

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: P644626

Luminaire Tested: OMN4DIP-SR4F0-100D50U935-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644626
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-SR4F0-100D50U935-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 - 500 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

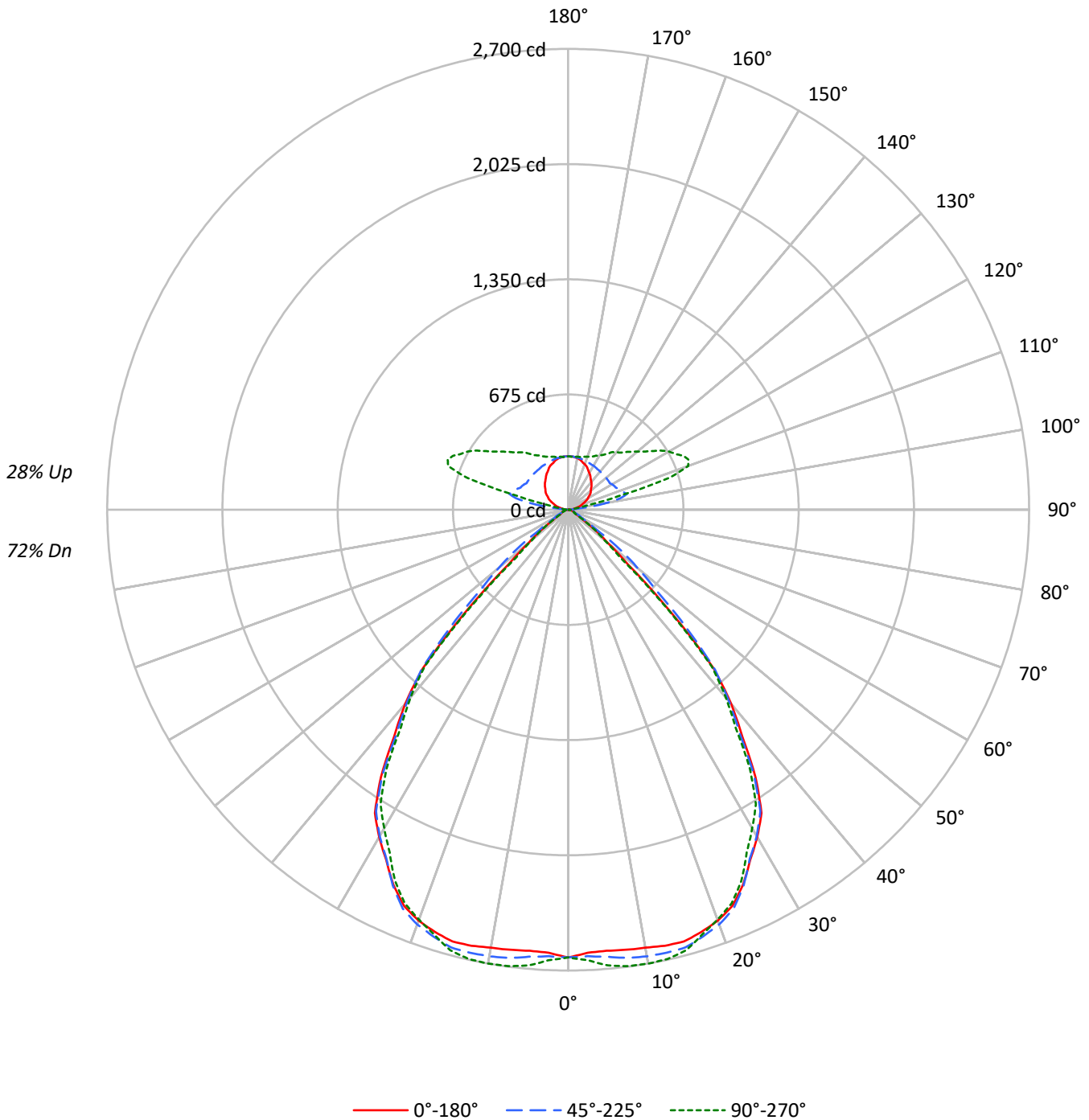
Lumens per Lamp: N/A
Luminaire Lumens: 5899.9 lumens
Efficiency: N/A
Efficacy: 112.0 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 52.7
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	50	30	10	0		
RCR																										
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	76	76	76	76	76	76	72		
1	105	102	99	96	100	97	94	92	87	85	84	79	77	76	71	70	69	68	67	66	65	64	63	65		
2	98	92	87	83	93	88	83	80	80	77	74	73	70	68	66	64	62	61	60	59	58	57	56	59		
3	91	83	77	73	87	80	74	70	73	69	65	67	64	61	61	59	56	55	54	53	52	51	50	53		
4	85	76	69	64	81	73	67	62	67	62	58	61	58	55	56	54	51	50	49	48	47	46	45	48		
5	79	69	62	57	75	67	60	55	61	56	52	57	53	49	52	49	46	45	44	43	42	41	40	44		
6	74	63	56	51	70	61	55	50	57	51	47	52	48	45	48	45	42	41	40	39	38	37	36	40		
7	69	58	51	46	66	56	50	45	52	47	43	49	44	41	45	41	39	38	37	36	35	34	33	37		
8	65	54	47	42	62	52	45	41	48	43	39	45	41	37	42	38	35	34	33	32	31	30	29	34		
9	61	50	43	38	58	48	42	37	45	40	36	42	37	34	39	35	33	32	31	30	29	28	27	31		
10	57	46	39	35	55	45	38	34	42	37	33	39	35	32	37	33	30	29	28	27	26	25	24	28		

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	4.3
10°-20°	747.4	12.7
20°-30°	1110.2	18.8
30°-40°	1162.0	19.7
40°-50°	703.8	11.9
50°-60°	162.4	2.8
60°-70°	44.6	0.8
70°-80°	26.1	0.4
80°-90°	9.7	0.2
90°-100°	38.5	0.7
100°-110°	274.1	4.6
110°-120°	372.2	6.3
120°-130°	302.9	5.1
130°-140°	243.6	4.1
140°-150°	192.1	3.3
150°-160°	140.4	2.4
160°-170°	87.2	1.5
170°-180°	29.7	0.5
0°-30°	2110.3	35.8
0°-40°	3272.3	55.5
0°-60°	4138.5	70.1
0°-90°	4219.0	71.5
90°-120°	684.8	11.6
90°-150°	1423.4	24.1
90°-180°	1681.0	28.5
0°-180°	5899.9	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	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	

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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	5.1	3.9	4.3	2.8
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



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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)