

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: P644418

Luminaire Tested: CRQ4DIP-SR4F0-75D150U930-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644418
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-75D150U930-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

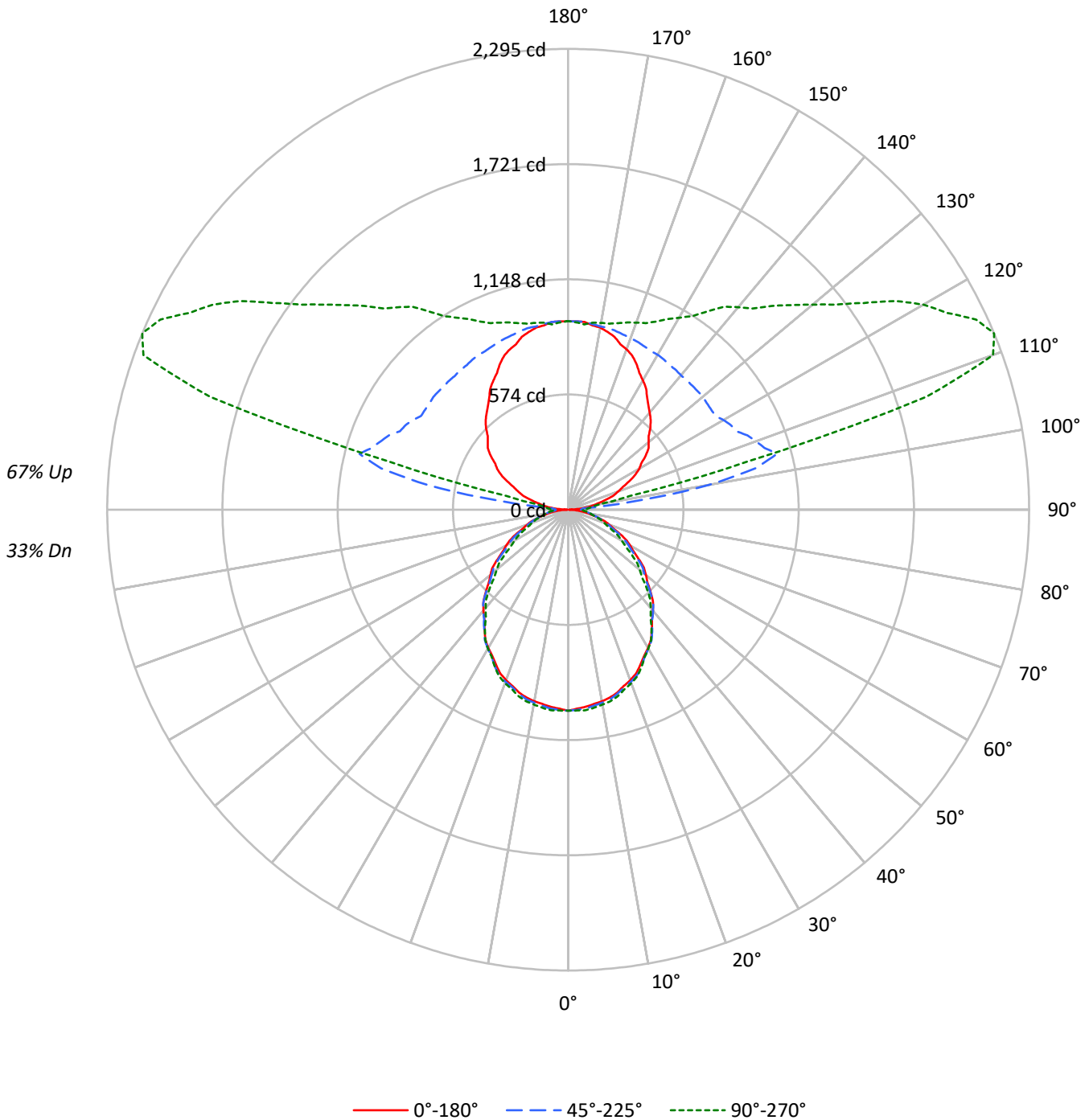
Lumens per Lamp: N/A
Luminaire Lumens: 7624.5 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 70.4
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	0
RCR																		
0	103	103	103	103	93	93	93	93	74	74	74	57	57	57	41	41	41	33
1	94	90	86	82	84	81	78	75	65	62	60	50	48	47	36	35	34	28
2	85	78	72	67	77	71	66	61	57	53	50	44	41	39	32	30	29	23
3	78	69	62	56	70	62	56	51	50	46	42	39	36	33	28	26	25	20
4	71	61	53	47	64	55	49	43	44	40	36	34	31	28	25	23	21	17
5	65	54	46	40	59	49	42	37	40	35	31	31	27	25	23	20	18	15
6	60	48	41	35	54	44	37	32	36	31	27	28	24	21	20	18	16	13
7	56	44	36	31	50	40	33	28	32	27	24	25	22	19	19	16	14	12
8	52	40	32	27	46	36	29	25	29	24	21	23	19	17	17	15	13	10
9	48	36	29	24	43	33	26	22	27	22	19	21	18	15	16	13	12	9
10	45	33	26	21	40	30	24	20	25	20	17	20	16	14	15	12	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16162	16162	16162
5°	15857	14271	13828
10°	15649	12697	11945
15°	15420	11370	10448
20°	15067	10201	9138
25°	14597	9108	7963
30°	14134	8049	6913
35°	13508	7079	5933
40°	12923	6197	5030
45°	12248	5326	4197
50°	11534	4511	3443
55°	10777	3795	2776
60°	10054	3111	2219
65°	9166	2481	1757
70°	8309	1944	1388
75°	7266	1493	1094
80°	6068	1110	852
85°	4431	808	648

