

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: P644309

Luminaire Tested: CRQ4DIP-SR4F0-125D75U930-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

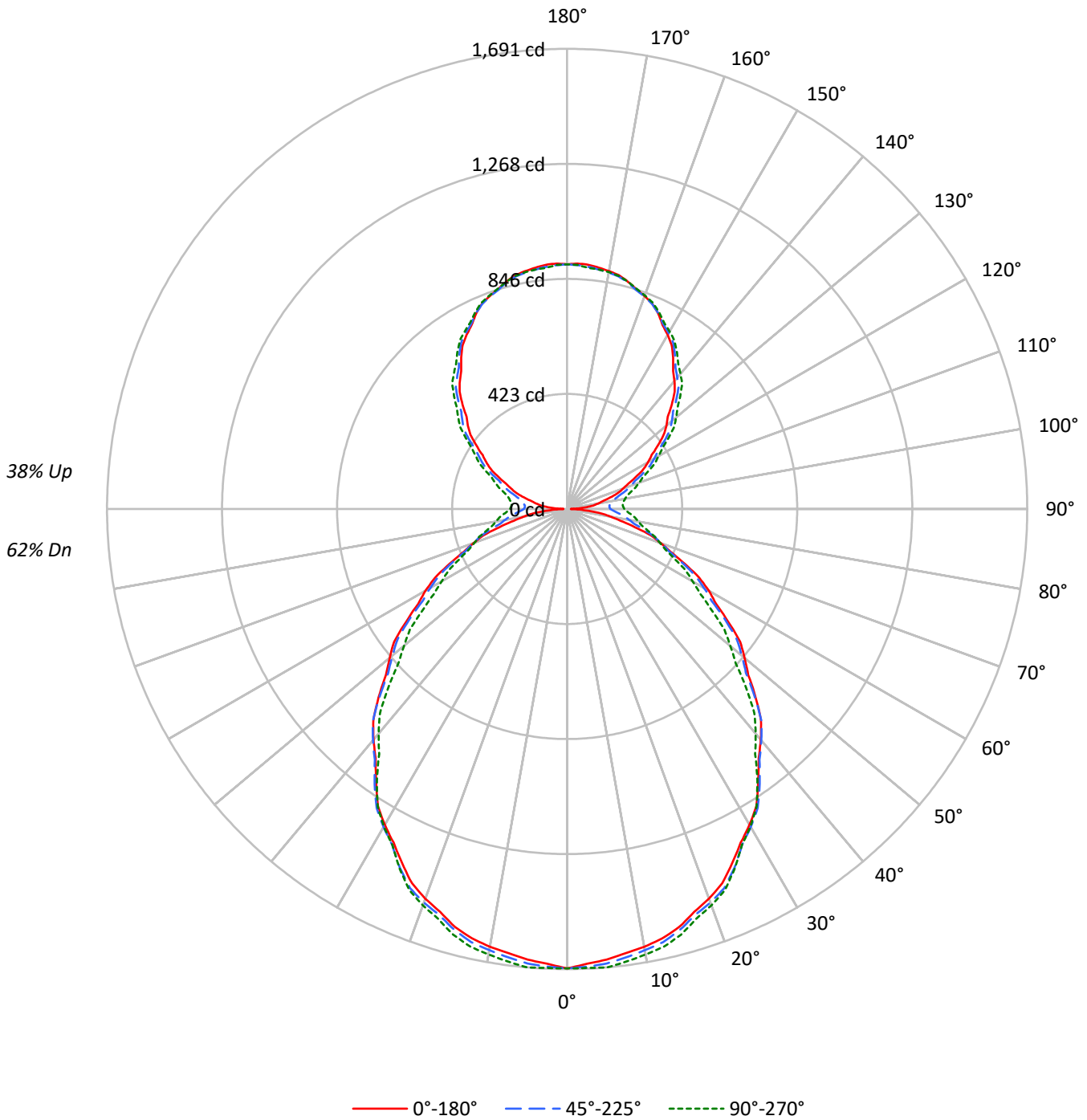
Test Method: LM-79-2019  
Report Number: P644309  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-28, G2-2206-689-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/20/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: CRQ4DIP-SR4F0-125D75U930-FLLFLL-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT  
UPLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT  
Light Source: 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7007.2 lumens  
Efficiency: N/A  
Efficacy: 115.3 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-Direct  
  
