

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: P644632

Luminaire Tested: OMN4DIP-SR4F0-100D50U940-WBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P644632
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-SR4F0-100D50U940-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: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

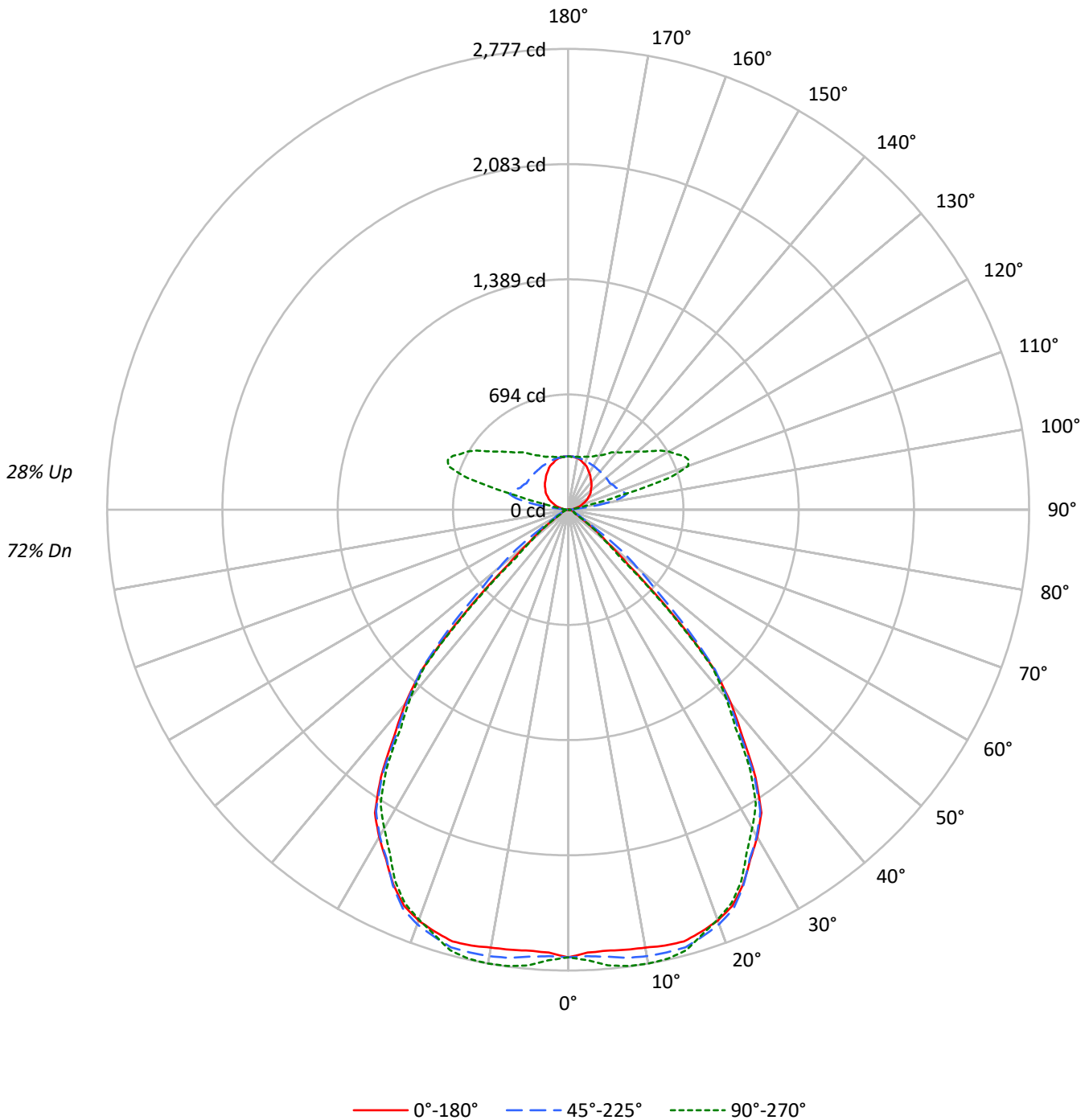
Lumens per Lamp: N/A
Luminaire Lumens: 6066.6 lumens
Efficiency: N/A
Efficacy: 115.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.21 / 1.19
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Direct

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	0	
RCR																						
0	112	112	112	112	106	106	106	106	95	95	95	85	85	85	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	69	69	69	65	
2	98	92	87	83	93	88	83	80	80	77	74	73	70	68	66	64	62	62	62	62	59	
3	91	83	77	73	87	80	74	70	73	69	65	67	64	61	61	59	56	56	56	56	53	
4	85	76	69	64	81	73	67	62	67	62	58	61	58	55	56	54	51	51	51	51	48	
5	79	69	62	57	75	67	60	55	61	56	52	57	53	49	52	49	46	46	46	46	44	
6	74	63	56	51	70	61	55	50	57	51	47	52	48	45	48	45	42	42	42	42	40	
7	69	58	51	46	66	56	50	45	52	47	43	49	44	41	45	41	39	39	39	39	37	
8	65	54	47	42	62	52	45	41	48	43	39	45	41	37	42	38	35	35	35	35	34	
9	61	50	43	38	58	48	42	37	45	40	36	42	37	34	39	35	33	33	33	33	31	
10	57	46	39	35	55	45	38	34	42	37	33	39	35	32	37	33	30	30	30	30	28	

