

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: P645161

Luminaire Tested: OMN4DIP-SR4F0-75D50U935-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



**Test Information**

Test Method: LM-79-2019  
Report Number: P645161  
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-SR4F0-75D50U935-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: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

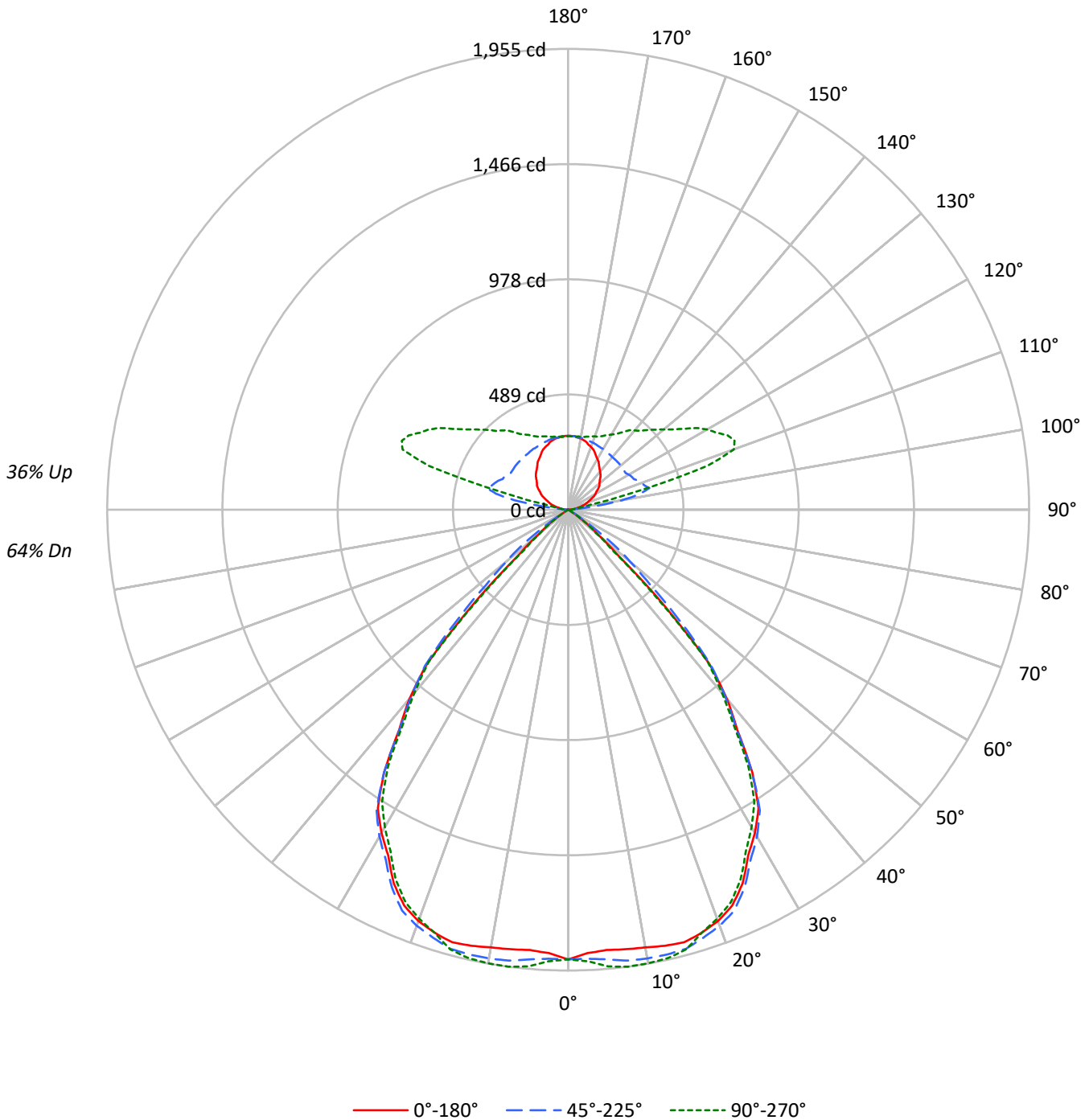
Lumens per Lamp: N/A  
Luminaire Lumens: 4611.8 lumens  
Efficiency: N/A  
Efficacy: 108.5 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.21 / 1.18  
Luminous Opening: Rectangular (W 0.21' x L: 4' x H: 0')  
CIE Type: Semi-Direct

