

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: P644867

Luminaire Tested: OMN4DIP-SR4F0-50D100U940-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644867
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-SR4F0-50D100U940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

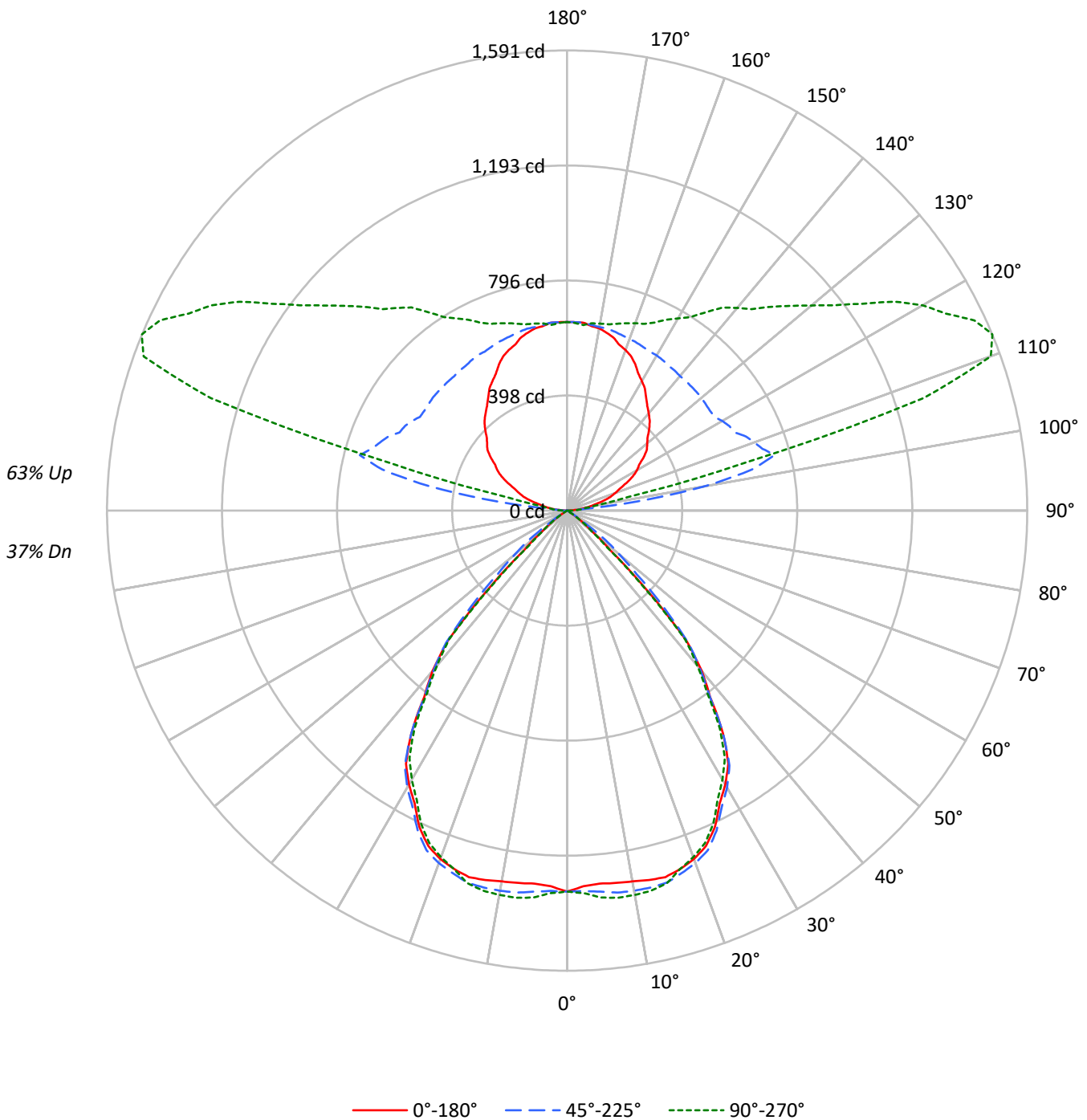
Lumens per Lamp: N/A
Luminaire Lumens: 5527.6 lumens
Efficiency: N/A
Efficacy: 117.1 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Indirect

