

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: P644270

Luminaire Tested: CRQ4DIP-SR4F0-125D150U835-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644270
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-SR4F0-125D150U835-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

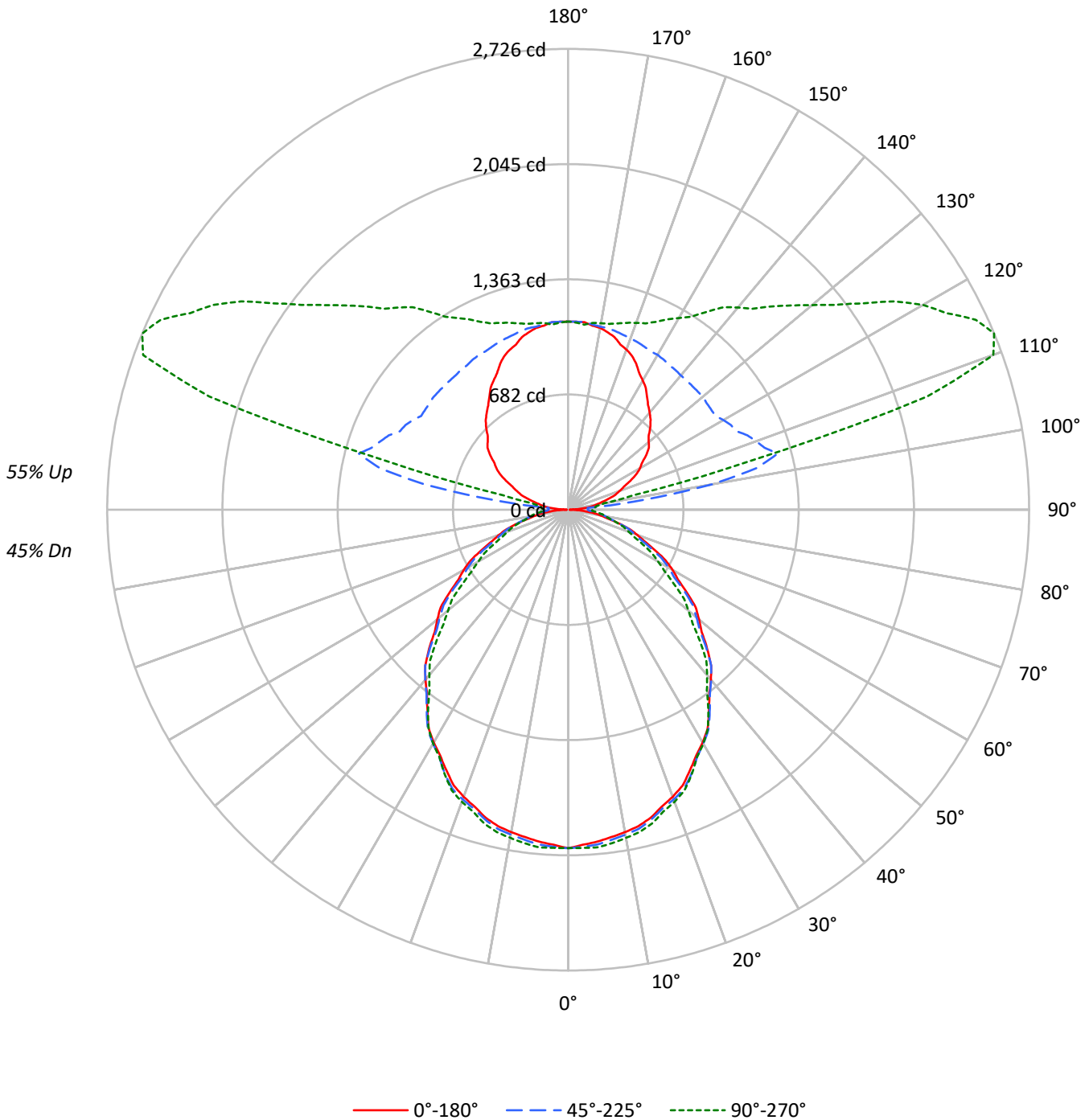
Lumens per Lamp: N/A
Luminaire Lumens: 11143.9 lumens
Efficiency: N/A
Efficacy: 125.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 88.6
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	106	106	106	106	97	97	97	97	81	81	81	66	66	66	52	52	52	45				
1	97	92	88	85	88	85	81	78	71	68	66	58	56	54	46	45	44	38				
2	88	81	74	69	80	74	69	64	62	58	55	51	48	45	40	38	37	32				
3	80	71	64	58	73	65	59	54	55	50	46	45	41	39	36	33	31	27				
4	73	63	55	49	67	58	51	46	49	43	39	40	36	33	32	29	27	23				
5	67	56	48	42	62	52	45	39	44	38	34	36	32	29	29	26	24	20				
6	62	50	42	36	57	46	39	34	39	34	30	33	28	25	26	23	21	18				
7	57	45	37	32	53	42	35	30	36	30	26	30	25	22	24	21	19	16				
8	53	41	33	28	49	38	31	27	32	27	23	27	23	20	22	19	17	14				
9	50	38	30	25	46	35	28	24	30	24	21	25	21	18	20	17	15	13				
10	46	34	27	23	43	32	26	21	27	22	19	23	19	16	19	16	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	32329	32329	32329
5°	31717	28545	27658
10°	31302	25396	23892
15°	30843	22743	20899
20°	30137	20402	18279
25°	29195	18219	15929
30°	28272	16099	13826
35°	27019	14159	11867
40°	25850	12396	10060
45°	24500	10654	8395
50°	23069	9022	6886
55°	21556	7592	5554
60°	20111	6223	4439
65°	18332	4962	3513
70°	16621	3888	2775
75°	14532	2987	2189
80°	12142	2220	1704
85°	8852	1615	1296

