

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: P644596

Luminaire Tested: OMN4DIP-SR4F0-100D25U935-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



**Test Information**

Test Method: LM-79-2019  
Report Number: P644596  
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-SR4F0-100D25U935-WBMOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE  
DOWNLIGHT - WHITE BAFFLE WITH MEDIUM OPTIC - 1000 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 250 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

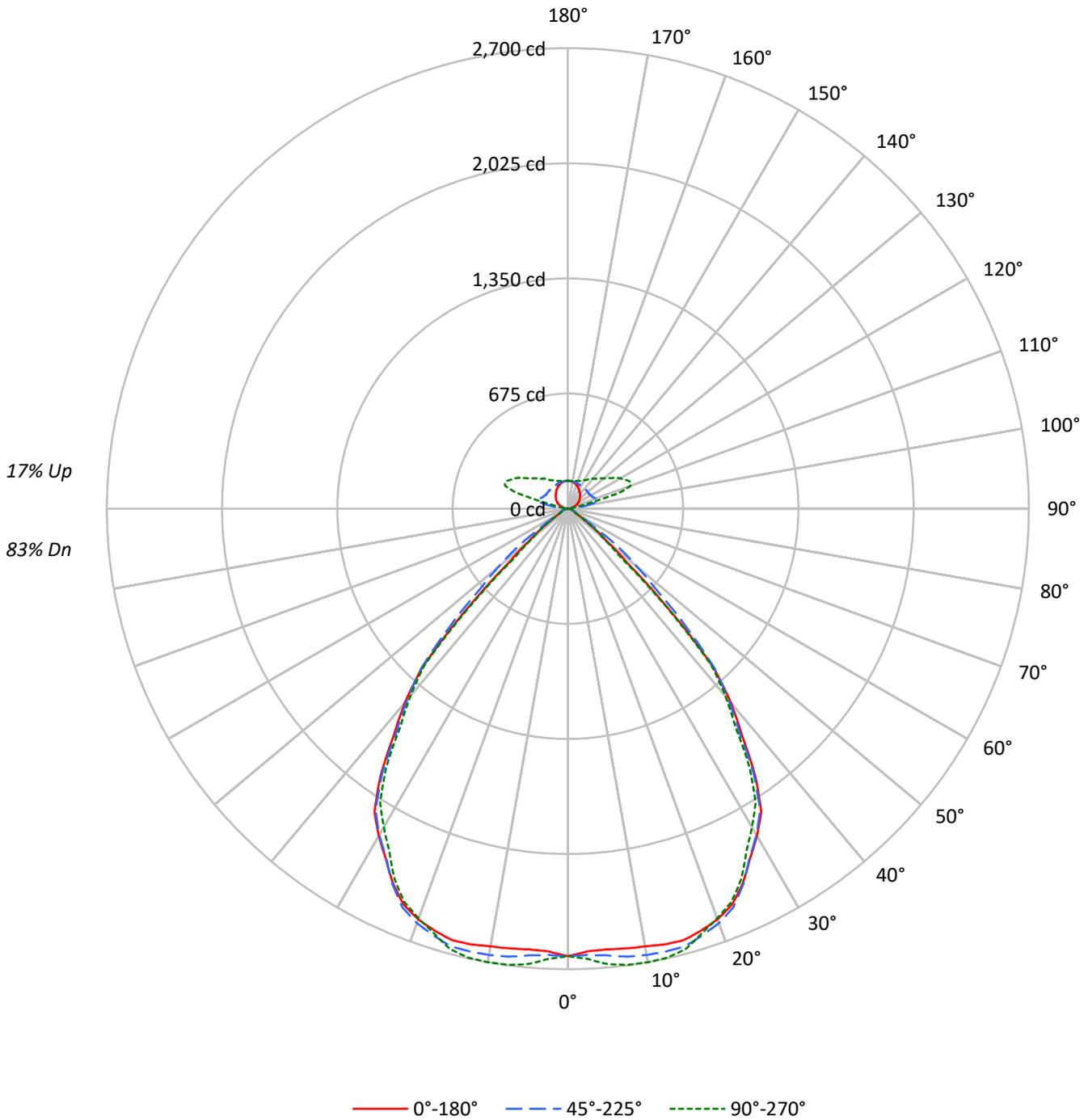
Lumens per Lamp: N/A  
Luminaire Lumens: 5097.9 lumens  
Efficiency: N/A  
Efficacy: 109.9 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19  
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 46.4  
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

