

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: P644222

Luminaire Tested: CRQ4DIP-SR4F0-100D50U835-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644222
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-SR4F0-100D50U835-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 500 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

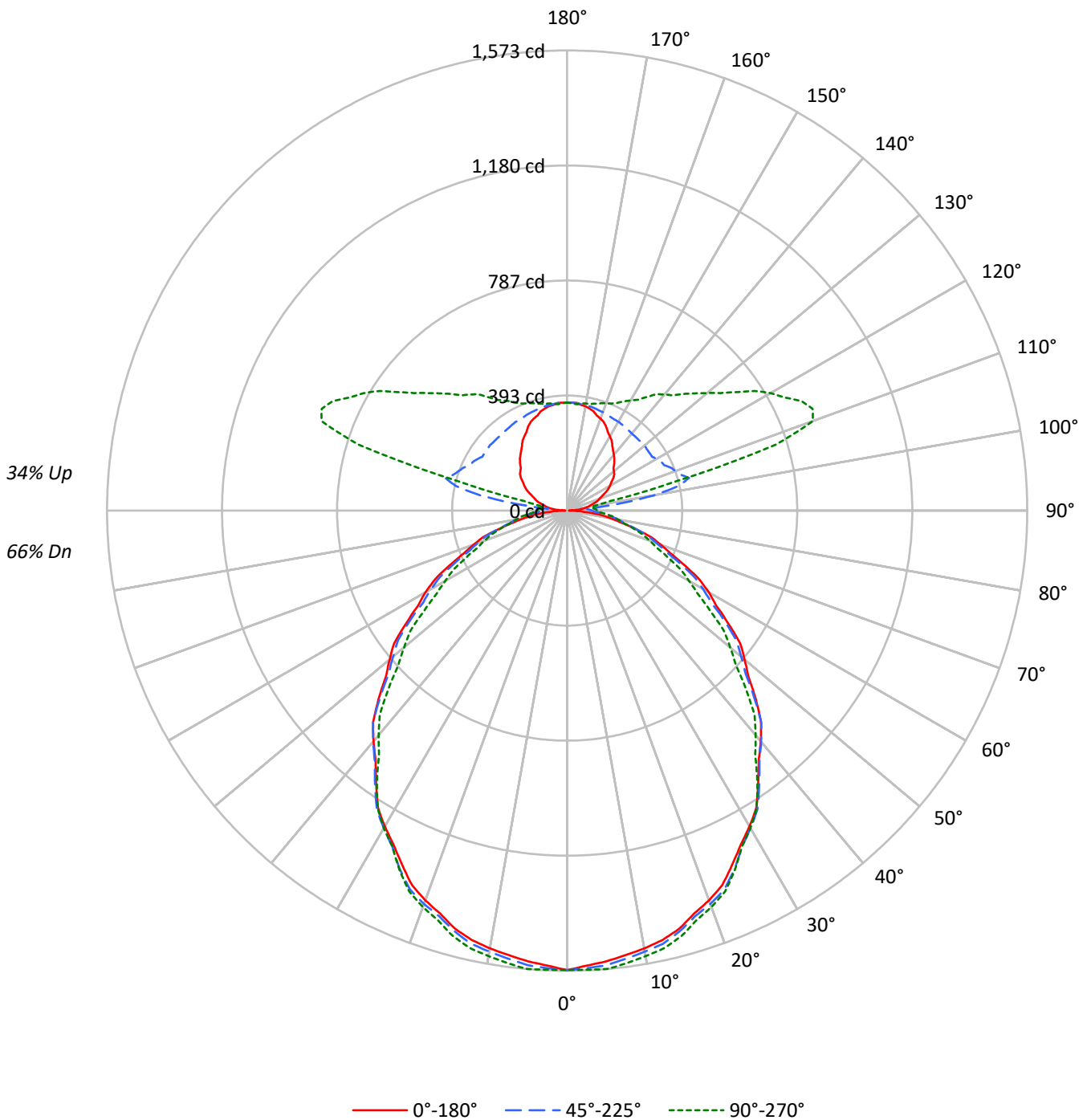
Lumens per Lamp: N/A
Luminaire Lumens: 6033.6 lumens
Efficiency: N/A
Efficacy: 135.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

