

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: P644525

Luminaire Tested: OMN4DIP-SR4F0-100D125U930-BBMOOB-1DUDD-WW

Issue Date: 9/2/2020



**Test Information**

Test Method: LM-79-2019  
Report Number: P644525  
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-SR4F0-100D125U930-BBMOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE 4-INCH DIAMETER LINEAR LED LUMINAIRE  
DOWNLIGHT - BLACK BAFFLE WITH MEDIUM OPTIC - 1000 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 1250 LUMENS PER FOOT  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

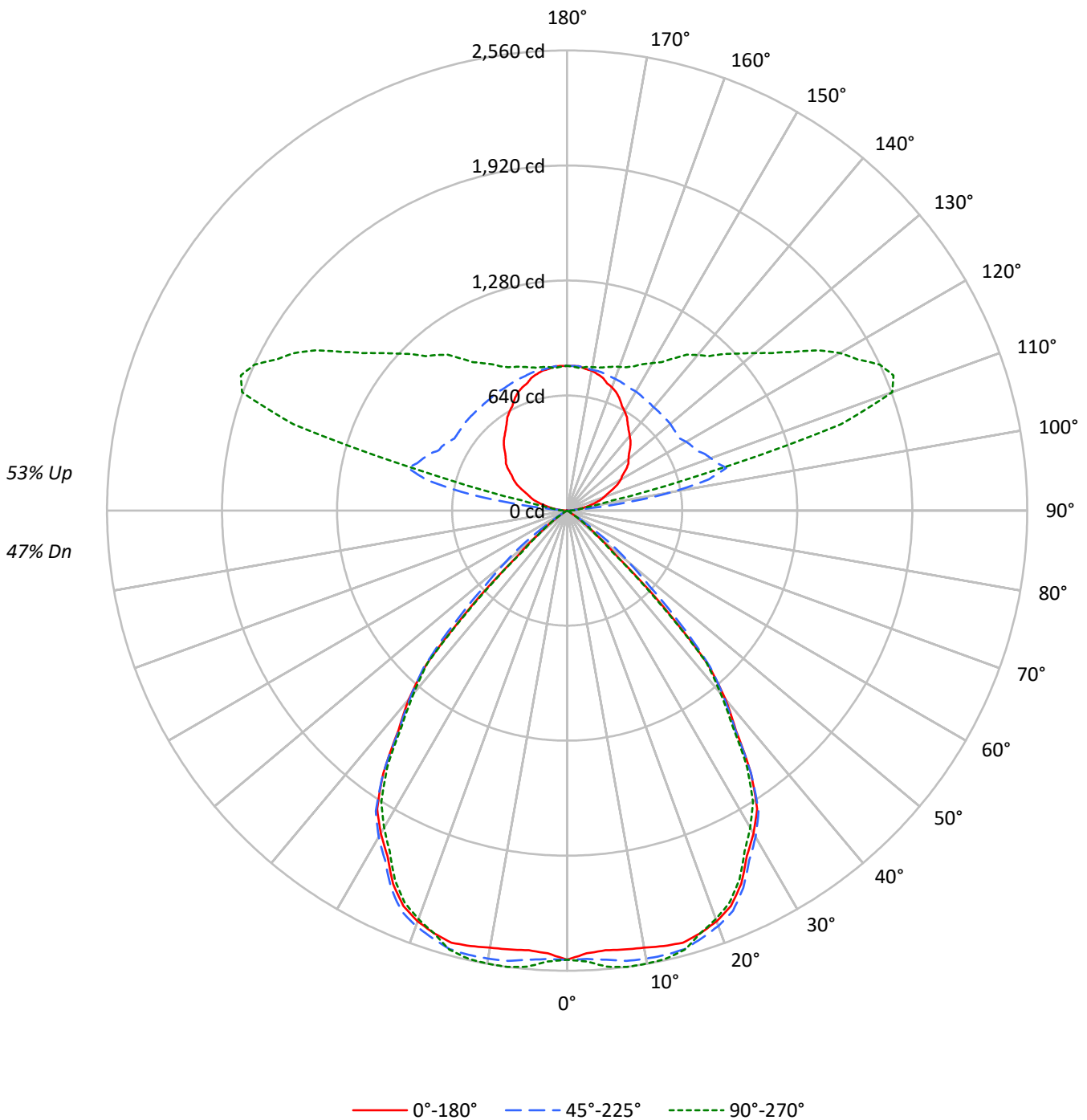
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8165.2 lumens  
Efficiency: N/A  
Efficacy: 107.0 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: General Diffuse  
  
