

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: P644437

Luminaire Tested: CRQ4DIP-SR4F0-75D50U835-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644437  
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-SR4F0-75D50U835-FLLFLL-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT  
UPLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

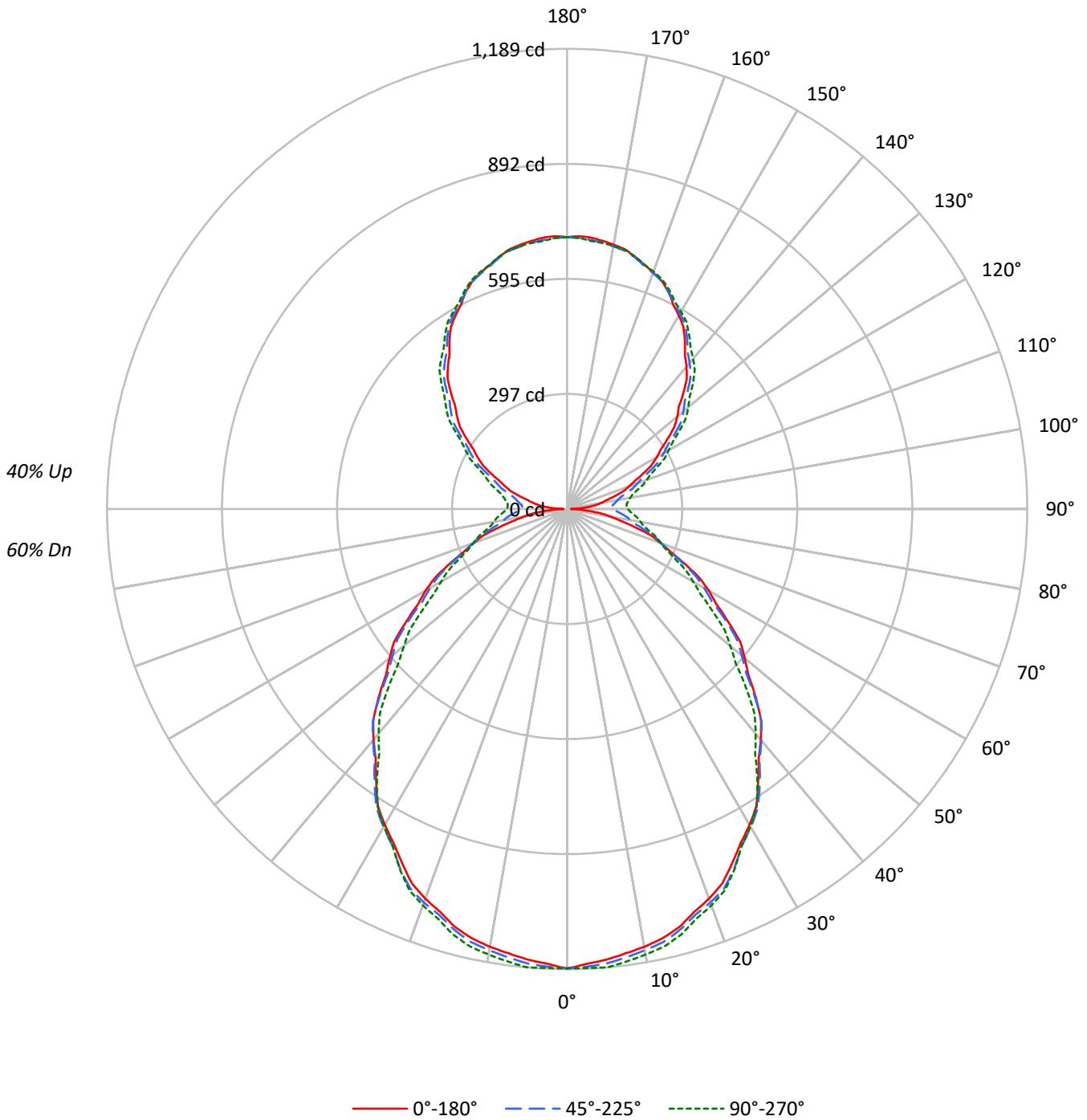
Lumens per Lamp: N/A  
Luminaire Lumens: 5135.3 lumens  
Efficiency: N/A  
Efficacy: 141.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: Semi-Direct