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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	115	115	115	115	110	110	110	110	102	102	102	94	94	94	86	86	86	83				
1	108	105	102	99	104	101	98	96	94	92	90	87	85	84	81	80	79	76				
2	101	95	90	86	97	92	88	84	86	82	79	80	77	75	75	73	71	68				
3	94	87	81	76	91	84	78	74	79	74	71	74	70	67	69	67	64	62				
4	88	79	72	67	85	77	71	66	72	67	63	68	64	61	64	61	58	56				
5	82	72	65	60	79	70	64	59	67	61	57	63	59	55	60	56	53	51				
6	77	66	59	54	74	65	58	53	61	56	52	58	54	50	55	51	48	46				
7	72	61	54	49	70	60	53	48	57	51	47	54	49	46	51	47	44	42				
8	68	57	50	45	65	55	49	44	53	47	43	50	45	42	48	44	41	39				
9	64	52	46	41	61	51	45	40	49	43	39	47	42	38	45	40	37	36				
10	60	49	42	38	58	48	41	37	46	40	36	44	39	35	42	38	35	33				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	33886	33886	33886
5°	33630	34092	34757
10°	34175	34848	35418
15°	35028	35504	35740
20°	35218	35544	35137
25°	34544	34630	34206
30°	33028	32940	32145
35°	30152	29903	29280
40°	25048	24682	24215
45°	15733	17898	15012
50°	6034	10598	5596
55°	2846	4448	2892
60°	1377	2245	1225
65°	1268	1330	1146
70°	1269	1269	1118
75°	1283	1283	1083
80°	1324	1175	1027
85°	1467	1171	874