Input Watts (W): 44.5
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	111	111	111	111	104	104	104	104	92	92	92	81	81	81	71	71	71	66				
1	101	97	92	89	95	91	87	84	81	78	75	71	69	67	62	61	59	55				
2	92	84	78	73	86	80	74	69	71	66	63	62	59	56	55	52	50	46				
3	84	74	67	61	79	70	63	58	62	57	53	55	51	48	49	45	43	39				
4	77	66	58	52	72	62	55	49	56	50	45	49	45	41	44	40	37	34				
5	71	59	51	44	66	56	48	43	50	44	39	45	40	36	39	35	32	29				
6	65	53	45	39	61	50	43	37	45	39	34	40	35	31	36	32	29	26				
7	61	48	40	34	57	46	38	33	41	35	30	37	32	28	33	29	25	23				
8	56	44	36	30	53	42	34	29	38	31	27	34	29	25	30	26	23	21				
9	53	40	32	27	49	38	31	26	35	29	24	31	26	23	28	24	21	19				
10	49	37	29	25	46	35	28	24	32	26	22	29	24	20	26	22	19	17				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25362	25362	25362
5°	24882	22393	21698
10°	24555	19922	18743
15°	24195	17842	16394
20°	23642	16006	14340
25°	22904	14292	12496
30°	22180	12629	10846
35°	21196	11107	9309
40°	20279	9724	7892
45°	19218	8357	6586
50°	18097	7078	5402
55°	16910	5956	4356
60°	15777	4882	3482
65°	14381	3893	2756
70°	13037	3050	2177
75°	11401	2343	1717
80°	9528	1742	1337
85°	6945	1267	1016