Input Watts (W): 36.4  
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

TEST NUMBER: P644437

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U835-FLLFLL-1DUDD-WW

### Luminous Intensity Polar Plot





TEST NUMBER: P644437

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U835-FLLFLL-1DUDD-WW

**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	110	110	110	110	102	102	102	102	89	89	89	77	77	77	65	65	65	60				
1	99	95	91	87	93	89	85	82	77	74	72	67	65	63	57	55	54	49				
2	91	83	76	71	84	77	72	67	68	63	59	58	55	52	50	48	45	41				
3	83	73	65	59	77	68	61	56	60	54	50	52	48	44	44	41	39	35				
4	76	65	56	50	70	61	53	48	53	47	43	46	42	38	40	36	33	30				
5	70	58	49	43	65	54	47	41	48	42	37	42	37	33	36	32	29	26				
6	64	52	43	37	60	49	41	36	43	37	32	38	33	29	33	29	26	23				
7	59	47	39	33	55	44	37	32	39	33	29	34	29	26	30	26	23	21				
8	55	43	35	29	51	40	33	28	36	30	26	31	27	23	27	24	21	18				
9	51	39	31	26	48	37	30	25	33	27	23	29	24	21	25	22	19	17				
10	48	36	28	24	45	34	27	23	30	25	21	27	22	19	24	20	17	15				

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

	0°	45°	90°
0°	19168	19168	19168
5°	18806	16924	16400
10°	18559	15068	14167
15°	18288	13494	12392
20°	17869	12105	10838
25°	17311	10802	9444
30°	16763	9560	8197
35°	16020	8417	7036
40°	15328	7357	5965
45°	14526	6323	4978
50°	13678	5370	4083
55°	12782	4515	3331
60°	11925	3717	2718
65°	10871	3010	2234
70°	9857	2424	1873
75°	8617	1979	1622
80°	7198	1650	1449
85°	5247	1454	1347

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 14526 cd/sqm



TEST NUMBER: P644437

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U835-FLLFLL-1DUDD-WW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	112.1	2.2
10°-20°	318.1	6.2
20°-30°	469.7	9.1
30°-40°	540.3	10.5
40°-50°	524.2	10.2
50°-60°	440.8	8.6
60°-70°	325.7	6.3
70°-80°	216.7	4.2
80°-90°	139.3	2.7
90°-100°	120.7	2.4
100°-110°	166.4	3.2
110°-120°	236.3	4.6
120°-130°	303.2	5.9
130°-140°	341.9	6.7
140°-150°	337.7	6.6
150°-160°	285.6	5.6
160°-170°	190.2	3.7
170°-180°	66.5	1.3
0°-30°	899.8	17.5
0°-40°	1440.1	28.0
0°-60°	2405.1	46.8
0°-90°	3086.8	60.1
90°-120°	523.4	10.2
90°-150°	1506.2	29.3
90°-180°	2048.0	39.9
0°-180°	5135.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1187	1187	1187	1187	1187	
5°	1169	1190	1179	1181	1189	111
15°	1118	1136	1126	1130	1139	315
25°	1010	1027	1023	1018	1024	465
35°	860	876	868	857	857	539
45°	689	698	685	664	654	531
55°	508	518	498	468	456	456
65°	335	341	328	314	309	334
75°	181	187	206	218	220	194
85°	55	84	140	167	174	59
90°	10	58	117	147	156	10
95°	50	64	118	148	154	49
105°	126	127	157	182	187	135
115°	217	222	239	253	257	215
125°	318	327	341	352	355	285
135°	425	434	443	454	459	328
145°	530	537	540	544	550	331
155°	619	623	620	620	624	284
165°	676	678	673	671	676	190
175°	704	707	698	695	695	67
180°	702	702	702	702	702	