Input Watts (W): 42.5  
Input Voltage (V): 120  
Input Current (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										
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	110	110	110	110	104	104	104	104	91	91	91	79	79	79	69	69	69	64	64	64	64	64	64	59														
1	103	100	97	94	97	94	92	89	83	82	80	74	72	71	64	64	63	59	59	59	59	59	59	59														
2	96	90	85	81	91	85	81	78	76	73	70	68	66	64	60	58	57	53	53	53	53	53	53	53														
3	90	82	76	71	84	78	72	68	70	66	63	62	60	57	56	54	52	48	48	48	48	48	48	48														
4	83	74	68	63	79	71	65	60	64	59	56	58	54	51	52	49	47	44	44	44	44	44	44	44														
5	78	68	61	56	73	65	59	54	59	54	50	53	49	46	48	45	43	40	40	40	40	40	40	40														
6	73	62	55	50	69	59	53	48	54	49	45	49	45	42	45	41	39	37	37	37	37	37	37	37														
7	68	57	50	45	64	55	48	44	50	45	41	46	41	38	41	38	36	34	34	34	34	34	34	34														
8	63	52	46	41	60	50	44	40	46	41	37	42	38	35	39	35	33	31	31	31	31	31	31	31														
9	60	49	42	37	56	47	40	36	43	38	34	39	35	32	36	33	30	28	28	28	28	28	28	28														
10	56	45	38	34	53	43	37	33	40	35	31	37	33	30	34	30	28	26	26	26	26	26	26	26														

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

	0°	45°	90°
0°	24640	24640	24640
5°	24310	24831	25218
10°	24728	25353	25626
15°	25410	25789	25829
20°	25526	25813	25383
25°	24938	25213	24662
30°	23610	23877	23188
35°	21462	21462	21016
40°	17652	17477	17099
45°	10555	12405	10065
50°	3412	6913	3201
55°	1207	2315	1207
60°	78	654	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: 12405 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	183.5	4.0
10°-20°	543.1	11.8
20°-30°	803.6	17.4
30°-40°	830.7	18.0
40°-50°	483.3	10.5
50°-60°	81.9	1.8
60°-70°	3.2	0.1
70°-80°	0.5	0.0
80°-90°	1.1	0.0
90°-100°	38.5	0.8
100°-110°	274.1	5.9
110°-120°	372.2	8.1
120°-130°	302.9	6.6
130°-140°	243.6	5.3
140°-150°	192.1	4.2
150°-160°	140.4	3.0
160°-170°	87.2	1.9
170°-180°	29.7	0.6
0°-30°	1530.2	33.2
0°-40°	2360.9	51.2
0°-60°	2926.1	63.4
0°-90°	2930.9	63.6
90°-120°	684.8	14.8
90°-150°	1423.4	30.9
90°-180°	1681.0	36.4
0°-180°	4611.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1908	1908	1908	1908	1908	
5°	1875	1924	1915	1920	1945	180
15°	1900	1967	1928	1918	1932	535
25°	1750	1808	1769	1716	1730	799
35°	1361	1383	1361	1327	1333	834
45°	578	672	679	656	551	447
55°	54	62	103	58	54	59
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	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°	1907.6	1907.6	1907.6	1907.6	1907.6
2.5°	1882.6	1919.9	1906.4	1907.8	1917.2
5°	1874.9	1924.4	1915.1	1920.1	1944.9
7.5°	1880.5	1930.6	1929.4	1930.8	1955.0
10°	1885.3	1937.7	1933.0	1932.0	1953.8
12.5°	1894.8	1951.9	1933.0	1930.7	1949.0
15°	1900.2	1967.2	1928.5	1918.4	1931.5
17.5°	1882.0	1956.6	1904.1	1877.1	1882.3
20°	1857.0	1932.7	1877.9	1837.8	1846.6
22.5°	1817.7	1889.9	1840.9	1791.4	1802.5
25°	1749.8	1808.0	1769.1	1715.9	1730.4
27.5°	1653.3	1699.3	1674.7	1623.1	1632.1
30°	1583.0	1620.9	1600.9	1550.3	1554.7
32.5°	1502.0	1534.0	1512.7	1469.2	1468.9
35°	1361.1	1382.9	1361.1	1327.0	1332.8
37.5°	1176.7	1193.3	1171.1	1150.6	1153.5
40°	1046.9	1060.0	1036.5	1017.0	1014.1
42.5°	884.9	921.3	898.3	871.9	875.9
45°	577.8	672.4	679.1	655.8	551.0
47.5°	291.3	394.7	472.7	358.7	257.0
50°	169.8	232.4	344.0	189.9	159.3
52.5°	111.4	137.9	240.4	120.0	105.7
55°	53.6	62.3	102.8	58.0	53.6
57.5°	18.5	28.4	45.6	29.0	20.6
60°	3.0	11.7	25.3	8.8	1.5
62.5°	1.8	3.5	15.8	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	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)