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	34842	34842	34842
5°	34580	35054	35738
10°	35140	35833	36419
15°	36017	36505	36750
20°	36213	36547	36129
25°	35520	35607	35173
30°	33961	33870	33052
35°	31004	30748	30107
40°	25756	25378	24899
45°	16177	18404	15436
50°	6203	10897	5755
55°	2928	4574	2973
60°	1416	2310	1258
65°	1305	1366	1180
70°	1303	1303	1152
75°	1318	1318	1113
80°	1361	1205	1056
85°	1512	1200	904

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°

Vertical Angle: 45°

Luminance: 18404 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	259.8	4.3
10°-20°	768.5	12.7
20°-30°	1141.6	18.8
30°-40°	1194.8	19.7
40°-50°	723.7	11.9
50°-60°	167.0	2.8
60°-70°	45.9	0.8
70°-80°	26.9	0.4
80°-90°	10.0	0.2
90°-100°	39.6	0.7
100°-110°	281.9	4.6
110°-120°	382.7	6.3
120°-130°	311.5	5.1
130°-140°	250.5	4.1
140°-150°	197.5	3.3
150°-160°	144.4	2.4
160°-170°	89.7	1.5
170°-180°	30.6	0.5
0°-30°	2169.9	35.8
0°-40°	3364.7	55.5
0°-60°	4255.4	70.1
0°-90°	4338.2	71.5
90°-120°	704.2	11.6
90°-150°	1463.7	24.1
90°-180°	1728.0	28.5
0°-180°	6066.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2697	2697	2697	2697	2697	
5°	2667	2728	2704	2715	2756	255
15°	2693	2775	2730	2708	2748	758
25°	2492	2566	2498	2434	2468	1141
35°	1966	1996	1950	1905	1909	1208
45°	886	1007	1008	972	845	680
55°	130	148	203	140	132	135
65°	43	45	45	41	39	43
75°	26	26	26	24	22	28
85°	10	10	8	8	6	10
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°	2697.4	2697.4	2697.4	2697.4	2697.4
2.5°	2671.4	2719.1	2692.6	2694.7	2716.9
5°	2667.0	2728.5	2703.5	2714.6	2756.3
7.5°	2674.3	2738.6	2723.8	2727.7	2773.4
10°	2679.2	2746.7	2732.0	2731.0	2776.7
12.5°	2690.5	2761.2	2733.6	2727.7	2771.8
15°	2693.4	2774.8	2729.9	2708.5	2748.2
17.5°	2667.0	2756.7	2696.2	2651.8	2683.6
20°	2634.5	2725.8	2658.8	2596.6	2628.4
22.5°	2584.1	2673.9	2602.0	2534.9	2568.3
25°	2492.3	2565.8	2498.4	2434.1	2467.9
27.5°	2376.1	2427.7	2370.0	2309.1	2328.2
30°	2277.0	2328.6	2270.9	2208.1	2216.0
32.5°	2166.5	2210.2	2153.9	2097.6	2103.9
35°	1966.2	1996.0	1950.0	1905.4	1909.3
37.5°	1722.5	1726.4	1695.2	1654.6	1655.4
40°	1527.5	1539.4	1505.1	1472.7	1476.7
42.5°	1295.1	1342.0	1308.5	1279.3	1280.1
45°	885.6	1006.8	1007.5	972.1	845.0
47.5°	489.1	629.3	719.5	557.9	421.3
50°	308.7	398.1	542.3	326.1	286.4
52.5°	221.0	261.1	396.1	230.7	210.0
55°	130.0	147.9	203.1	140.0	132.0
57.5°	79.2	94.7	118.6	93.5	79.6
60°	54.8	68.7	89.4	62.7	48.7
62.5°	48.3	52.7	69.9	49.9	45.5
65°	42.7	44.6	44.7	40.6	38.6
67.5°	37.8	39.8	37.8	35.7	33.7
70°	34.5	36.5	34.5	32.5	30.5
72.5°	31.3	33.3	31.3	29.2	27.2
75°	26.4	26.4	26.4	24.3	22.3
77.5°	21.5	21.5	21.1	19.5	17.5
80°	18.3	18.3	16.2	16.2	14.2
82.5°	15.0	15.0	13.0	13.0	11.0
85°	10.2	10.2	8.1	8.1	6.1
87.5°	4.9	5.3	4.1	4.4	2.8
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)