

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: P645167

Luminaire Tested: OMN4DIP-SR4F0-75D50U940-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



Test Information

Test Method: LM-79-2019
Report Number: P645167
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-SR4F0-75D50U940-BBMOOB-1DUDD-WW
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE
DOWNLIGHT - BLACK BAFFLE WITH MEDIUM OPTIC - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

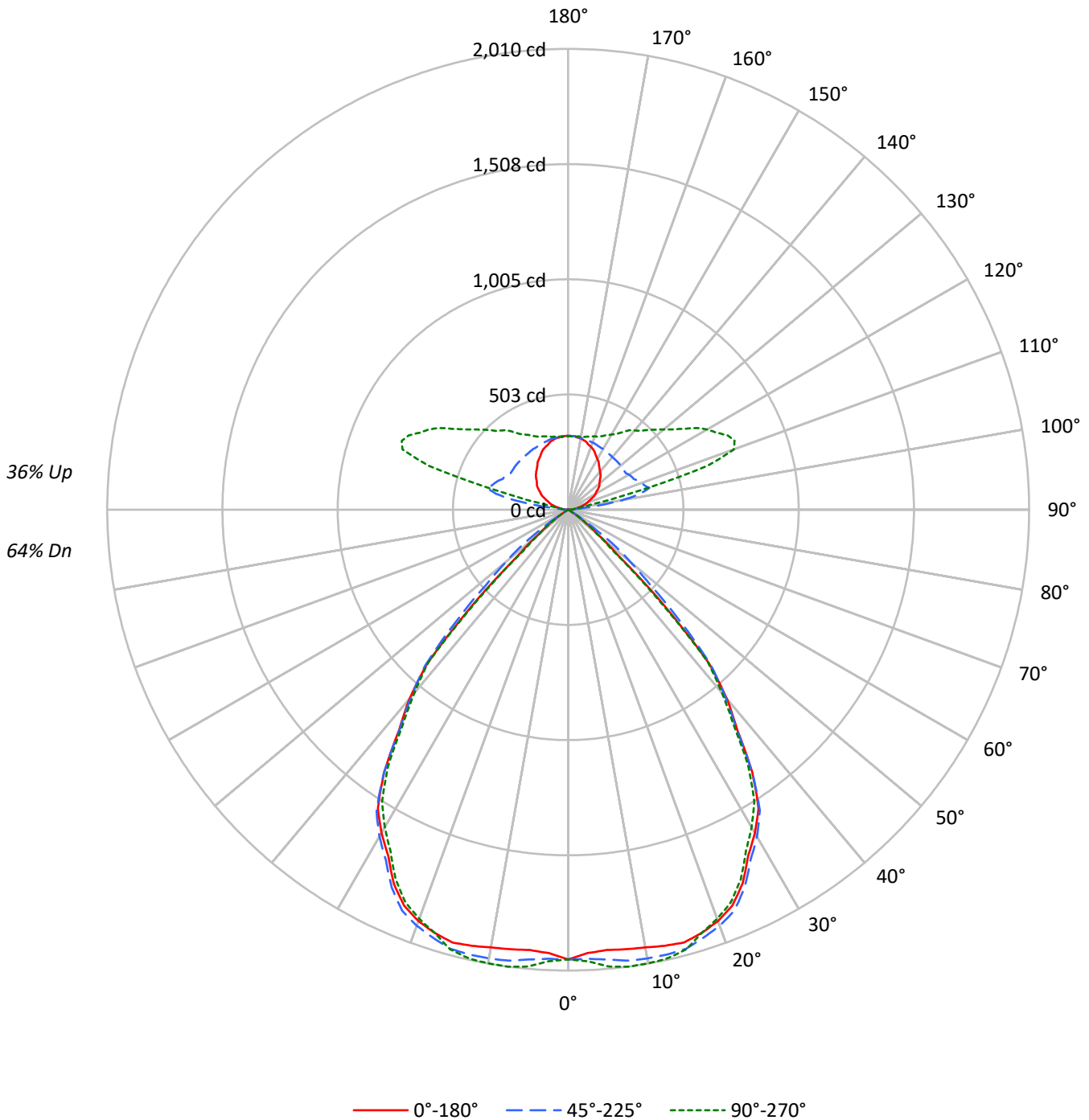
Lumens per Lamp: N/A
Luminaire Lumens: 4742.0 lumens
Efficiency: N/A
Efficacy: 111.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 42.5
Input Voltage (V): 120
Input Current (Ain): 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: P645167

CATALOG NUMBER: OMN4DIP-SR4F0-75D50U940-BBMOOB-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P645167

CATALOG NUMBER: OMN4DIP-SR4F0-75D50U940-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	0
RCR																		
0	110	110	110	110	104	104	104	104	91	91	91	79	79	79	69	69	69	64
1	103	100	97	94	97	94	92	89	83	82	80	74	72	71	64	64	63	59
2	96	90	85	81	91	85	81	78	76	73	70	68	66	64	60	58	57	53
3	90	82	76	71	84	78	72	68	70	66	63	62	60	57	56	54	52	48
4	83	74	68	63	79	71	65	60	64	59	56	58	54	51	52	49	47	44
5	78	68	61	56	73	65	59	54	59	54	50	53	49	46	48	45	43	40
6	73	62	55	50	69	59	53	48	54	49	45	49	45	42	45	41	39	37
7	68	57	50	45	64	55	48	44	50	45	41	46	41	38	41	38	36	34
8	63	52	46	41	60	50	44	40	46	41	37	42	38	35	39	35	33	31
9	60	49	42	37	56	47	40	36	43	38	34	39	35	32	36	33	30	28
10	56	45	38	34	53	43	37	33	40	35	31	37	33	30	34	30	28	26

