

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: P645022

Luminaire Tested: OMN4DIP-SR4F0-50D75U940-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P645022
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-SR4F0-50D75U940-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 - 750 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

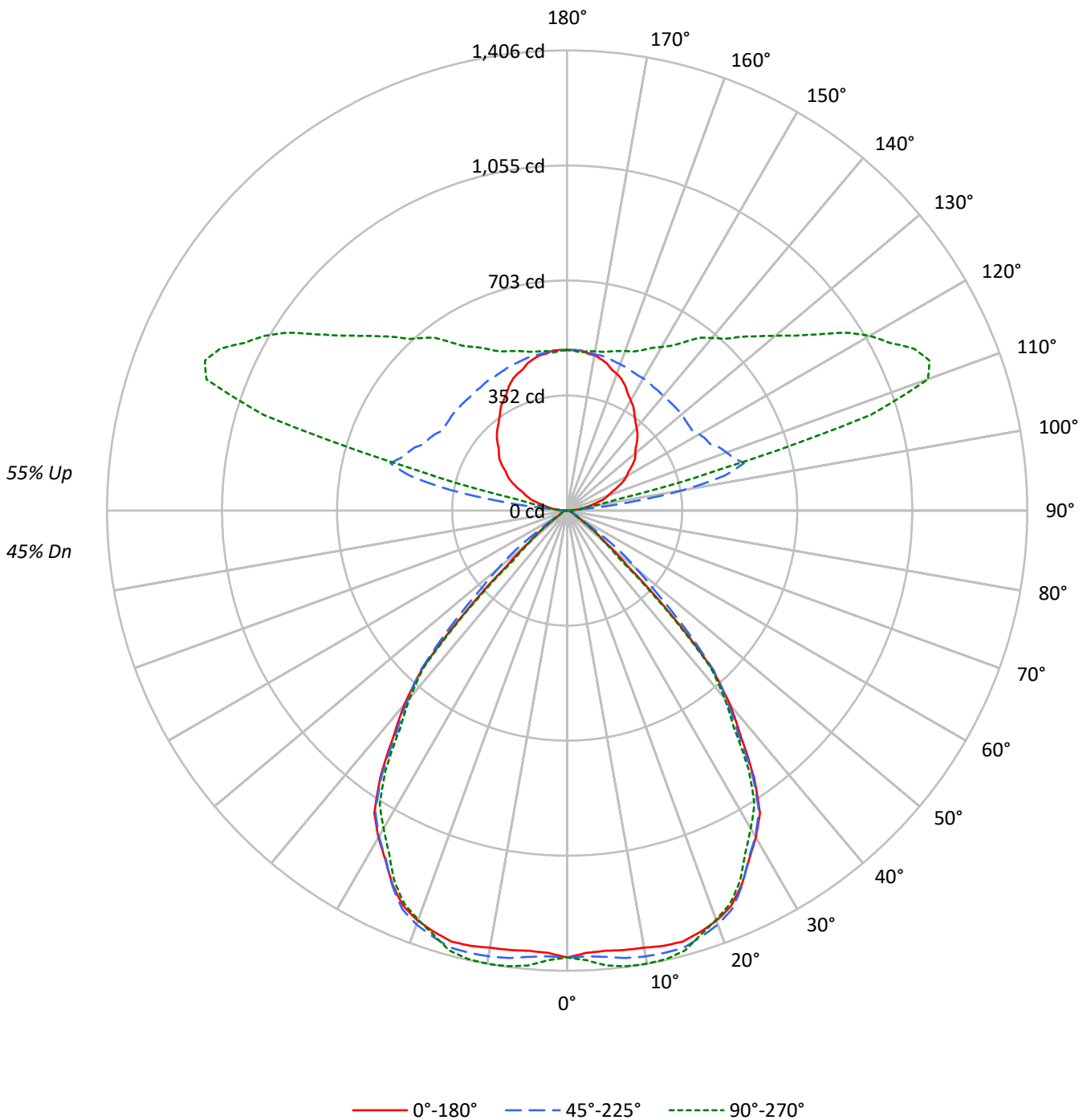
Lumens per Lamp: N/A
Luminaire Lumens: 4834.0 lumens
Efficiency: N/A
Efficacy: 123.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 39
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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45				
1	98	95	91	88	90	87	84	82	73	71	70	60	59	58	48	48	47	41				
2	91	85	79	75	84	78	74	70	66	63	60	55	53	51	45	43	42	38				
3	84	76	70	65	77	70	65	61	60	56	53	50	48	45	41	40	38	34				
4	78	68	62	56	72	64	58	53	54	50	47	46	43	40	38	36	34	31				
5	72	62	55	50	66	58	51	47	50	45	41	42	39	36	35	33	31	28				
6	67	56	49	44	62	53	46	42	45	41	37	39	35	33	33	30	28	25				
7	62	51	44	39	58	48	42	37	42	37	33	36	32	30	30	28	26	23				
8	58	47	40	35	54	44	38	33	38	34	30	33	29	27	28	26	24	21				
9	54	43	36	32	50	41	34	30	35	31	27	31	27	24	26	24	22	20				
10	51	40	33	29	47	37	32	27	33	28	25	29	25	22	24	22	20	18				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	17638	17638	17638
5°	17505	17745	18092
10°	17788	18139	18436
15°	18232	18481	18604
20°	18331	18502	18289
25°	17980	18025	17805
30°	17192	17146	16732
35°	15694	15565	15240
40°	13037	12847	12604
45°	8189	9316	7813
50°	3141	5516	2914
55°	1482	2315	1504
60°	718	1168	638
65°	660	691	596
70°	661	661	582
75°	669	669	564
80°	692	610	536
85°	756	608	459