Input Watts (W): 47.2
Input Voltage (V): 120
Input Current (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	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°	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	2.3
10°-20°	375.0	6.8
20°-30°	554.9	10.0
30°-40°	573.6	10.4
40°-50°	333.7	6.0
50°-60°	56.5	1.0
60°-70°	2.2	0.0
70°-80°	0.3	0.0
80°-90°	1.8	0.0
90°-100°	80.2	1.5
100°-110°	571.3	10.3
110°-120°	775.6	14.0
120°-130°	631.3	11.4
130°-140°	507.7	9.2
140°-150°	400.3	7.2
150°-160°	292.7	5.3
160°-170°	181.8	3.3
170°-180°	62.0	1.1
0°-30°	1056.6	19.1
0°-40°	1630.2	29.5
0°-60°	2020.4	36.6
0°-90°	2024.7	36.6
90°-120°	1427.1	25.8
90°-150°	2966.4	53.7
90°-180°	3503.0	63.4
0°-180°	5527.6	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	4	8	12	12	1
95°	33	61	33	37	45	37
105°	127	195	742	948	628	134
115°	226	274	640	1330	1554	224
125°	324	368	603	1054	1247	288
135°	402	446	607	868	997	309
145°	476	516	611	756	837	299
155°	558	578	623	686	718	256
165°	619	627	640	656	668	174
175°	652	656	652	648	644	62
180°	652	652	652	652	652	



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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	1.6	1.6	2.5	2.5
90°	0.0	4.0	8.2	12.3	12.3
92.5°	9.8	13.9	18.0	25.5	28.7
95°	32.8	60.9	32.8	37.1	45.1
97.5°	58.2	116.8	241.2	71.1	61.5
100°	77.9	146.1	483.9	142.5	94.3
102.5°	97.6	169.0	654.6	375.9	205.9
105°	127.1	195.3	742.3	948.3	627.5
107.5°	156.7	208.0	708.7	1380.1	1292.7
110°	176.4	224.5	689.0	1450.2	1558.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	196.0	244.2	669.3	1409.2	1591.3
115°	225.6	273.7	639.8	1329.8	1554.4
117.5°	255.9	303.2	632.4	1243.8	1474.8
120°	278.9	323.0	619.3	1178.4	1419.0
122.5°	295.3	342.6	602.9	1122.2	1343.6
125°	324.0	368.1	602.9	1054.3	1246.8
127.5°	347.8	392.7	603.7	975.5	1165.6
130°	360.9	409.0	607.0	922.8	1103.2
132.5°	377.3	425.4	607.0	899.1	1047.5
135°	401.9	446.0	607.0	868.3	996.6
137.5°	422.4	469.7	607.0	834.2	944.1
140°	438.8	482.9	607.0	814.3	914.6
142.5°	455.2	496.1	610.3	791.2	885.1
145°	475.7	515.8	611.1	756.5	836.7
147.5°	500.4	535.6	616.0	731.4	793.2
150°	516.8	548.8	619.3	714.8	766.9
152.5°	533.2	562.0	619.3	701.5	744.0
155°	557.8	577.8	623.4	685.6	717.7
157.5°	577.5	596.7	628.3	675.6	698.9
160°	590.6	606.6	631.6	669.0	689.0
162.5°	600.4	616.5	634.9	665.5	679.2
165°	619.3	627.3	639.8	656.5	668.5
167.5°	630.0	637.2	643.9	652.3	659.5
170°	639.8	643.8	643.9	652.2	656.2
172.5°	643.1	650.3	647.2	648.9	652.9
175°	652.1	656.1	652.1	647.9	643.9
177.5°	652.1	655.3	652.1	652.0	648.8
180°	652.1	652.1	652.1	652.1	652.1

(END OF REPORT)