

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: P644314

Luminaire Tested: CRQ4DIP-SR4F0-125D75U940-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644314
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-SR4F0-125D75U940-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 750 LUMENS PER FOOT
Light Source: 4000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

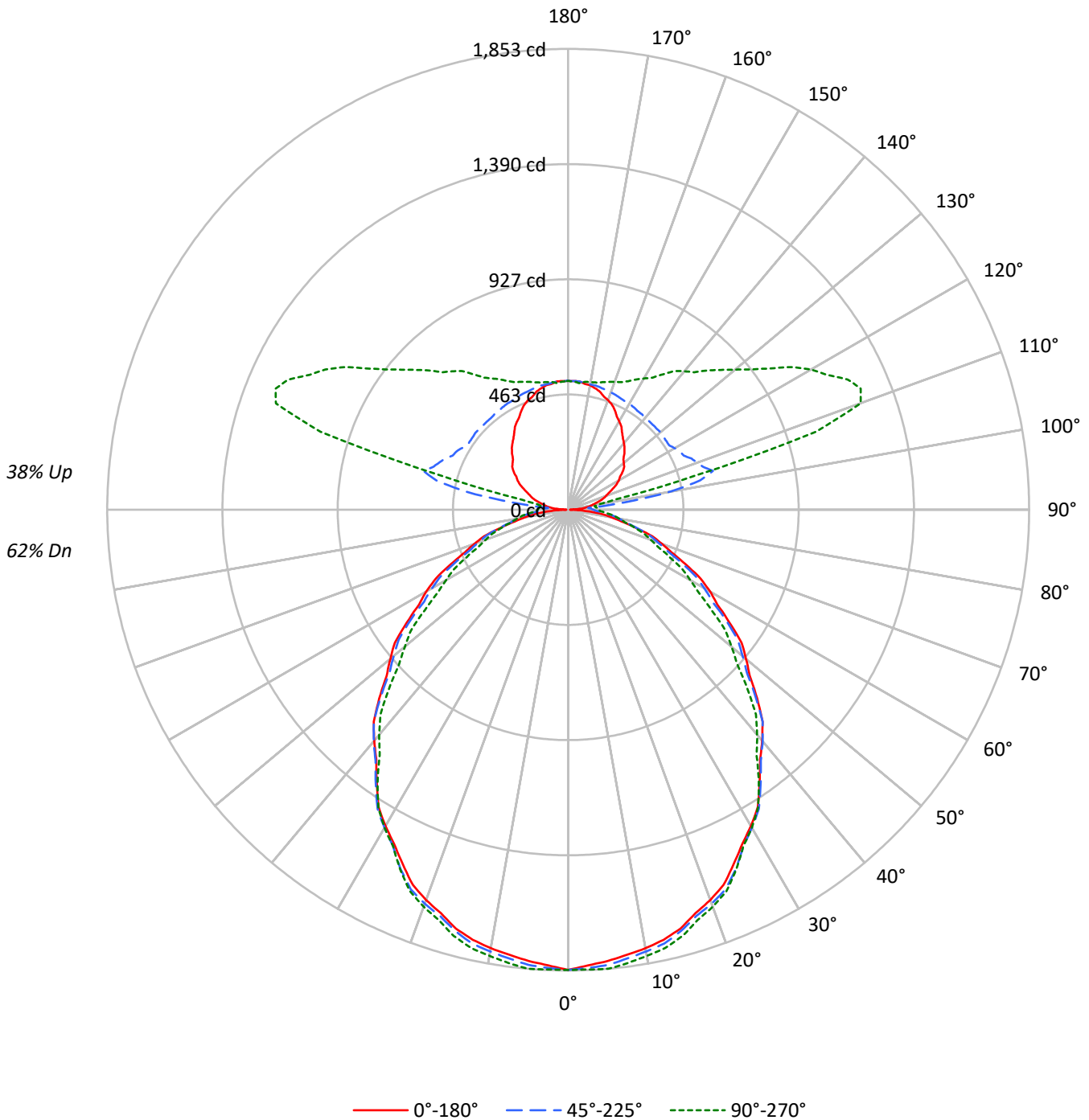
Lumens per Lamp: N/A
Luminaire Lumens: 7553.2 lumens
Efficiency: N/A
Efficacy: 124.2 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