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 24500 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.0	1.7
10°-20°	536.3	4.8
20°-30°	791.7	7.1
30°-40°	910.2	8.2
40°-50°	882.9	7.9
50°-60°	739.1	6.6
60°-70°	532.5	4.8
70°-80°	325.4	2.9
80°-90°	160.6	1.4
90°-100°	199.4	1.8
100°-110°	997.9	9.0
110°-120°	1331.9	12.0
120°-130°	1080.8	9.7
130°-140°	867.1	7.8
140°-150°	683.3	6.1
150°-160°	499.6	4.5
160°-170°	310.3	2.8
170°-180°	105.8	0.9
0°-30°	1517.0	13.6
0°-40°	2427.2	21.8
0°-60°	4049.3	36.3
0°-90°	5067.8	45.5
90°-120°	2529.2	22.7
90°-150°	5160.4	46.3
90°-180°	6076.0	54.5
0°-180°	11143.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2002	2002	2002	2002	2002	
5°	1971	2007	1988	1991	2005	187
15°	1886	1914	1898	1906	1920	531
25°	1702	1730	1725	1717	1728	784
35°	1451	1473	1459	1445	1445	908
45°	1162	1173	1154	1120	1103	896
55°	857	868	837	786	761	768
65°	566	568	540	500	486	563
75°	305	305	311	302	297	327
85°	93	113	156	167	167	99
90°	8	62	116	140	143	13
95°	84	129	115	143	159	87
105°	245	345	1281	1644	1102	259
115°	405	476	1098	2276	2659	401
125°	564	634	1032	1800	2128	501
135°	686	761	1036	1482	1701	529
145°	812	880	1043	1291	1428	510
155°	952	986	1064	1170	1225	437
165°	1057	1071	1092	1121	1141	297
175°	1113	1120	1113	1106	1099	105
180°	1113	1113	1113	1113	1113	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2002.3	2002.3	2002.3	2002.3	2002.3
2.5°	1984.2	2013.0	1995.5	2000.1	2002.3
5°	1971.2	2007.2	1988.2	1991.3	2005.1
7.5°	1953.1	1986.3	1969.5	1973.3	1989.3
10°	1937.3	1970.4	1951.4	1957.4	1971.2
12.5°	1916.9	1947.9	1933.3	1939.3	1953.1
15°	1886.4	1914.0	1897.7	1906.5	1920.3
17.5°	1841.1	1871.0	1853.6	1858.4	1872.2
20°	1807.2	1834.8	1824.1	1824.5	1838.3
22.5°	1766.4	1796.3	1787.9	1781.5	1797.6
25°	1702.5	1730.2	1725.2	1716.9	1728.0
27.5°	1639.2	1659.6	1649.9	1641.6	1649.9
30°	1589.4	1614.3	1597.9	1589.6	1597.9
32.5°	1535.1	1560.0	1543.6	1532.9	1536.8
35°	1450.8	1472.9	1459.3	1445.2	1445.2
37.5°	1371.1	1385.5	1376.2	1352.3	1346.2
40°	1312.2	1328.8	1315.1	1286.6	1278.3
42.5°	1251.2	1267.8	1251.7	1220.9	1208.2
45°	1162.4	1173.4	1153.9	1119.6	1103.0
47.5°	1070.7	1082.3	1055.5	1017.7	997.8
50°	1009.6	1023.5	989.8	949.7	927.6
52.5°	950.8	960.2	928.8	881.9	862.0
55°	856.9	868.0	837.1	785.7	760.8
57.5°	769.2	779.8	743.2	694.1	674.8
60°	712.7	721.0	684.4	633.1	613.7
62.5°	649.3	657.6	623.3	578.8	559.4
65°	565.6	568.4	540.2	500.3	486.4
67.5°	487.0	487.0	463.2	433.6	422.5
70°	432.7	432.7	415.7	392.9	381.8
72.5°	382.9	380.7	370.5	354.4	345.6
75°	305.4	305.4	311.1	302.5	297.0
77.5°	237.6	233.1	257.4	256.2	253.4
80°	192.3	192.3	223.4	229.0	226.2
82.5°	151.6	156.0	196.3	204.1	201.4
85°	93.3	112.7	155.5	166.9	166.9
87.5°	42.4	77.5	125.0	141.1	141.6
90°	8.5	62.3	115.8	139.8	142.6
92.5°	34.3	66.1	114.5	144.3	154.8
95°	84.3	129.4	115.4	142.6	159.0
97.5°	133.3	216.1	454.6	180.9	167.8
100°	166.9	264.0	860.0	291.4	214.7
102.5°	198.3	300.8	1142.2	680.8	393.9
105°	245.3	345.1	1281.3	1644.3	1102.2
107.5°	292.3	363.9	1217.6	2371.7	2225.3
110°	323.7	392.0	1181.8	2486.8	2674.4