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 12248 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	94.5	1.2
10°-20°	268.1	3.5
20°-30°	395.8	5.2
30°-40°	455.1	6.0
40°-50°	441.4	5.8
50°-60°	369.5	4.8
60°-70°	266.2	3.5
70°-80°	162.7	2.1
80°-90°	81.1	1.1
90°-100°	146.7	1.9
100°-110°	833.6	10.9
110°-120°	1120.3	14.7
120°-130°	910.2	11.9
130°-140°	731.0	9.6
140°-150°	576.1	7.6
150°-160°	421.3	5.5
160°-170°	261.7	3.4
170°-180°	89.2	1.2
0°-30°	758.4	9.9
0°-40°	1213.5	15.9
0°-60°	2024.4	26.6
0°-90°	2534.5	33.2
90°-120°	2100.6	27.6
90°-150°	4317.9	56.6
90°-180°	5090.0	66.8
0°-180°	7624.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1001	1001	1001	1001	1001	
5°	986	1004	994	996	1002	94
15°	943	957	949	953	960	265
25°	851	865	862	858	864	392
35°	725	736	730	722	722	454
45°	581	587	577	560	551	448
55°	428	434	418	393	380	384
65°	283	284	270	250	243	281
75°	153	153	156	151	148	163
85°	47	56	78	83	83	49
90°	4	34	63	77	78	7
95°	61	100	77	93	106	65
105°	197	287	1076	1378	919	208
115°	335	398	924	1917	2240	332
125°	472	533	869	1517	1794	419
135°	578	642	874	1250	1434	445
145°	685	742	880	1089	1204	430
155°	803	832	897	987	1033	369
165°	891	903	921	945	962	250
175°	939	944	939	932	927	89
180°	939	939	939	939	939	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1001.0	1001.0	1001.0	1001.0	1001.0
2.5°	992.0	1006.4	997.6	999.9	1001.0
5°	985.5	1003.5	994.0	995.5	1002.5
7.5°	976.4	993.0	984.6	986.5	994.5
10°	968.5	985.1	975.6	978.6	985.5
12.5°	958.3	973.8	966.5	969.5	976.4
15°	943.1	956.9	948.7	953.1	960.0
17.5°	920.4	935.4	926.7	929.1	936.0
20°	903.5	917.3	912.0	912.1	919.0
22.5°	883.1	898.0	893.9	890.7	898.7
25°	851.2	865.0	862.5	858.4	863.9
27.5°	819.5	829.7	824.9	820.7	824.9
30°	794.6	807.1	798.9	794.7	798.9
32.5°	767.5	779.9	771.7	766.4	768.3
35°	725.3	736.4	729.6	722.5	722.5
37.5°	685.5	692.6	688.0	676.1	673.0
40°	656.0	664.3	657.5	643.2	639.1
42.5°	625.5	633.8	625.8	610.4	604.0
45°	581.1	586.6	576.9	559.7	551.4
47.5°	535.3	541.1	527.7	508.8	498.8
50°	504.8	511.7	494.9	474.8	463.8
52.5°	475.4	480.1	464.3	440.9	431.0
55°	428.4	433.9	418.5	392.8	380.3
57.5°	384.6	389.8	371.6	347.0	337.4
60°	356.3	360.4	342.2	316.5	306.8
62.5°	324.6	328.8	311.6	289.3	279.7
65°	282.8	284.2	270.1	250.1	243.2
67.5°	243.5	243.5	231.6	216.8	211.2
70°	216.3	216.3	207.8	196.4	190.9
72.5°	191.4	190.3	185.2	177.2	172.8
75°	152.7	152.7	155.5	151.2	148.5
77.5°	118.8	116.6	128.7	128.1	126.7
80°	96.1	96.1	111.7	114.5	113.1
82.5°	75.8	78.0	98.1	102.1	100.7
85°	46.7	56.3	77.8	83.4	83.4
87.5°	21.2	39.2	63.4	72.0	72.3
90°	4.2	33.5	62.7	77.1	78.5
92.5°	22.9	41.1	67.8	87.1	94.2
95°	61.4	100.4	76.9	93.0	105.9
97.5°	100.8	176.5	368.6	132.1	119.9
100°	129.1	217.6	713.5	229.1	162.6
102.5°	156.3	249.4	954.5	560.6	317.5
105°	197.1	287.0	1075.5	1377.7	918.7
107.5°	237.9	303.8	1024.0	1994.4	1869.9
110°	265.1	327.5	994.5	2092.9	2250.2