Input Watts (W): 76.3  
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

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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	106	106	106	106	98	98	98	98	82	82	82	67	67	67	53	53	53	47				47
1	99	95	92	89	91	88	85	83	74	72	71	62	60	59	50	49	49	43				43
2	92	86	80	76	84	79	75	71	67	64	62	57	54	53	46	45	44	39				39
3	85	77	71	66	78	72	66	62	61	57	54	52	49	47	43	41	40	36				36
4	79	70	63	58	73	65	59	54	56	52	48	48	44	42	40	38	36	33				33
5	73	63	56	51	68	59	53	48	51	46	43	44	40	38	37	35	33	30				30
6	68	57	50	45	63	54	47	43	47	42	38	40	37	34	34	32	30	27				27
7	63	52	45	40	59	49	43	38	43	38	35	37	34	31	32	29	27	25				25
8	59	48	41	36	55	45	39	35	40	35	31	34	31	28	30	27	25	23				23
9	55	44	37	33	51	42	36	31	37	32	29	32	28	26	28	25	23	21				21
10	52	41	34	30	48	38	33	29	34	29	26	30	26	24	26	23	21	19				19

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

	0°	45°	90°
0°	32270	32270	32270
5°	31837	32520	33026
10°	32385	33203	33561
15°	33278	33773	33825
20°	33430	33805	33243
25°	32660	33021	32298
30°	30922	31271	30368
35°	28109	28109	27524
40°	23119	22888	22394
45°	13823	16245	13181
50°	4467	9053	4194
55°	1581	3031	1581
60°	101	858	52
65°	61	61	0
70°	76	0	0
75°	0	0	0
80°	0	0	0
85°	296	0	0