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	357.3	425.6	1148.2	2412.3	2725.9
115°	404.8	475.9	1097.8	2275.6	2658.9
117.5°	453.2	526.3	1084.6	2125.4	2519.7
120°	490.2	559.9	1059.9	2011.5	2422.2
122.5°	518.2	591.2	1031.9	1915.6	2293.4
125°	564.4	634.1	1031.9	1799.6	2128.2
127.5°	601.6	676.0	1033.3	1665.1	1989.6
130°	621.7	703.9	1038.9	1575.1	1883.2
132.5°	645.2	727.3	1036.7	1534.7	1788.0
135°	686.1	761.4	1036.1	1482.1	1701.2
137.5°	721.1	801.8	1036.1	1424.0	1611.5
140°	749.1	824.4	1036.1	1390.0	1561.1
142.5°	777.1	846.9	1041.7	1350.6	1510.7
145°	812.1	880.5	1043.1	1291.2	1428.1
147.5°	854.1	914.3	1051.5	1248.5	1353.9
150°	882.1	936.8	1057.1	1220.1	1309.1
152.5°	910.1	959.4	1057.1	1197.4	1269.9
155°	952.1	986.3	1064.1	1170.3	1225.1
157.5°	985.7	1018.5	1072.5	1153.2	1192.9
160°	1008.1	1035.5	1078.1	1141.9	1176.1
162.5°	1024.9	1052.3	1083.7	1136.0	1159.3
165°	1057.1	1070.8	1092.1	1120.6	1141.1
167.5°	1075.3	1087.6	1099.1	1113.4	1125.7
170°	1092.1	1098.9	1099.1	1113.3	1120.1
172.5°	1097.7	1110.0	1104.7	1107.7	1114.5
175°	1113.1	1119.9	1113.1	1105.9	1099.1
177.5°	1113.1	1118.6	1113.1	1113.0	1107.5
180°	1113.1	1113.1	1113.1	1113.1	1113.1

(END OF REPORT)