Input Watts (W): 60.8
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										
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	103	103	103	103	90	90	90	78	78	78	67	67	67	62																				
1	100	96	92	88	94	90	86	83	79	76	74	68	66	65	59	58	56	52																				
2	91	84	77	72	85	79	73	68	69	65	61	60	57	54	52	50	47	43																				
3	83	74	66	60	78	69	63	57	61	56	51	53	49	46	46	43	41	37																				
4	76	65	57	51	71	62	54	49	54	49	44	48	43	39	41	38	35	32																				
5	70	58	50	44	66	55	48	42	49	43	38	43	38	34	37	34	31	28																				
6	65	53	44	38	61	50	42	37	44	38	33	39	34	30	34	30	27	24																				
7	60	48	39	34	56	45	38	32	40	34	30	35	31	27	31	27	24	22																				
8	56	43	35	30	52	41	34	29	37	31	26	32	28	24	29	25	22	19																				
9	52	40	32	27	49	38	31	26	34	28	24	30	25	22	26	23	20	18																				
10	49	36	29	24	46	35	28	23	31	25	21	28	23	20	25	21	18	16																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	29878	29878	29878
5°	29312	26380	25561
10°	28928	23470	22080
15°	28504	21019	19314
20°	27851	18856	16893
25°	26982	16837	14721
30°	26128	14877	12777
35°	24971	13086	10967
40°	23889	11456	9297
45°	22641	9846	7758
50°	21321	8339	6364
55°	19921	7016	5132
60°	18585	5751	4103
65°	16942	4585	3248
70°	15361	3593	2564
75°	13433	2760	2022
80°	11220	2053	1575
85°	8188	1493	1197

