

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: P644987

Luminaire Tested: OMN4DIP-SR4F0-50D50U940-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644987
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-SR4F0-50D50U940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

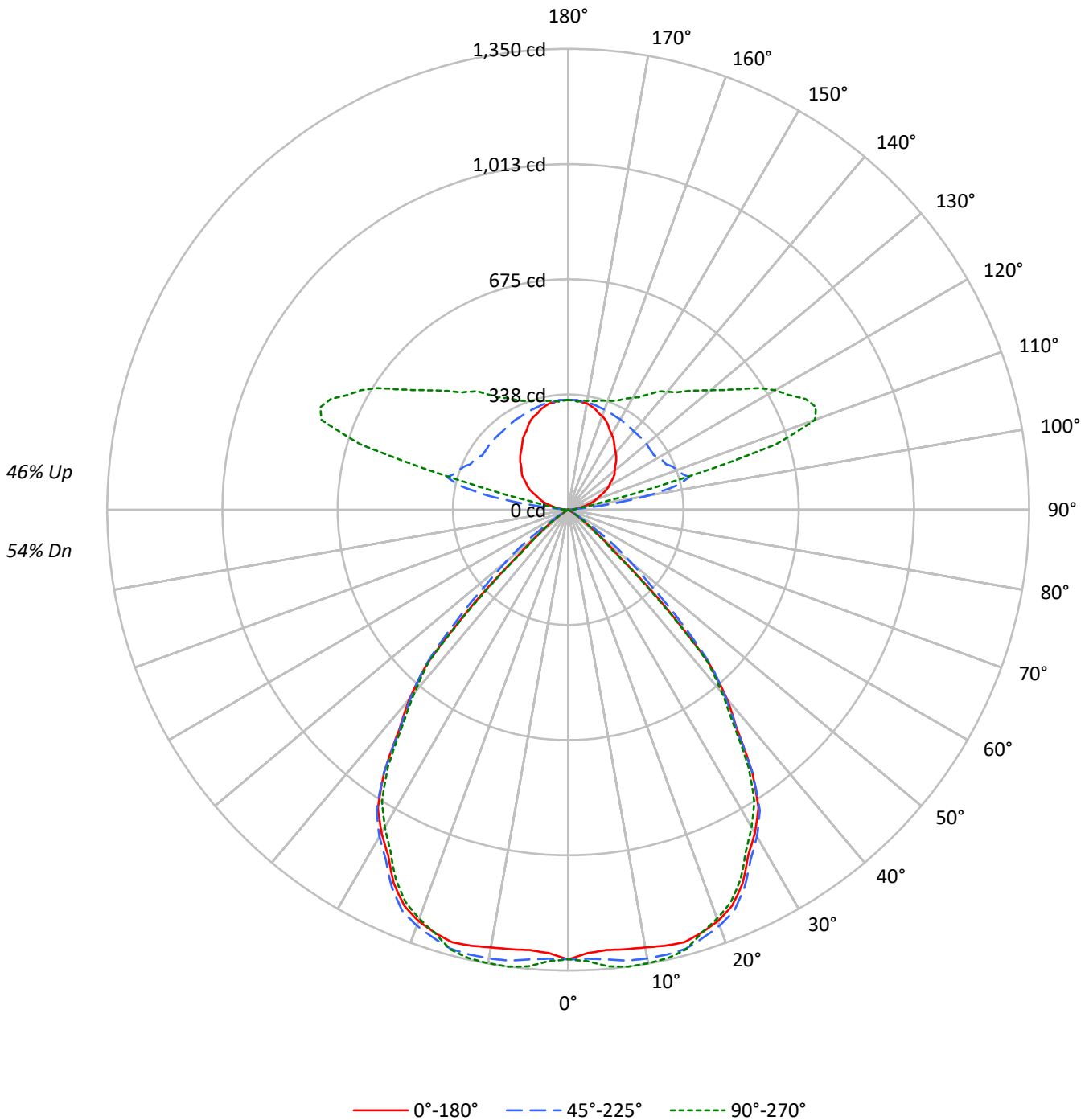
Lumens per Lamp: N/A
Luminaire Lumens: 3752.3 lumens
Efficiency: N/A
Efficacy: 114.4 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: General Diffuse