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 17898 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	252.7	5.0
10°-20°	747.4	14.7
20°-30°	1110.2	21.8
30°-40°	1162.0	22.8
40°-50°	703.8	13.8
50°-60°	162.4	3.2
60°-70°	44.6	0.9
70°-80°	26.1	0.5
80°-90°	9.4	0.2
90°-100°	20.1	0.4
100°-110°	143.4	2.8
110°-120°	194.7	3.8
120°-130°	158.4	3.1
130°-140°	127.4	2.5
140°-150°	100.5	2.0
150°-160°	73.5	1.4
160°-170°	45.6	0.9
170°-180°	15.6	0.3
0°-30°	2110.3	41.4
0°-40°	3272.3	64.2
0°-60°	4138.5	81.2
0°-90°	4218.7	82.8
90°-120°	358.2	7.0
90°-150°	744.5	14.6
90°-180°	879.0	17.2
0°-180°	5097.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2623	2623	2623	2623	2623	
5°	2594	2654	2629	2640	2681	248
15°	2619	2699	2655	2634	2673	737
25°	2424	2495	2430	2367	2400	1110
35°	1912	1941	1896	1853	1857	1175
45°	861	979	980	945	822	661
55°	126	144	198	136	128	131
65°	42	43	44	40	38	42
75°	26	26	26	24	22	27
85°	10	10	8	8	6	10
90°	0	1	2	3	3	1
95°	8	15	8	9	11	9
105°	32	49	186	238	158	34
115°	57	69	161	334	390	56
125°	81	92	151	265	313	72
135°	101	112	152	218	250	78
145°	119	130	153	190	210	75
155°	140	145	156	172	180	64
165°	155	157	161	165	168	44
175°	164	165	164	163	162	15
180°	164	164	164	164	164	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2623.4	2623.4	2623.4	2623.4	2623.4
2.5°	2598.1	2644.4	2618.6	2620.7	2642.3
5°	2593.7	2653.6	2629.3	2640.1	2680.6
7.5°	2600.8	2663.4	2649.0	2652.8	2697.2
10°	2605.6	2671.2	2656.9	2656.0	2700.4
12.5°	2616.6	2685.4	2658.5	2652.8	2695.7
15°	2619.4	2698.6	2655.0	2634.1	2672.7
17.5°	2593.7	2681.0	2622.2	2579.0	2609.9
20°	2562.1	2651.0	2585.8	2525.3	2556.2
22.5°	2513.1	2600.4	2530.5	2465.3	2497.7
25°	2423.8	2495.3	2429.8	2367.3	2400.1
27.5°	2310.8	2361.1	2304.9	2245.7	2264.2
30°	2214.4	2264.7	2208.5	2147.5	2155.2
32.5°	2107.0	2149.5	2094.7	2040.0	2046.1
35°	1912.2	1941.2	1896.4	1853.0	1856.9
37.5°	1675.2	1679.0	1648.7	1609.2	1610.0
40°	1485.5	1497.1	1463.8	1432.3	1436.1
42.5°	1259.5	1305.1	1272.6	1244.1	1244.9
45°	861.3	979.1	979.8	945.4	821.8
47.5°	475.7	612.0	699.7	542.6	409.7
50°	300.3	387.2	527.4	317.2	278.5
52.5°	214.9	253.9	385.2	224.3	204.3
55°	126.4	143.8	197.5	136.1	128.4
57.5°	77.0	92.1	115.4	91.0	77.4
60°	53.3	66.9	86.9	60.9	47.4
62.5°	47.0	51.3	68.0	48.5	44.2
65°	41.5	43.4	43.5	39.5	37.5
67.5°	36.7	38.7	36.7	34.7	32.8
70°	33.6	35.5	33.6	31.6	29.6
72.5°	30.4	32.4	30.4	28.4	26.5
75°	25.7	25.7	25.7	23.7	21.7
77.5°	20.9	20.9	20.5	18.9	17.0
80°	17.8	17.8	15.8	15.8	13.8
82.5°	14.6	14.6	12.6	12.6	10.7
85°	9.9	9.9	7.9	7.9	5.9
87.5°	4.7	4.9	3.6	3.7	2.2
90°	0.0	1.0	2.1	3.1	3.1
92.5°	2.5	3.5	4.5	6.4	7.2
95°	8.2	15.3	8.2	9.3	11.3
97.5°	14.6	29.3	60.5	17.9	15.4
100°	19.6	36.7	121.5	35.8	23.7
102.5°	24.5	42.4	164.3	94.3	51.7
105°	31.9	49.0	186.3	238.0	157.5
107.5°	39.3	52.2	177.9	346.4	324.4
110°	44.3	56.3	172.9	364.0	391.1



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CATALOG NUMBER: OMN4DIP-SR4F0-100D25U935-WBMOOB-1DUDD-WW

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	49.2	61.3	168.0	353.7	399.4
115°	56.6	68.7	160.6	333.8	390.1
117.5°	64.2	76.1	158.7	312.2	370.1
120°	70.0	81.1	155.4	295.8	356.1
122.5°	74.1	86.0	151.3	281.7	337.2
125°	81.3	92.4	151.3	264.6	312.9
127.5°	87.3	98.6	151.5	244.8	292.5
130°	90.6	102.7	152.3	231.6	276.9
132.5°	94.7	106.8	152.3	225.7	262.9
135°	100.9	111.9	152.3	217.9	250.1
137.5°	106.0	117.9	152.3	209.4	237.0
140°	110.1	121.2	152.3	204.4	229.5
142.5°	114.3	124.5	153.2	198.6	222.1
145°	119.4	129.5	153.4	189.9	210.0
147.5°	125.6	134.4	154.6	183.6	199.1
150°	129.7	137.7	155.4	179.4	192.5
152.5°	133.8	141.1	155.4	176.1	186.7
155°	140.0	145.0	156.5	172.1	180.1
157.5°	144.9	149.8	157.7	169.6	175.4
160°	148.2	152.3	158.5	167.9	172.9
162.5°	150.7	154.7	159.3	167.0	170.5
165°	155.4	157.4	160.6	164.8	167.8
167.5°	158.1	159.9	161.6	163.7	165.5
170°	160.6	161.6	161.6	163.7	164.7
172.5°	161.4	163.2	162.4	162.9	163.9
175°	163.7	164.7	163.7	162.6	161.6
177.5°	163.7	164.5	163.7	163.6	162.8
180°	163.7	163.7	163.7	163.7	163.7

(END OF REPORT)