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 22641 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	174.7	2.3
10°-20°	495.6	6.6
20°-30°	731.6	9.7
30°-40°	841.2	11.1
40°-50°	816.0	10.8
50°-60°	683.1	9.0
60°-70°	492.2	6.5
70°-80°	300.7	4.0
80°-90°	147.3	1.9
90°-100°	121.5	1.6
100°-110°	474.6	6.3
110°-120°	623.2	8.3
120°-130°	504.3	6.7
130°-140°	403.5	5.3
140°-150°	317.8	4.2
150°-160°	232.4	3.1
160°-170°	144.4	1.9
170°-180°	49.2	0.7
0°-30°	1401.9	18.6
0°-40°	2243.1	29.7
0°-60°	3742.2	49.5
0°-90°	4682.3	62.0
90°-120°	1219.3	16.1
90°-150°	2444.9	32.4
90°-180°	2871.0	38.0
0°-180°	7553.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1850	1850	1850	1850	1850	
5°	1822	1855	1837	1840	1853	173
15°	1743	1769	1754	1762	1775	490
25°	1573	1599	1594	1587	1597	725
35°	1341	1361	1349	1336	1336	840
45°	1074	1084	1066	1035	1019	828
55°	792	802	774	726	703	710
65°	523	525	499	462	450	520
75°	282	282	288	280	274	302
85°	86	104	144	154	154	91
90°	8	54	101	120	122	11
95°	52	72	81	103	112	51
105°	127	166	602	777	527	134
115°	197	225	513	1061	1240	196
125°	268	298	481	837	990	238
135°	319	354	482	689	791	246
145°	378	410	485	601	664	237
155°	443	459	495	544	570	203
165°	492	498	508	521	531	138
175°	518	521	518	514	511	49
180°	518	518	518	518	518	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1850.5	1850.5	1850.5	1850.5	1850.5
2.5°	1833.7	1860.3	1844.2	1848.4	1850.5
5°	1821.7	1854.9	1837.4	1840.3	1853.1
7.5°	1805.0	1835.7	1820.2	1823.6	1838.5
10°	1790.4	1821.0	1803.4	1808.9	1821.7
12.5°	1771.5	1800.2	1786.7	1792.2	1805.0
15°	1743.3	1768.9	1753.8	1761.9	1774.7
17.5°	1701.5	1729.1	1713.0	1717.5	1730.2
20°	1670.1	1695.7	1685.8	1686.1	1698.9
22.5°	1632.5	1660.1	1652.4	1646.4	1661.2
25°	1573.4	1599.0	1594.3	1586.7	1597.0
27.5°	1514.9	1533.8	1524.8	1517.1	1524.8
30°	1468.9	1491.9	1476.7	1469.1	1476.7
32.5°	1418.7	1441.7	1426.5	1416.7	1420.3
35°	1340.8	1361.3	1348.7	1335.6	1335.6
37.5°	1267.1	1280.4	1271.8	1249.7	1244.1
40°	1212.7	1228.1	1215.4	1189.0	1181.4
42.5°	1156.3	1171.6	1156.8	1128.3	1116.6
45°	1074.2	1084.4	1066.4	1034.7	1019.3
47.5°	989.5	1000.3	975.4	940.5	922.1
50°	933.1	945.9	914.8	877.7	857.3
52.5°	878.7	887.4	858.3	815.0	796.6
55°	791.9	802.2	773.6	726.1	703.1
57.5°	710.9	720.6	686.9	641.5	623.6
60°	658.6	666.3	632.5	585.1	567.2
62.5°	600.1	607.8	576.1	534.9	517.0
65°	522.7	525.3	499.2	462.3	449.6
67.5°	450.1	450.1	428.1	400.7	390.5
70°	399.9	399.9	384.2	363.1	352.8
72.5°	353.9	351.8	342.4	327.6	319.4
75°	282.3	282.3	287.5	279.5	274.4
77.5°	219.5	215.5	237.8	236.7	234.2
80°	177.7	177.7	206.5	211.6	209.1
82.5°	140.1	144.2	181.4	188.6	186.1
85°	86.3	104.1	143.8	154.2	154.2
87.5°	39.2	71.0	114.2	128.5	129.0
90°	7.8	54.5	100.6	119.6	122.2
92.5°	24.0	50.2	91.7	113.4	120.5
95°	52.2	71.9	80.9	102.7	111.6
97.5°	77.6	108.3	231.2	111.4	106.9
100°	93.2	129.5	415.6	157.7	124.6
102.5°	106.8	145.6	542.7	334.6	202.7
105°	127.1	165.9	602.5	776.6	527.0
107.5°	147.4	173.3	570.1	1110.6	1043.7
110°	160.9	186.4	552.3	1162.0	1250.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	176.6	202.0	536.7	1125.3	1272.4
115°	197.4	225.4	513.2	1061.1	1239.5
117.5°	218.4	248.8	506.9	989.7	1173.1
120°	234.5	264.4	494.4	935.7	1126.8
122.5°	247.5	278.0	481.3	891.1	1066.8
125°	267.7	297.6	481.3	837.2	990.0
127.5°	283.5	317.1	482.0	774.6	925.5
130°	291.8	330.0	484.6	732.7	876.0
132.5°	300.6	338.9	482.5	713.9	831.7
135°	319.1	354.2	482.0	689.4	791.3
137.5°	335.4	373.0	482.0	662.4	749.7
140°	348.5	383.5	482.0	646.6	726.2
142.5°	361.5	394.0	484.6	628.3	702.8
145°	377.8	409.6	485.2	600.7	664.3
147.5°	397.3	425.3	489.1	580.8	629.8
150°	410.3	435.8	491.7	567.6	609.0
152.5°	423.4	446.3	491.7	557.0	590.7
155°	442.9	458.8	495.0	544.4	569.9
157.5°	458.5	473.8	498.9	536.4	554.9
160°	468.9	481.7	501.5	531.2	547.1
162.5°	476.8	489.5	504.1	528.5	539.3
165°	491.7	498.1	508.0	521.3	530.8
167.5°	500.2	505.9	511.3	517.9	523.7
170°	508.0	511.2	511.3	517.9	521.0
172.5°	510.6	516.4	513.9	515.3	518.4
175°	517.8	521.0	517.8	514.5	511.3
177.5°	517.8	520.3	517.8	517.7	515.2
180°	517.8	517.8	517.8	517.8	517.8

(END OF REPORT)