

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: P644403

Luminaire Tested: CRQ4DIP-SR4F0-75D125U840-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644403  
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-SR4F0-75D125U840-FLLFLL-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT  
UPLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

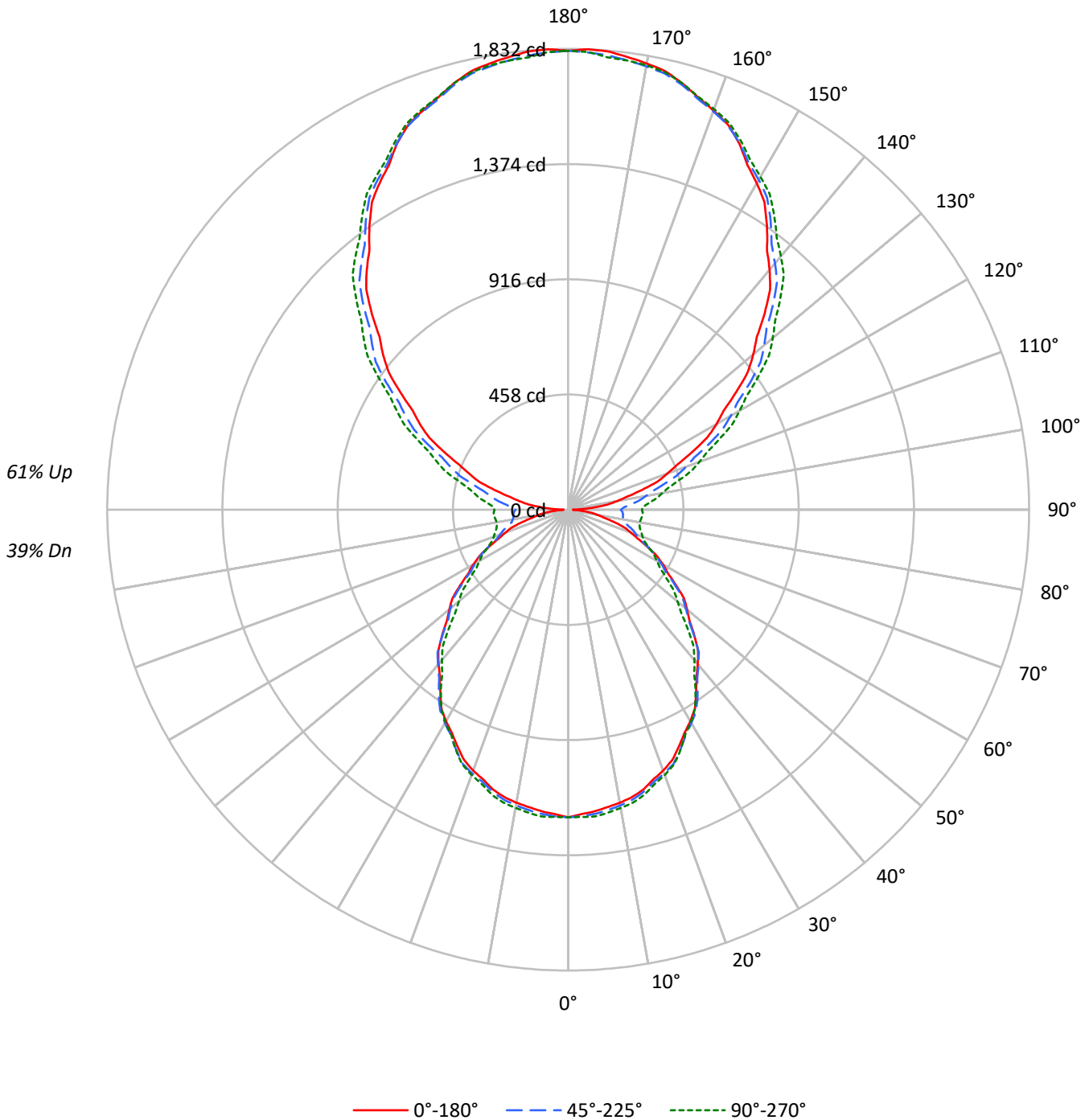
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8539.8 lumens  
Efficiency: N/A  
Efficacy: 142.3 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): 60  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	104	104	104	104	95	95	95	95	77	77	77		61	61	61		46	46	46	39
1	95	90	86	82	86	82	78	75	66	64	62		52	51	49		39	38	37	31
2	86	78	72	67	78	71	66	61	58	54	51		46	43	41		34	33	31	26
3	78	69	61	56	71	63	56	51	51	46	43		40	37	34		30	28	26	22
4	72	61	53	47	65	55	49	43	45	40	36		36	32	29		27	25	23	19
5	66	54	46	40	59	49	42	37	41	35	31		32	28	25		25	22	20	16
6	60	48	40	35	55	44	37	32	36	31	27		29	25	22		22	20	17	14
7	56	44	36	30	51	40	33	28	33	28	24		27	23	20		20	18	16	13
8	52	40	32	27	47	36	30	25	30	25	21		24	20	17		19	16	14	11
9	48	36	29	24	44	33	27	22	28	22	19		22	18	16		17	15	13	10
10	45	33	26	21	41	30	24	20	25	20	17		21	17	14		16	13	11	9

