

Signify Classified - Internal  
Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269



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: P644981

Luminaire Tested: OMN4DIP-SR4F0-50D50U935-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



**Test Information**

Test Method: LM-79-2019  
Report Number: P644981  
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-SR4F0-50D50U935-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: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

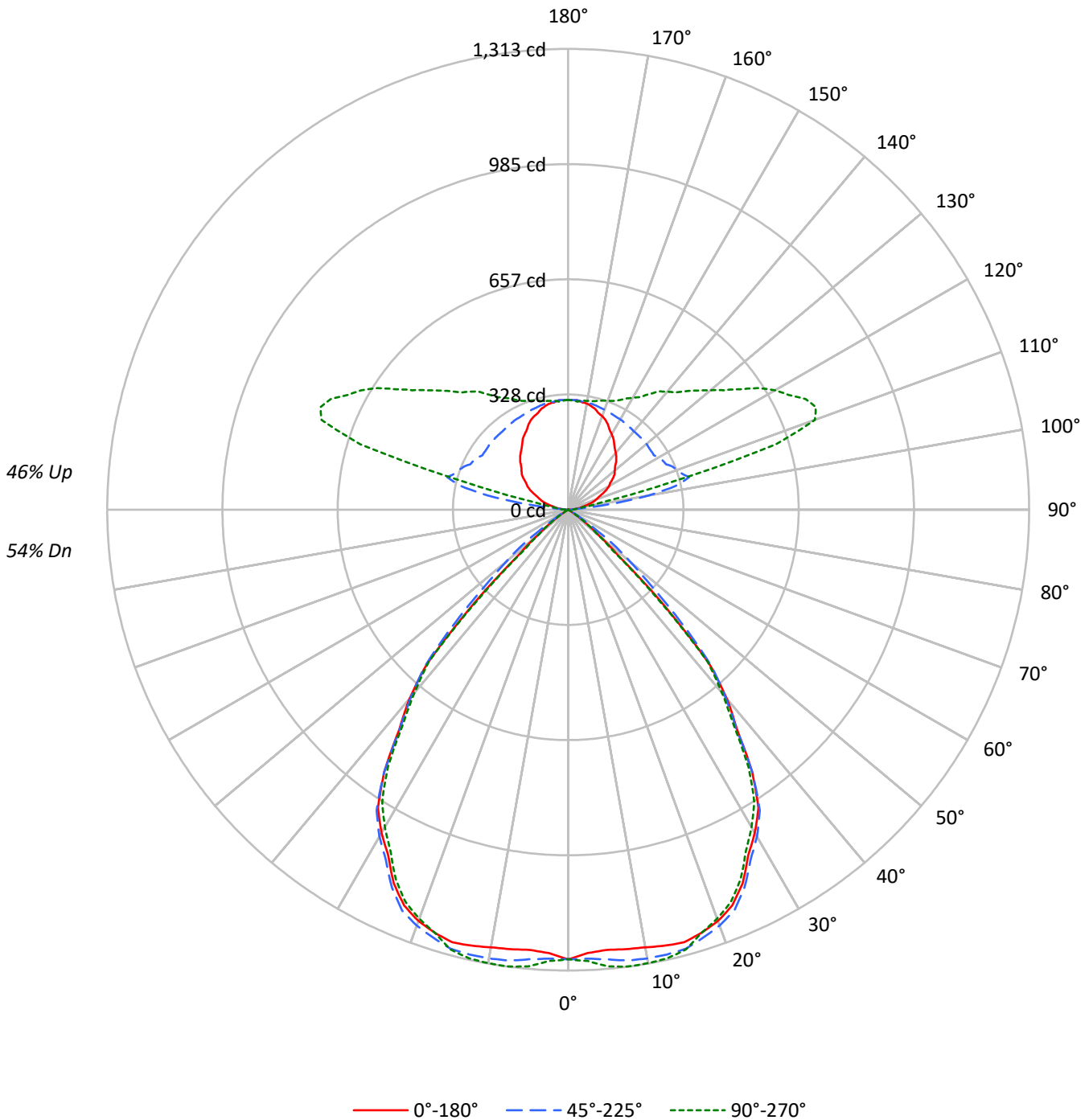
Lumens per Lamp: N/A  
Luminaire Lumens: 3649.2 lumens  
Efficiency: N/A  
Efficacy: 111.3 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18  
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')  
CIE Type: General Diffuse

Input Watts (W): 32.8  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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

TEST NUMBER: P644981

CATALOG NUMBER: OMN4DIP-SR4F0-50D50U935-BBMOOB-1DUDD-WW

### Luminous Intensity Polar Plot





TEST NUMBER: P644981

CATALOG NUMBER: OMN4DIP-SR4F0-50D50U935-BBMOOB-1DUDD-WW

**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°	16546	16546	16546
5°	16324	16674	16934
10°	16605	17025	17208
15°	17063	17317	17344
20°	17141	17333	17045
25°	16746	16931	16561
30°	15855	16034	15571
35°	14412	14412	14113
40°	11854	11736	11483
45°	7088	8330	6759
50°	2291	4642	2150
55°	811	1554	811
60°	52	439	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: 8330 cd/sqm