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19218 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.3	2.5
10°-20°	420.7	7.0
20°-30°	621.1	10.3
30°-40°	714.0	11.8
40°-50°	692.7	11.5
50°-60°	579.8	9.6
60°-70°	417.7	6.9
70°-80°	255.3	4.2
80°-90°	124.9	2.1
90°-100°	94.5	1.6
100°-110°	341.2	5.7
110°-120°	445.3	7.4
120°-130°	360.0	6.0
130°-140°	287.8	4.8
140°-150°	226.6	3.8
150°-160°	165.7	2.7
160°-170°	102.9	1.7
170°-180°	35.1	0.6
0°-30°	1190.0	19.7
0°-40°	1904.1	31.6
0°-60°	3176.6	52.6
0°-90°	3974.4	65.9
90°-120°	881.1	14.6
90°-150°	1755.5	29.1
90°-180°	2059.0	34.1
0°-180°	6033.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1571	1571	1571	1571	1571	
5°	1546	1575	1560	1562	1573	147
15°	1480	1502	1489	1496	1506	416
25°	1336	1357	1353	1347	1356	615
35°	1138	1156	1145	1134	1134	713
45°	912	920	905	878	865	703
55°	672	681	657	616	597	603
65°	444	446	424	392	382	441
75°	240	240	244	237	233	256
85°	73	88	122	131	131	77
90°	7	46	84	100	102	9
95°	41	54	65	83	90	40
105°	94	120	431	557	380	99
115°	143	162	367	757	884	142
125°	192	213	344	597	706	171
135°	228	252	344	492	564	176
145°	269	292	346	428	474	169
155°	316	327	353	388	406	145
165°	351	355	362	372	378	98
175°	369	372	369	367	365	35
180°	369	369	369	369	369	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1570.8	1570.8	1570.8	1570.8	1570.8
2.5°	1556.6	1579.1	1565.4	1569.0	1570.8
5°	1546.4	1574.6	1559.7	1562.1	1573.0
7.5°	1532.2	1558.2	1545.0	1548.0	1560.6
10°	1519.7	1545.8	1530.8	1535.5	1546.4
12.5°	1503.8	1528.1	1516.6	1521.3	1532.2
15°	1479.8	1501.5	1488.7	1495.6	1506.4
17.5°	1444.3	1467.7	1454.1	1457.9	1468.7
20°	1417.7	1439.4	1431.0	1431.2	1442.1
22.5°	1385.7	1409.2	1402.6	1397.6	1410.1
25°	1335.6	1357.3	1353.3	1346.9	1355.6
27.5°	1285.9	1302.0	1294.3	1287.8	1294.3
30°	1246.9	1266.4	1253.5	1247.0	1253.5
32.5°	1204.3	1223.8	1210.9	1202.5	1205.6
35°	1138.1	1155.5	1144.8	1133.7	1133.7
37.5°	1075.6	1086.9	1079.6	1060.8	1056.1
40°	1029.4	1042.4	1031.6	1009.3	1002.8
42.5°	981.5	994.5	982.0	957.8	947.8
45°	911.8	920.5	905.2	878.3	865.3
47.5°	840.0	849.1	828.0	798.3	782.7
50°	792.0	802.9	776.5	745.1	727.7
52.5°	745.9	753.3	728.6	691.8	676.2
55°	672.2	680.9	656.7	616.3	596.8
57.5°	603.5	611.7	583.0	544.5	529.4
60°	559.1	565.6	536.9	496.6	481.4
62.5°	509.4	515.9	489.0	454.0	438.8
65°	443.7	445.9	423.8	392.4	381.6
67.5°	382.0	382.0	363.4	340.1	331.5
70°	339.4	339.4	326.1	308.2	299.5
72.5°	300.4	298.7	290.6	278.1	271.1
75°	239.6	239.6	244.0	237.3	233.0
77.5°	186.4	182.9	201.9	201.0	198.8
80°	150.9	150.9	175.3	179.7	177.5
82.5°	118.9	122.4	154.0	160.1	158.0
85°	73.2	88.4	122.0	130.9	130.9
87.5°	33.3	60.2	96.8	108.8	109.2
90°	6.7	45.8	84.5	100.2	102.4
92.5°	19.3	41.1	75.9	93.5	99.2
95°	40.8	54.5	65.2	83.2	89.9
97.5°	59.6	79.3	170.3	86.9	84.1
100°	70.7	94.2	300.6	118.5	95.6
102.5°	80.1	105.3	390.1	243.5	149.8
105°	94.2	119.7	431.4	557.0	379.7
107.5°	108.2	124.7	407.5	793.9	746.5
110°	117.6	134.0	394.5	830.0	893.4

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	128.7	145.1	383.4	803.2	908.5
115°	143.2	161.8	366.7	757.3	884.5
117.5°	157.8	178.5	362.0	706.0	836.8
120°	169.0	189.6	352.8	667.2	803.4
122.5°	178.3	199.0	343.6	635.4	760.7
125°	192.3	212.9	343.6	596.9	705.9
127.5°	203.1	226.8	344.0	552.3	659.9
130°	208.8	236.0	345.9	522.4	624.6
132.5°	214.5	241.8	344.1	509.0	593.0
135°	227.6	252.5	343.7	491.6	564.2
137.5°	239.2	266.0	343.7	472.3	534.5
140°	248.5	273.4	343.7	461.0	517.8
142.5°	257.7	280.9	345.5	448.0	501.1
145°	269.4	292.1	346.0	428.3	473.7
147.5°	283.3	303.3	348.8	414.1	449.1
150°	292.6	310.7	350.6	404.7	434.2
152.5°	301.9	318.2	350.6	397.1	421.2
155°	315.8	327.1	352.9	388.2	406.3
157.5°	326.9	337.8	355.7	382.5	395.7
160°	334.4	343.4	357.6	378.7	390.1
162.5°	339.9	349.0	359.4	376.8	384.5
165°	350.6	355.2	362.2	371.7	378.5
167.5°	356.7	360.7	364.6	369.3	373.4
170°	362.2	364.5	364.6	369.2	371.5
172.5°	364.1	368.2	366.4	367.4	369.7
175°	369.2	371.5	369.2	366.8	364.6
177.5°	369.2	371.0	369.2	369.2	367.3
180°	369.2	369.2	369.2	369.2	369.2

(END OF REPORT)