76	67	60	54	69	61	55	51	51	47	44	42	39	37	33	31	30	26				
5	70	60	53	48	64	55	49	44	47	42	39	38	35	33	31	29	27	24				
6	65	54	47	42	59	50	44	39	42	38	34	35	32	29	28	26	25	22				
7	61	49	42	37	55	46	40	35	39	34	31	32	29	27	26	24	22	20				
8	56	45	38	33	52	42	36	31	36	31	28	30	27	24	24	22	20	18				
9	53	41	35	30	48	39	33	28	33	28	25	28	24	22	23	20	19	17				
10	49	38	32	27	45	36	30	26	31	26	23	26	22	20	21	19	17	15				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16935	16935	16935
5°	16808	17039	17371
10°	17080	17417	17701
15°	17506	17744	17863
20°	17601	17764	17560
25°	17265	17306	17095
30°	16506	16463	16065
35°	15070	14945	14633
40°	12518	12336	12102
45°	7864	8945	7502
50°	3016	5297	2797
55°	1423	2223	1446
60°	690	1121	612
65°	633	663	575
70°	634	634	559
75°	639	639	544
80°	662	588	513
85°	726	578	445

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 8945 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.3	2.3
10°-20°	373.5	6.8
20°-30°	554.9	10.1
30°-40°	580.8	10.6
40°-50°	351.8	6.4
50°-60°	81.2	1.5
60°-70°	22.3	0.4
70°-80°	13.1	0.2
80°-90°	5.9	0.1
90°-100°	77.0	1.4
100°-110°	548.6	10.0
110°-120°	744.7	13.6
120°-130°	606.1	11.1
130°-140°	487.5	8.9
140°-150°	384.3	7.0
150°-160°	281.0	5.1
160°-170°	174.6	3.2
170°-180°	59.5	1.1
0°-30°	1054.7	19.3
0°-40°	1635.4	29.9
0°-60°	2068.3	37.8
0°-90°	2109.6	38.5
90°-120°	1370.3	25.0
90°-150°	2848.3	52.0
90°-180°	3363.0	61.4
0°-180°	5473.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1311	1311	1311	1311	1311	
5°	1296	1326	1314	1320	1340	124
15°	1309	1349	1327	1316	1336	369
25°	1211	1247	1214	1183	1200	555
35°	956	970	948	926	928	587
45°	430	489	490	472	411	331
55°	63	72	99	68	64	66
65°	21	22	22	20	19	21
75°	13	13	13	12	11	14
85°	5	5	4	4	3	5
90°	0	4	8	12	12	2
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°	1311.1	1311.1	1311.1	1311.1	1311.1
2.5°	1298.5	1321.6	1308.7	1309.8	1320.6
5°	1296.3	1326.2	1314.1	1319.5	1339.7
7.5°	1299.8	1331.1	1323.9	1325.8	1348.0
10°	1302.2	1335.0	1327.9	1327.4	1349.6
12.5°	1307.7	1342.1	1328.7	1325.8	1347.2
15°	1309.1	1348.7	1326.9	1316.5	1335.8
17.5°	1296.3	1339.9	1310.5	1288.9	1304.4
20°	1280.5	1324.9	1292.3	1262.1	1277.5
22.5°	1256.0	1299.6	1264.7	1232.1	1248.3
25°	1211.4	1247.1	1214.3	1183.1	1199.5
27.5°	1154.9	1180.0	1152.0	1122.3	1131.6
30°	1106.7	1131.8	1103.8	1073.3	1077.1
32.5°	1053.0	1074.3	1046.9	1019.5	1022.6
35°	955.7	970.2	947.8	926.1	928.0
37.5°	837.2	839.1	824.0	804.2	804.6
40°	742.4	748.2	731.6	715.8	717.7
42.5°	629.5	652.3	636.0	621.8	622.2
45°	430.5	489.3	489.7	472.5	410.7
47.5°	237.7	305.9	349.7	271.2	204.8
50°	150.1	193.5	263.6	158.5	139.2
52.5°	107.4	126.9	192.5	112.1	102.1
55°	63.2	71.9	98.7	68.0	64.2
57.5°	38.5	46.0	57.7	45.5	38.7
60°	26.7	33.4	43.4	30.5	23.7
62.5°	23.5	25.6	34.0	24.2	22.1
65°	20.7	21.7	21.7	19.7	18.8
67.5°	18.4	19.3	18.4	17.4	16.4
70°	16.8	17.7	16.8	15.8	14.8
72.5°	15.2	16.2	15.2	14.2	13.2
75°	12.8	12.8	12.8	11.8	10.9
77.5°	10.5	10.5	10.3	9.5	8.5
80°	8.9	8.9	7.9	7.9	6.9
82.5°	7.3	7.3	6.3	6.3	5.3
85°	4.9	4.9	3.9	3.9	3.0
87.5°	2.4	3.1	3.2	3.9	3.2
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)