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 9316 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.5	2.7
10°-20°	389.0	8.0
20°-30°	577.9	12.0
30°-40°	604.8	12.5
40°-50°	366.4	7.6
50°-60°	84.5	1.7
60°-70°	23.2	0.5
70°-80°	13.6	0.3
80°-90°	5.8	0.1
90°-100°	60.4	1.2
100°-110°	430.1	8.9
110°-120°	583.9	12.1
120°-130°	475.3	9.8
130°-140°	382.3	7.9
140°-150°	301.4	6.2
150°-160°	220.3	4.6
160°-170°	136.9	2.8
170°-180°	46.7	1.0
0°-30°	1098.4	22.7
0°-40°	1703.3	35.2
0°-60°	2154.2	44.6
0°-90°	2196.8	45.4
90°-120°	1074.4	22.2
90°-150°	2233.3	46.2
90°-180°	2637.0	54.6
0°-180°	4834.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1366	1366	1366	1366	1366	
5°	1350	1381	1369	1374	1395	129
15°	1363	1405	1382	1371	1391	384
25°	1262	1299	1265	1232	1249	578
35°	995	1010	987	964	966	612
45°	448	510	510	492	428	344
55°	66	75	103	71	67	68
65°	22	23	23	20	20	22
75°	13	13	13	12	11	14
85°	5	5	4	4	3	5
90°	0	3	6	9	9	1
95°	25	46	25	28	34	28
105°	96	147	559	714	472	101
115°	170	206	482	1001	1170	169
125°	244	277	454	794	939	217
135°	303	336	457	654	750	233
145°	358	388	460	570	630	225
155°	420	435	469	516	540	193
165°	466	472	482	494	503	131
175°	491	494	491	488	485	46
180°	491	491	491	491	491	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1365.5	1365.5	1365.5	1365.5	1365.5
2.5°	1352.3	1376.5	1363.0	1364.1	1375.4
5°	1350.1	1381.2	1368.6	1374.2	1395.3
7.5°	1353.8	1386.4	1378.9	1380.8	1404.0
10°	1356.2	1390.4	1383.0	1382.5	1405.6
12.5°	1362.0	1397.8	1383.8	1380.8	1403.1
15°	1363.4	1404.7	1382.0	1371.1	1391.2
17.5°	1350.1	1395.5	1364.9	1342.4	1358.5
20°	1333.6	1379.9	1346.0	1314.5	1330.5
22.5°	1308.1	1353.6	1317.2	1283.2	1300.1
25°	1261.6	1298.8	1264.7	1232.2	1249.3
27.5°	1202.8	1229.0	1199.7	1168.9	1178.6
30°	1152.7	1178.8	1149.6	1117.8	1121.8
32.5°	1096.7	1118.8	1090.3	1061.8	1065.1
35°	995.3	1010.4	987.1	964.5	966.5
37.5°	871.9	874.0	858.2	837.6	838.0
40°	773.2	779.3	761.9	745.5	747.5
42.5°	655.6	679.3	662.4	647.6	648.0
45°	448.3	509.6	510.0	492.1	427.7
47.5°	247.6	318.6	364.2	282.4	213.3
50°	156.3	201.5	274.5	165.1	145.0
52.5°	111.9	132.2	200.5	116.8	106.3
55°	65.8	74.9	102.8	70.9	66.8
57.5°	40.1	47.9	60.0	47.3	40.3
60°	27.8	34.8	45.2	31.7	24.7
62.5°	24.5	26.7	35.4	25.2	23.0
65°	21.6	22.6	22.6	20.5	19.5
67.5°	19.1	20.1	19.1	18.1	17.1
70°	17.5	18.5	17.5	16.4	15.4
72.5°	15.8	16.8	15.8	14.8	13.8
75°	13.4	13.4	13.4	12.3	11.3
77.5°	10.9	10.9	10.7	9.8	8.8
80°	9.3	9.3	8.2	8.2	7.2
82.5°	7.6	7.6	6.6	6.6	5.6
85°	5.1	5.1	4.1	4.1	3.1
87.5°	2.5	3.1	2.9	3.5	2.7
90°	0.0	3.0	6.2	9.3	9.3
92.5°	7.4	10.4	13.6	19.2	21.6
95°	24.7	45.8	24.7	27.9	34.0
97.5°	43.8	87.9	181.6	53.6	46.3
100°	58.7	110.0	364.3	107.2	71.0
102.5°	73.5	127.2	492.8	283.0	155.0
105°	95.7	147.0	558.9	713.9	472.4
107.5°	117.9	156.6	533.5	1039.0	973.2
110°	132.8	169.0	518.7	1091.8	1173.3