Input Watts (W): 32.8
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	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°	17014	17014	17014
5°	16786	17145	17412
10°	17074	17506	17695
15°	17545	17807	17833
20°	17625	17823	17526
25°	17219	17410	17028
30°	16302	16487	16011
35°	14819	14819	14512
40°	12189	12068	11806
45°	7289	8565	6949
50°	2355	4773	2210
55°	833	1597	833
60°	54	452	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: 8565 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	126.7	3.4
10°-20°	375.0	10.0
20°-30°	554.9	14.8
30°-40°	573.6	15.3
40°-50°	333.7	8.9
50°-60°	56.5	1.5
60°-70°	2.2	0.1
70°-80°	0.3	0.0
80°-90°	1.0	0.0
90°-100°	39.6	1.1
100°-110°	281.9	7.5
110°-120°	382.7	10.2
120°-130°	311.5	8.3
130°-140°	250.5	6.7
140°-150°	197.5	5.3
150°-160°	144.4	3.8
160°-170°	89.7	2.4
170°-180°	30.6	0.8
0°-30°	1056.6	28.2
0°-40°	1630.2	43.4
0°-60°	2020.4	53.8
0°-90°	2024.0	53.9
90°-120°	704.2	18.8
90°-150°	1463.7	39.0
90°-180°	1728.0	46.1
0°-180°	3752.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1317	1317	1317	1317	1317	
5°	1295	1329	1322	1326	1343	124
15°	1312	1358	1332	1325	1334	369
25°	1208	1248	1222	1185	1195	552
35°	940	955	940	916	920	576
45°	399	464	469	453	380	309
55°	37	43	71	40	37	41
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	30	16	18	22	18
105°	63	96	366	468	310	66
115°	111	135	316	656	767	110
125°	160	182	298	520	615	142
135°	198	220	300	428	492	153
145°	235	254	302	373	413	147
155°	275	285	308	338	354	126
165°	306	310	316	324	330	86
175°	322	324	322	320	318	30
180°	322	322	322	322	322	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1317.2	1317.2	1317.2	1317.2	1317.2
2.5°	1299.9	1325.6	1316.4	1317.3	1323.8
5°	1294.6	1328.7	1322.3	1325.8	1342.9
7.5°	1298.5	1333.0	1332.2	1333.2	1349.9
10°	1301.8	1337.9	1334.7	1334.0	1349.1
12.5°	1308.3	1347.7	1334.7	1333.1	1345.8
15°	1312.0	1358.3	1331.6	1324.6	1333.6
17.5°	1299.5	1351.0	1314.7	1296.1	1299.7
20°	1282.2	1334.5	1296.6	1269.0	1275.0
22.5°	1255.1	1304.9	1271.1	1236.9	1244.6
25°	1208.2	1248.4	1221.6	1184.8	1194.8
27.5°	1141.6	1173.3	1156.4	1120.7	1127.0
30°	1093.0	1119.2	1105.4	1070.5	1073.5
32.5°	1037.1	1059.2	1044.5	1014.5	1014.3
35°	939.8	954.9	939.8	916.3	920.3
37.5°	812.5	824.0	808.6	794.5	796.5
40°	722.9	731.9	715.7	702.2	700.2
42.5°	611.0	636.1	620.2	602.0	604.8
45°	399.0	464.3	468.9	452.8	380.4
47.5°	201.1	272.5	326.4	247.7	177.5
50°	117.2	160.5	237.5	131.1	110.0
52.5°	76.9	95.2	166.0	82.9	73.0
55°	37.0	43.0	70.9	40.0	37.0
57.5°	12.8	19.6	31.5	20.0	14.2
60°	2.1	8.1	17.5	6.1	1.0
62.5°	1.2	2.4	10.9	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	2.0	4.0	6.1	6.1
92.5°	4.9	6.8	8.9	12.6	14.2
95°	16.2	30.0	16.2	18.3	22.3
97.5°	28.7	57.6	119.0	35.1	30.4
100°	38.4	72.1	238.8	70.3	46.5
102.5°	48.2	83.4	323.0	185.5	101.6
105°	62.7	96.4	366.3	467.9	309.6
107.5°	77.3	102.6	349.7	681.0	637.8
110°	87.0	110.8	340.0	715.5	769.0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	96.7	120.5	330.2	695.3	785.1
115°	111.3	135.0	315.7	656.1	766.9
117.5°	126.3	149.6	312.0	613.7	727.7
120°	137.6	159.4	305.6	581.4	700.2
122.5°	145.7	169.0	297.5	553.7	662.9
125°	159.9	181.6	297.5	520.2	615.2
127.5°	171.6	193.8	297.9	481.3	575.1
130°	178.1	201.8	299.5	455.3	544.3
132.5°	186.2	209.9	299.5	443.6	516.8
135°	198.3	220.1	299.5	428.4	491.7
137.5°	208.4	231.8	299.5	411.6	465.8
140°	216.5	238.3	299.5	401.8	451.3
142.5°	224.6	244.8	301.1	390.4	436.7
145°	234.7	254.5	301.5	373.2	412.8
147.5°	246.9	264.3	303.9	360.9	391.4
150°	255.0	270.8	305.6	352.7	378.4
152.5°	263.1	277.3	305.6	346.1	367.1
155°	275.2	285.1	307.6	338.3	354.1
157.5°	284.9	294.4	310.0	333.3	344.8
160°	291.4	299.3	311.6	330.1	340.0
162.5°	296.2	304.2	313.2	328.4	335.1
165°	305.6	309.5	315.7	323.9	329.8
167.5°	310.8	314.4	317.7	321.8	325.4
170°	315.7	317.7	317.7	321.8	323.8
172.5°	317.3	320.9	319.3	320.2	322.2
175°	321.7	323.7	321.7	319.7	317.7
177.5°	321.7	323.3	321.7	321.7	320.1
180°	321.7	321.7	321.7	321.7	321.7

(END OF REPORT)