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

	0°	45°	90°
0°	19740	19740	19740
5°	19366	17430	16888
10°	19113	15531	14588
15°	18832	13909	12761
20°	18401	12479	11161
25°	17828	11124	9726
30°	17263	9868	8442
35°	16499	8702	7246
40°	15783	7587	6142
45°	14959	6523	5126
50°	14087	5562	4205
55°	13161	4671	3490
60°	12281	3870	2935
65°	11195	3208	2537
70°	10149	2682	2286
75°	8874	2363	2179
80°	7413	2222	2179
85°	5408	2273	2294

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 14959 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.5	1.4
10°-20°	327.7	3.8
20°-30°	484.1	5.7
30°-40°	557.3	6.5
40°-50°	541.0	6.3
50°-60°	457.9	5.4
60°-70°	351.0	4.1
70°-80°	260.4	3.0
80°-90°	215.0	2.5
90°-100°	255.3	3.0
100°-110°	411.0	4.8
110°-120°	606.3	7.1
120°-130°	784.5	9.2
130°-140°	887.5	10.4
140°-150°	876.9	10.3
150°-160°	741.7	8.7
160°-170°	493.8	5.8
170°-180°	172.7	2.0
0°-30°	927.3	10.9
0°-40°	1484.6	17.4
0°-60°	2483.4	29.1
0°-90°	3309.8	38.8
90°-120°	1272.7	14.9
90°-150°	3821.7	44.8
90°-180°	5230.0	61.2
0°-180°	8539.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1223	1223	1223	1223	1223	
5°	1204	1226	1214	1216	1224	114
15°	1152	1172	1161	1164	1172	324
25°	1040	1060	1053	1048	1055	479
35°	886	905	897	882	882	555
45°	710	722	706	684	674	547
55°	523	538	515	486	478	469
65°	345	358	349	350	351	344
75°	186	202	246	284	296	199
85°	57	114	219	278	296	61
90°	19	99	209	272	293	16
95°	104	142	251	312	325	105
105°	302	318	394	448	457	322
115°	545	568	615	652	662	541
125°	814	843	883	914	922	730
135°	1104	1128	1150	1180	1193	851
145°	1377	1394	1402	1412	1427	860
155°	1607	1617	1609	1612	1621	738
165°	1755	1762	1749	1743	1755	495
175°	1828	1836	1813	1805	1805	174
180°	1824	1824	1824	1824	1824	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1222.6	1222.6	1222.6	1222.6	1222.6
2.5°	1211.5	1229.1	1220.0	1221.2	1222.6
5°	1203.6	1225.5	1214.0	1215.9	1224.3
7.5°	1192.5	1214.3	1204.5	1204.9	1214.7
10°	1182.9	1203.1	1193.4	1195.2	1203.6
12.5°	1170.4	1192.4	1180.8	1184.1	1192.5
15°	1151.8	1172.5	1160.6	1164.1	1172.5
17.5°	1124.2	1144.3	1133.7	1134.7	1143.2
20°	1103.4	1122.2	1115.7	1114.0	1122.4
22.5°	1078.6	1098.7	1093.6	1087.8	1097.6
25°	1039.6	1060.2	1053.4	1048.3	1055.1
27.5°	1000.9	1020.2	1009.8	1002.4	1007.4
30°	970.5	989.5	979.5	970.6	975.7