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	147.6	183.8	503.9	1060.9	1198.0
115°	169.8	206.0	481.7	1001.2	1170.2
117.5°	192.7	228.3	476.1	936.4	1110.3
120°	210.0	243.2	466.2	887.2	1068.3
122.5°	222.3	257.9	453.9	844.9	1011.5
125°	243.9	277.1	453.9	793.7	938.6
127.5°	261.8	295.6	454.5	734.4	877.5
130°	271.7	307.9	457.0	694.7	830.6
132.5°	284.1	320.3	457.0	676.9	788.6
135°	302.6	335.8	457.0	653.7	750.3
137.5°	318.0	353.7	457.0	628.1	710.8
140°	330.4	363.6	457.0	613.1	688.5
142.5°	342.7	373.5	459.4	595.7	666.3
145°	358.2	388.4	460.1	569.5	629.9
147.5°	376.7	403.3	463.8	550.7	597.2
150°	389.0	413.2	466.2	538.1	577.4
152.5°	401.4	423.1	466.2	528.1	560.1
155°	419.9	435.0	469.3	516.2	540.3
157.5°	434.7	449.2	473.0	508.6	526.1
160°	444.6	456.7	475.5	503.6	518.7
162.5°	452.0	464.1	478.0	501.0	511.3
165°	466.2	472.3	481.7	494.2	503.3
167.5°	474.3	479.7	484.8	491.1	496.5
170°	481.7	484.7	484.8	491.0	494.0
172.5°	484.1	489.6	487.2	488.5	491.6
175°	490.9	494.0	490.9	487.8	484.8
177.5°	490.9	493.4	490.9	490.9	488.5
180°	490.9	490.9	490.9	490.9	490.9

(END OF REPORT)