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25336	25336	25336
5°	24996	25533	25930
10°	25425	26068	26350
15°	26127	26516	26558
20°	26246	26542	26099
25°	25642	25926	25359
30°	24277	24551	23843
35°	22068	22068	21611
40°	18151	17969	17583
45°	10852	12754	10350
50°	3509	7108	3292
55°	1241	2380	1241
60°	80	672	39
65°	46	46	0
70°	57	0	0
75°	0	0	0
80°	0	0	0
85°	222	0	0

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 45°
 Vertical Angle: 45°
 Luminance: 12754 cd/sqm



TEST NUMBER: P645167

CATALOG NUMBER: OMN4DIP-SR4F0-75D50U940-BBMOOB-1DUDD-WW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	188.7	4.0
10°-20°	558.4	11.8
20°-30°	826.3	17.4
30°-40°	854.1	18.0
40°-50°	497.0	10.5
50°-60°	84.2	1.8
60°-70°	3.3	0.1
70°-80°	0.5	0.0
80°-90°	1.2	0.0
90°-100°	39.6	0.8
100°-110°	281.9	5.9
110°-120°	382.7	8.1
120°-130°	311.5	6.6
130°-140°	250.5	5.3
140°-150°	197.5	4.2
150°-160°	144.4	3.0
160°-170°	89.7	1.9
170°-180°	30.6	0.6
0°-30°	1573.4	33.2
0°-40°	2427.5	51.2
0°-60°	3008.7	63.4
0°-90°	3013.6	63.6
90°-120°	704.2	14.8
90°-150°	1463.7	30.9
90°-180°	1728.0	36.4
0°-180°	4742.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1962	1962	1962	1962	1962	
5°	1928	1979	1969	1974	2000	185
15°	1954	2023	1983	1972	1986	550
25°	1799	1859	1819	1764	1779	822
35°	1400	1422	1400	1364	1370	857
45°	594	691	698	674	567	459
55°	55	64	106	60	55	61
65°	2	2	2	0	0	2
75°	0	2	0	0	0	1
85°	2	2	0	0	0	1
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	



TEST NUMBER: P645167

CATALOG NUMBER: OMN4DIP-SR4F0-75D50U940-BBMOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1961.5	1961.5	1961.5	1961.5	1961.5
2.5°	1935.8	1974.1	1960.3	1961.7	1971.3
5°	1927.8	1978.7	1969.2	1974.3	1999.8
7.5°	1933.6	1985.1	1983.9	1985.3	2010.2
10°	1938.5	1992.4	1987.5	1986.5	2009.0
12.5°	1948.3	2007.0	1987.5	1985.2	2004.1
15°	1953.8	2022.7	1982.9	1972.5	1986.0
17.5°	1935.2	2011.8	1957.8	1930.1	1935.5
20°	1909.4	1987.3	1930.9	1889.7	1898.7
22.5°	1869.0	1943.3	1892.9	1842.0	1853.4
25°	1799.2	1859.1	1819.1	1764.3	1779.3
27.5°	1700.0	1747.3	1722.0	1668.9	1678.2
30°	1627.7	1666.6	1646.1	1594.1	1598.6
32.5°	1544.4	1577.3	1555.4	1510.7	1510.4
35°	1399.5	1422.0	1399.5	1364.5	1370.5
37.5°	1210.0	1227.0	1204.2	1183.1	1186.1
40°	1076.5	1089.9	1065.7	1045.8	1042.8
42.5°	909.9	947.3	923.6	896.5	900.7
45°	594.1	691.4	698.2	674.4	566.6
47.5°	299.5	405.8	486.0	368.8	264.3
50°	174.6	238.9	353.7	195.3	163.8
52.5°	114.5	141.8	247.1	123.4	108.7
55°	55.1	64.1	105.7	59.6	55.1
57.5°	19.0	29.2	46.9	29.8	21.1
60°	3.1	12.0	26.0	9.0	1.5
62.5°	1.8	3.6	16.2	1.8	0.3
65°	1.5	1.5	1.5	0.0	0.0
67.5°	1.5	1.5	0.0	0.0	0.0
70°	1.5	1.5	0.0	0.0	0.0
72.5°	1.5	1.5	0.0	0.0	0.0
75°	0.0	1.5	0.0	0.0	0.0
77.5°	0.0	1.5	0.0	0.0	0.0
80°	0.0	1.5	0.0	0.0	0.0
82.5°	0.0	1.5	0.0	0.0	0.0
85°	1.5	1.5	0.0	0.0	0.0
87.5°	1.2	1.6	0.8	1.2	1.2
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



TEST NUMBER: P645167

CATALOG NUMBER: OMN4DIP-SR4F0-75D50U940-BBMOOB-1DUDD-WW

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)