Input Watts (W): 60.8  
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										
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	68	68	68	62																				
1	100	95	91	87	93	89	86	82	78	76	73	68	66	64	59	57	56	51																				
2	91	83	77	71	85	78	72	68	69	64	60	60	56	54	52	49	47	43																				
3	83	73	66	59	78	69	62	57	61	55	51	53	49	45	46	43	40	36																				
4	76	65	57	50	71	61	54	48	54	48	43	47	43	39	41	38	35	31																				
5	70	58	50	43	65	55	47	41	48	42	38	43	38	34	37	33	30	27																				
6	65	52	44	38	60	49	42	36	44	38	33	39	34	30	34	30	27	24																				
7	60	47	39	33	56	45	37	32	40	34	29	35	30	26	31	27	24	21																				
8	56	43	35	30	52	41	33	28	36	30	26	32	27	24	28	24	21	19																				
9	52	39	32	26	49	37	30	25	33	28	23	30	25	21	26	22	19	17																				
10	48	36	29	24	45	34	28	23	31	25	21	28	23	19	24	20	18	16																				

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

	0°	45°	90°
0°	27259	27259	27259
5°	26744	24068	23321
10°	26393	21427	20146
15°	26007	19189	17622
20°	25411	17215	15413
25°	24619	15361	13431
30°	23839	13593	11658
35°	22782	11966	10006
40°	21797	10461	8483
45°	20658	8992	7078
50°	19452	7634	5807
55°	18175	6419	4731
60°	16957	5282	3853
65°	15457	4271	3156
70°	14017	3431	2631
75°	12253	2784	2260
80°	10241	2299	1998
85°	7467	1996	1833

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 20658 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.4	2.3
10°-20°	452.3	6.5
20°-30°	667.9	9.5
30°-40°	768.2	11.0
40°-50°	745.4	10.6
50°-60°	626.5	8.9
60°-70°	461.7	6.6
70°-80°	304.8	4.3
80°-90°	191.7	2.7
90°-100°	159.7	2.3
100°-110°	214.8	3.1
110°-120°	303.0	4.3
120°-130°	388.3	5.5
130°-140°	437.5	6.2
140°-150°	432.1	6.2
150°-160°	365.5	5.2
160°-170°	243.3	3.5
170°-180°	85.1	1.2
0°-30°	1279.6	18.3
0°-40°	2047.8	29.2
0°-60°	3419.7	48.8
0°-90°	4377.9	62.5
90°-120°	677.6	9.7
90°-150°	1935.5	27.6
90°-180°	2629.0	37.5
0°-180°	7007.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1688	1688	1688	1688	1688	
5°	1662	1692	1676	1679	1691	158
15°	1591	1616	1601	1608	1619	447
25°	1436	1461	1455	1448	1457	661
35°	1223	1245	1233	1219	1219	766
45°	980	992	974	944	930	755
55°	722	736	708	665	648	648
65°	477	485	465	444	437	474
75°	258	265	290	304	307	275
85°	79	117	192	228	236	83
90°	14	79	158	199	210	14
95°	67	84	156	197	205	65
105°	164	163	202	234	242	175
115°	279	285	306	324	329	277
125°	407	419	436	450	454	365
135°	544	556	567	581	588	420
145°	678	687	691	696	703	424
155°	792	797	793	794	799	364
165°	864	868	862	859	864	244
175°	901	904	893	889	889	85
180°	899	899	899	899	899	