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 45°  
 Vertical Angle: 45°  
 Luminance: 16245 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	240.3	2.9
10°-20°	711.2	8.7
20°-30°	1052.5	12.9
30°-40°	1087.9	13.3
40°-50°	633.0	7.8
50°-60°	107.2	1.3
60°-70°	4.2	0.1
70°-80°	0.6	0.0
80°-90°	2.4	0.0
90°-100°	99.0	1.2
100°-110°	705.5	8.6
110°-120°	957.8	11.7
120°-130°	779.6	9.5
130°-140°	627.0	7.7
140°-150°	494.3	6.1
150°-160°	361.4	4.4
160°-170°	224.5	2.7
170°-180°	76.6	0.9
0°-30°	2004.0	24.5
0°-40°	3091.9	37.9
0°-60°	3832.1	46.9
0°-90°	3839.4	47.0
90°-120°	1762.4	21.6
90°-150°	3663.3	44.9
90°-180°	4326.0	53.0
0°-180°	8165.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2498	2498	2498	2498	2498	
5°	2455	2520	2508	2515	2547	235
15°	2489	2576	2526	2512	2530	700
25°	2292	2368	2317	2247	2266	1047
35°	1783	1811	1783	1738	1746	1092
45°	757	881	889	859	722	585
55°	70	82	135	76	70	77
65°	2	2	2	0	0	2
75°	0	2	0	0	0	1
85°	2	2	0	0	0	1
90°	0	5	10	15	15	2
95°	40	75	40	46	56	45
105°	157	241	917	1171	775	166
115°	279	338	790	1642	1920	277
125°	400	455	744	1302	1540	356
135°	496	551	750	1072	1231	382
145°	588	637	755	934	1033	369
155°	689	714	770	847	886	316
165°	765	775	790	811	826	215
175°	805	810	805	800	795	76
180°	805	805	805	805	805	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2498.3	2498.3	2498.3	2498.3	2498.3
2.5°	2465.6	2514.4	2496.8	2498.6	2510.8
5°	2455.4	2520.2	2508.1	2514.7	2547.1
7.5°	2462.8	2528.4	2526.8	2528.7	2560.3
10°	2469.1	2537.7	2531.5	2530.2	2558.8
12.5°	2481.5	2556.3	2531.5	2528.5	2552.5
15°	2488.6	2576.3	2525.6	2512.4	2529.5
17.5°	2464.8	2562.4	2493.6	2458.3	2465.2
20°	2432.0	2531.2	2459.3	2406.9	2418.4
22.5°	2380.5	2475.1	2410.9	2346.1	2360.6
25°	2291.6	2367.9	2316.9	2247.2	2266.2
27.5°	2165.2	2225.5	2193.3	2125.7	2137.5
30°	2073.2	2122.7	2096.6	2030.4	2036.1
32.5°	1967.1	2009.0	1981.1	1924.1	1923.8
35°	1782.6	1811.2	1782.6	1737.9	1745.5
37.5°	1541.1	1562.9	1533.7	1506.9	1510.7
40°	1371.1	1388.2	1357.4	1332.0	1328.1
42.5°	1158.9	1206.5	1176.4	1141.8	1147.2
45°	756.7	880.7	889.3	858.9	721.6
47.5°	381.5	516.9	619.0	469.7	336.6
50°	222.3	304.3	450.5	248.7	208.7
52.5°	145.9	180.6	314.8	157.2	138.5
55°	70.2	81.7	134.6	75.9	70.2
57.5°	24.2	37.2	59.7	38.0	26.9
60°	3.9	15.3	33.2	11.5	2.0
62.5°	2.3	4.6	20.7	2.3	0.4
65°	2.0	2.0	2.0	0.0	0.0
67.5°	2.0	2.0	0.0	0.0	0.0
70°	2.0	2.0	0.0	0.0	0.0
72.5°	2.0	2.0	0.0	0.0	0.0
75°	0.0	1.9	0.0	0.0	0.0
77.5°	0.0	1.9	0.0	0.0	0.0
80°	0.0	1.9	0.0	0.0	0.0
82.5°	0.0	1.9	0.0	0.0	0.0
85°	2.0	2.0	0.0	0.0	0.0
87.5°	1.6	2.6	2.0	3.0	3.0
90°	0.0	5.0	10.1	15.2	15.2
92.5°	12.2	17.1	22.3	31.5	35.5
95°	40.5	75.2	40.5	45.8	55.7
97.5°	71.9	144.2	297.8	87.9	76.0
100°	96.2	180.4	597.6	175.9	116.5
102.5°	120.5	208.7	808.3	464.2	254.2
105°	157.0	241.2	916.7	1171.1	774.9
107.5°	193.5	256.9	875.2	1704.4	1596.4
110°	217.8	277.2	850.9	1790.9	1924.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	242.1	301.5	826.6	1740.3	1965.1
115°	278.6	338.0	790.1	1642.2	1919.5
117.5°	316.0	374.5	781.0	1536.0	1821.3
120°	344.4	398.9	764.8	1455.3	1752.4
122.5°	364.7	423.1	744.5	1385.8	1659.2
125°	400.1	454.6	744.5	1302.0	1539.7
127.5°	429.5	485.0	745.5	1204.7	1439.4
130°	445.7	505.1	749.6	1139.6	1362.4
132.5°	466.0	525.4	749.6	1110.3	1293.5
135°	496.3	550.8	749.6	1072.3	1230.7
137.5°	521.7	580.1	749.6	1030.2	1165.9
140°	541.9	596.4	749.6	1005.6	1129.4
142.5°	562.2	612.7	753.6	977.1	1093.0
145°	587.5	637.0	754.6	934.2	1033.2
147.5°	617.9	661.5	760.7	903.3	979.5
150°	638.2	677.8	764.8	882.7	947.1
152.5°	658.4	694.1	764.8	866.2	918.7
155°	688.8	713.6	769.8	846.7	886.3
157.5°	713.1	736.9	775.9	834.3	863.0
160°	729.3	749.1	780.0	826.1	850.9
162.5°	741.5	761.3	784.0	821.9	838.7
165°	764.8	774.7	790.1	810.7	825.6
167.5°	777.9	786.9	795.2	805.5	814.4
170°	790.1	795.1	795.2	805.4	810.4
172.5°	794.2	803.1	799.2	801.4	806.3
175°	805.3	810.2	805.3	800.1	795.2
177.5°	805.3	809.3	805.3	805.2	801.2
180°	805.3	805.3	805.3	805.3	805.3

(END OF REPORT)