32.5°	937.3	957.8	946.4	936.0	938.4
35°	885.9	905.1	896.9	882.4	882.4
37.5°	837.2	853.5	842.2	825.7	822.0
40°	801.2	819.0	804.9	785.6	780.5
42.5°	763.9	781.7	767.8	745.5	737.7
45°	709.7	722.2	706.5	683.6	673.5
47.5°	653.8	668.1	647.2	621.4	609.2
50°	616.5	630.6	610.2	579.9	566.4
52.5°	580.6	593.5	571.4	540.1	529.4
55°	523.2	537.6	515.0	485.7	478.1
57.5°	469.7	483.7	460.0	441.4	433.7
60°	435.2	447.8	425.6	411.8	405.7
62.5°	396.5	410.6	391.4	386.5	383.4
65°	345.4	358.4	349.2	350.2	351.2
67.5°	297.4	308.7	309.6	323.5	328.5
70°	264.2	275.6	286.8	308.0	314.5
72.5°	233.8	245.3	270.0	296.9	304.8
75°	186.5	201.6	246.1	283.8	295.6
77.5°	145.1	162.8	230.3	276.4	290.3
80°	117.4	143.9	223.6	273.8	289.2
82.5°	92.6	127.8	219.4	275.7	291.0
85°	57.0	114.3	218.9	278.5	295.5
87.5°	28.6	104.9	215.6	277.3	296.6
90°	18.7	98.6	209.3	272.5	293.1
92.5°	50.6	110.9	223.1	284.5	300.5
95°	104.4	142.5	251.2	312.0	325.1
97.5°	158.2	184.5	286.1	342.9	355.6
100°	197.0	217.3	313.2	368.5	379.5
102.5°	239.0	254.8	344.8	397.1	409.7
105°	302.0	318.3	394.0	447.6	456.7
107.5°	371.9	389.4	453.7	504.5	514.1
110°	418.6	440.4	497.3	543.6	554.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	469.7	491.6	542.2	585.8	596.9
115°	544.7	568.2	615.4	652.4	661.9
117.5°	623.2	648.0	691.0	725.9	735.0
120°	680.6	703.8	745.4	778.7	786.3
122.5°	731.8	758.1	799.6	832.9	840.5
125°	814.5	843.3	882.9	914.3	921.8
127.5°	899.6	927.4	963.8	995.7	1005.5
130°	960.1	984.8	1016.5	1049.9	1061.3
132.5°	1016.3	1040.9	1069.4	1102.6	1115.5
135°	1103.9	1128.5	1150.4	1179.7	1193.0
137.5°	1187.9	1211.8	1228.6	1251.8	1268.5
140°	1245.3	1266.1	1278.2	1299.8	1315.0
142.5°	1297.9	1318.8	1327.8	1346.3	1361.5
145°	1376.9	1394.0	1402.1	1412.1	1427.3
147.5°	1450.9	1467.6	1471.1	1479.8	1489.3
150°	1499.0	1514.1	1514.4	1518.5	1528.0
152.5°	1543.9	1557.5	1553.2	1555.8	1566.7
155°	1607.4	1616.9	1609.3	1611.5	1621.0
157.5°	1657.8	1667.2	1655.4	1659.1	1666.7
160°	1688.7	1698.2	1684.9	1687.0	1694.6
162.5°	1718.2	1724.6	1712.8	1710.3	1720.9
165°	1754.6	1762.2	1748.8	1743.2	1754.6
167.5°	1785.6	1793.1	1775.5	1769.6	1780.9
170°	1801.1	1808.6	1789.4	1782.0	1793.3
172.5°	1815.0	1822.6	1801.8	1792.7	1801.1
175°	1828.2	1835.8	1812.7	1804.9	1804.9
177.5°	1832.1	1836.6	1819.7	1812.1	1821.2
180°	1824.3	1824.3	1824.3	1824.3	1824.3

(END OF REPORT)