TEST NUMBER: P644309

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1688.3	1688.3	1688.3	1688.3	1688.3
2.5°	1673.1	1697.3	1683.4	1686.5	1688.3
5°	1662.1	1692.4	1676.4	1679.1	1690.7
7.5°	1646.8	1675.6	1661.6	1663.8	1677.4
10°	1633.5	1661.5	1646.4	1650.4	1662.1
12.5°	1616.3	1643.9	1630.3	1635.2	1646.8
15°	1590.6	1615.7	1601.1	1607.5	1619.2
17.5°	1552.4	1578.5	1563.9	1567.0	1578.6
20°	1523.8	1548.0	1539.1	1538.4	1550.0
22.5°	1489.5	1515.6	1508.5	1502.2	1515.7
25°	1435.6	1460.7	1454.6	1447.7	1457.0
27.5°	1382.1	1402.8	1392.3	1384.2	1391.2
30°	1340.2	1363.0	1349.2	1340.3	1347.3
32.5°	1294.4	1318.0	1303.4	1292.6	1295.8
35°	1223.3	1244.8	1233.3	1218.6	1218.6
37.5°	1156.1	1171.9	1161.3	1140.2	1135.1
40°	1106.5	1124.2	1109.8	1084.9	1077.9
42.5°	1055.0	1072.7	1057.2	1029.4	1018.7
45°	980.1	992.2	973.9	944.0	930.0
47.5°	902.8	916.2	891.3	858.1	841.3
50°	851.3	865.8	837.5	800.8	782.2
52.5°	801.7	813.2	785.2	744.4	728.4
55°	722.5	735.6	707.8	665.4	648.1
57.5°	648.6	661.2	629.7	593.9	579.7
60°	600.9	611.7	580.9	546.3	532.7
62.5°	547.5	559.0	530.9	504.3	492.3
65°	476.9	484.9	465.0	443.9	436.9
67.5°	410.6	416.2	403.8	394.5	391.0
70°	364.9	370.4	366.8	364.8	362.0
72.5°	322.9	327.4	334.0	338.5	337.6
75°	257.5	265.0	290.0	303.9	306.7
77.5°	200.3	206.7	253.1	275.1	280.5
80°	162.2	175.2	231.3	259.1	265.2
82.5°	127.8	147.6	214.5	246.5	252.6
85°	78.7	117.4	192.2	227.7	236.1
87.5°	37.1	93.0	172.5	210.9	220.7
90°	13.8	78.7	158.4	198.7	210.4
92.5°	34.4	77.6	155.3	194.9	205.4
95°	66.8	84.0	156.0	196.7	204.7
97.5°	96.4	100.0	164.3	201.2	209.2
100°	115.4	115.0	172.7	207.7	216.1
102.5°	134.9	132.2	183.4	216.9	224.9
105°	164.1	163.2	201.8	234.4	241.9
107.5°	196.7	196.7	227.9	257.2	263.5
110°	218.5	221.8	248.1	274.0	281.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	243.7	247.0	270.2	292.3	299.3
115°	279.1	284.7	306.3	324.5	329.2
117.5°	315.9	324.0	343.2	358.9	363.4
120°	343.0	351.4	368.8	383.7	387.4
122.5°	368.2	377.0	395.5	410.4	414.1
125°	407.4	418.6	436.5	450.5	454.2
127.5°	447.5	460.0	476.4	490.6	495.4
130°	476.1	488.3	502.4	517.3	522.9
132.5°	501.3	513.5	527.2	543.3	549.6
135°	543.9	556.0	566.8	581.3	587.8
137.5°	585.3	597.1	605.3	616.8	625.0
140°	613.6	623.8	629.8	640.4	647.9
142.5°	639.5	649.8	654.2	663.3	670.8
145°	678.4	686.8	690.8	695.8	703.3
147.5°	714.9	723.1	724.8	729.1	733.8
150°	738.6	746.0	746.2	748.2	752.9
152.5°	760.7	767.4	765.3	766.5	772.0
155°	792.0	796.7	792.9	794.0	798.7
157.5°	816.8	821.5	815.7	817.5	821.2
160°	832.1	836.7	830.2	831.2	834.9
162.5°	846.6	849.7	843.9	842.7	847.9
165°	864.5	868.2	861.6	858.9	864.5
167.5°	879.8	883.5	874.8	871.9	877.5
170°	887.4	891.1	881.7	878.0	883.6
172.5°	894.3	898.0	887.8	883.3	887.4
175°	900.8	904.5	893.1	889.3	889.3
177.5°	902.7	904.9	896.6	892.9	897.3
180°	898.9	898.9	898.9	898.9	898.9

(END OF REPORT)