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	293.5	355.8	966.2	2031.7	2295.1
115°	334.6	398.3	923.7	1916.8	2240.0
117.5°	376.5	440.8	912.8	1791.4	2123.8
120°	408.5	469.2	892.7	1696.1	2042.4
122.5°	432.1	496.3	869.1	1615.2	1933.8
125°	472.0	532.7	869.1	1517.4	1794.5
127.5°	504.5	568.1	870.3	1404.0	1677.6
130°	522.3	591.5	875.0	1328.1	1587.9
132.5°	543.6	612.9	873.9	1294.0	1507.6
135°	578.5	642.0	873.6	1249.7	1434.4
137.5°	608.0	676.1	873.6	1200.7	1358.8
140°	631.6	695.1	873.6	1172.0	1316.3
142.5°	655.2	714.1	878.3	1138.8	1273.8
145°	684.7	742.4	879.5	1088.8	1204.2
147.5°	720.1	770.9	886.6	1052.7	1141.6
150°	743.8	789.9	891.3	1028.8	1103.8
152.5°	767.4	808.9	891.3	1009.6	1070.8
155°	802.8	831.6	897.2	986.8	1033.0
157.5°	831.1	858.8	904.3	972.4	1005.8
160°	850.0	873.1	909.0	962.8	991.7
162.5°	864.2	887.3	913.8	957.9	977.5
165°	891.3	902.9	920.8	944.9	962.2
167.5°	906.7	917.1	926.7	938.8	949.2
170°	920.8	926.6	926.7	938.7	944.5
172.5°	925.6	936.0	931.5	934.0	939.7
175°	938.6	944.3	938.6	932.5	926.7
177.5°	938.6	943.2	938.6	938.5	933.8
180°	938.6	938.6	938.6	938.6	938.6

(END OF REPORT)