TEST NUMBER: P644437

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U835-FLLFLL-1DUDD-WW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1187.2	<i>1187.2</i>	1187.2	1187.2	1187.2
2.5°	<i>1176.5</i>	<i>1193.5</i>	<i>1183.8</i>	<i>1185.9</i>	<i>1187.2</i>
5°	1168.8	<i>1190.1</i>	1178.8	1180.7	1188.9
7.5°	1158.0	<i>1178.3</i>	1168.5	1170.0	1179.5
10°	1148.6	<i>1168.3</i>	1157.8	1160.6	1168.8
12.5°	1136.6	<i>1156.1</i>	1146.4	1149.8	1158.0
15°	1118.5	<i>1136.3</i>	1125.9	1130.4	1138.6
17.5°	1091.6	<i>1110.1</i>	1099.7	1101.9	1110.1
20°	1071.5	<i>1088.6</i>	1082.3	1081.7	1089.9
22.5°	1047.4	<i>1065.8</i>	1060.8	1056.3	1065.8
25°	1009.5	<i>1027.3</i>	1022.9	1018.0	1024.5
27.5°	971.9	<i>986.7</i>	979.2	973.3	978.3
30°	942.4	<i>958.6</i>	948.9	942.5	947.4
32.5°	910.2	<i>927.0</i>	916.7	908.9	911.2
35°	860.2	<i>875.5</i>	867.5	856.9	856.9
37.5°	812.9	<i>824.4</i>	816.7	801.8	798.2
40°	778.1	<i>790.8</i>	780.5	762.8	757.9
42.5°	741.8	<i>754.6</i>	743.5	723.9	716.3
45°	689.2	<i>697.9</i>	684.9	663.8	654.0
47.5°	634.9	<i>644.5</i>	626.8	603.4	591.6
50°	598.6	<i>609.0</i>	589.1	563.1	550.0
52.5°	563.8	<i>572.1</i>	552.3	523.5	512.3
55°	508.1	<i>517.6</i>	497.8	468.1	456.3
57.5°	456.1	<i>465.2</i>	443.1	418.3	408.4
60°	422.6	<i>430.4</i>	408.8	385.1	375.8
62.5°	385.0	<i>393.4</i>	373.8	355.9	347.8
65°	335.4	<i>341.4</i>	327.7	313.8	309.3
67.5°	288.8	<i>293.1</i>	285.0	279.7	277.7
70°	256.6	<i>260.9</i>	259.2	259.1	257.7
72.5°	227.0	<i>230.7</i>	236.5	241.1	241.0
75°	181.1	<i>186.9</i>	206.1	217.5	220.1
77.5°	140.9	<i>146.1</i>	180.8	198.1	202.4
80°	114.0	<i>124.2</i>	166.0	187.4	192.3
82.5°	89.9	<i>105.0</i>	154.7	179.2	184.1
85°	55.3	<i>84.3</i>	140.0	166.9	173.5
87.5°	26.2	<i>67.6</i>	126.7	155.8	163.4
90°	10.3	<i>57.8</i>	117.0	147.4	156.4
92.5°	25.8	<i>57.9</i>	115.9	145.6	153.5
95°	50.3	<i>64.0</i>	118.0	148.5	154.5
97.5°	73.1	<i>77.0</i>	125.6	153.3	159.4
100°	88.0	<i>88.9</i>	132.7	159.1	165.3
102.5°	103.3	<i>102.5</i>	141.7	166.9	173.0
105°	126.4	<i>126.8</i>	156.8	181.5	187.0
107.5°	152.1	<i>153.1</i>	177.6	200.0	204.7
110°	169.3	<i>172.7</i>	193.5	213.4	218.7



TEST NUMBER: P644437

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U835-FLLFLL-1DUDD-WW

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	189.0	192.4	210.8	228.0	233.3
115°	216.8	221.9	239.0	253.2	256.9
117.5°	245.8	252.6	267.9	280.3	283.8
120°	267.1	274.1	288.0	299.8	302.8
122.5°	286.8	294.2	308.9	320.7	323.6
125°	317.7	326.8	341.0	352.0	355.0
127.5°	349.2	359.1	372.1	383.4	387.2
130°	371.7	381.2	392.4	404.3	408.6
132.5°	391.7	401.2	412.0	424.6	429.5
135°	425.1	434.5	443.0	454.3	459.4
137.5°	457.4	466.6	473.1	482.0	488.4
140°	479.5	487.5	492.2	500.5	506.3
142.5°	499.8	507.8	511.3	518.4	524.2
145°	530.2	536.8	539.9	543.8	549.6
147.5°	558.7	565.1	566.4	569.8	573.5
150°	577.2	583.0	583.1	584.7	588.4
152.5°	594.5	599.7	598.1	599.1	603.3
155°	618.9	622.6	619.7	620.5	624.2
157.5°	638.3	642.0	637.4	638.8	641.8
160°	650.3	653.9	648.8	649.6	652.5
162.5°	661.6	664.1	659.5	658.6	662.6
165°	675.6	678.5	673.4	671.2	675.6
167.5°	687.5	690.5	683.7	681.4	685.8
170°	693.5	696.4	689.0	686.2	690.5
172.5°	698.9	701.8	693.8	690.3	693.5
175°	703.9	706.9	698.0	695.0	695.0
177.5°	705.4	707.2	700.7	697.8	701.3
180°	702.5	702.5	702.5	702.5	702.5

(END OF REPORT)