TEST NUMBER: P644981

CATALOG NUMBER: OMN4DIP-SR4F0-50D50U935-BBMOOB-1DUDD-WW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.2	3.4
10°-20°	364.7	10.0
20°-30°	539.7	14.8
30°-40°	557.8	15.3
40°-50°	324.6	8.9
50°-60°	55.0	1.5
60°-70°	2.2	0.1
70°-80°	0.3	0.0
80°-90°	1.0	0.0
90°-100°	38.5	1.1
100°-110°	274.1	7.5
110°-120°	372.2	10.2
120°-130°	302.9	8.3
130°-140°	243.6	6.7
140°-150°	192.1	5.3
150°-160°	140.4	3.8
160°-170°	87.2	2.4
170°-180°	29.7	0.8
0°-30°	1027.6	28.2
0°-40°	1585.4	43.4
0°-60°	1964.9	53.8
0°-90°	1968.4	53.9
90°-120°	684.8	18.8
90°-150°	1423.4	39.0
90°-180°	1681.0	46.1
0°-180°	3649.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1281	1281	1281	1281	1281	
5°	1259	1292	1286	1289	1306	121
15°	1276	1321	1295	1288	1297	359
25°	1175	1214	1188	1152	1162	537
35°	914	929	914	891	895	560
45°	388	452	456	440	370	300
55°	36	42	69	39	36	40
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	22	18
105°	61	94	356	455	301	64
115°	108	131	307	638	746	107
125°	156	177	289	506	598	138
135°	193	214	291	417	478	148
145°	228	248	293	363	402	143
155°	268	277	299	329	344	123
165°	297	301	307	315	321	83
175°	313	315	313	311	309	30
180°	313	313	313	313	313	



TEST NUMBER: P644981

CATALOG NUMBER: OMN4DIP-SR4F0-50D50U935-BBMOOB-1DUDD-WW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1281.0	1281.0	1281.0	1281.0	1281.0
2.5°	1264.2	1289.2	1280.2	1281.1	1287.4
5°	1259.0	1292.2	1286.0	1289.4	1306.0
7.5°	1262.8	1296.4	1295.6	1296.6	1312.8
10°	1266.0	1301.2	1298.0	1297.3	1312.0
12.5°	1272.4	1310.7	1298.0	1296.5	1308.8
15°	1276.0	1321.0	1295.0	1288.2	1297.0
17.5°	1263.8	1313.9	1278.6	1260.5	1264.0
20°	1247.0	1297.8	1261.0	1234.1	1240.0
22.5°	1220.6	1269.1	1236.2	1203.0	1210.4
25°	1175.0	1214.1	1188.0	1152.2	1162.0
27.5°	1110.2	1141.1	1124.6	1089.9	1096.0
30°	1063.0	1088.4	1075.0	1041.1	1044.0
32.5°	1008.6	1030.1	1015.8	986.6	986.4
35°	914.0	928.7	914.0	891.1	895.0
37.5°	790.2	801.3	786.4	772.6	774.6
40°	703.0	711.8	696.0	683.0	681.0
42.5°	594.2	618.6	603.2	585.5	588.2
45°	388.0	451.6	456.0	440.4	370.0
47.5°	195.6	265.0	317.4	240.8	172.6
50°	114.0	156.0	231.0	127.5	107.0
52.5°	74.8	92.6	161.4	80.6	71.0
55°	36.0	41.9	69.0	38.9	36.0
57.5°	12.4	19.0	30.6	19.5	13.8
60°	2.0	7.9	17.0	5.9	1.0
62.5°	1.2	2.4	10.6	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	5.9	5.9
92.5°	4.7	6.6	8.7	12.2	13.8
95°	15.7	29.2	15.7	17.8	21.6
97.5°	27.9	56.0	115.7	34.1	29.5
100°	37.4	70.1	232.2	68.4	45.3
102.5°	46.8	81.1	314.1	180.4	98.8
105°	61.0	93.7	356.2	455.0	301.1
107.5°	75.2	99.8	340.1	662.3	620.3
110°	84.6	107.7	330.6	695.9	747.8



TEST NUMBER: P644981

CATALOG NUMBER: OMN4DIP-SR4F0-50D50U935-BBMOOB-1DUDD-WW

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	94.1	117.2	321.2	676.2	763.6
115°	108.2	131.3	307.0	638.1	745.9
117.5°	122.8	145.5	303.5	596.9	707.7
120°	133.8	155.0	297.2	565.5	680.9
122.5°	141.7	164.4	289.3	538.5	644.7
125°	155.5	176.6	289.3	505.9	598.3
127.5°	166.9	188.4	289.7	468.1	559.3
130°	173.2	196.3	291.3	442.8	529.4
132.5°	181.1	204.1	291.3	431.4	502.6
135°	192.9	214.0	291.3	416.6	478.2
137.5°	202.7	225.4	291.3	400.3	453.0
140°	210.6	231.7	291.3	390.8	438.9
142.5°	218.4	238.1	292.8	379.7	424.7
145°	228.3	247.5	293.2	363.0	401.5
147.5°	240.1	257.0	295.6	351.0	380.6
150°	248.0	263.4	297.2	343.0	368.0
152.5°	255.8	269.7	297.2	336.6	357.0
155°	267.6	277.3	299.1	329.0	344.4
157.5°	277.1	286.3	301.5	324.2	335.3
160°	283.4	291.1	303.1	321.0	330.6
162.5°	288.1	295.8	304.6	319.4	325.9
165°	297.2	301.0	307.0	315.0	320.8
167.5°	302.3	305.7	309.0	313.0	316.5
170°	307.0	308.9	309.0	313.0	314.9
172.5°	308.6	312.0	310.5	311.4	313.3
175°	312.9	314.8	312.9	310.9	309.0
177.5°	312.9	314.4	312.9	312.9	311.3
180°	312.9	312.9	312.9	312.9	312.9

(END OF REPORT)