

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: P644445

Luminaire Tested: CRQ4DIP-SR4F0-75D50U940-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644445  
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-SR4F0-75D50U940-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: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

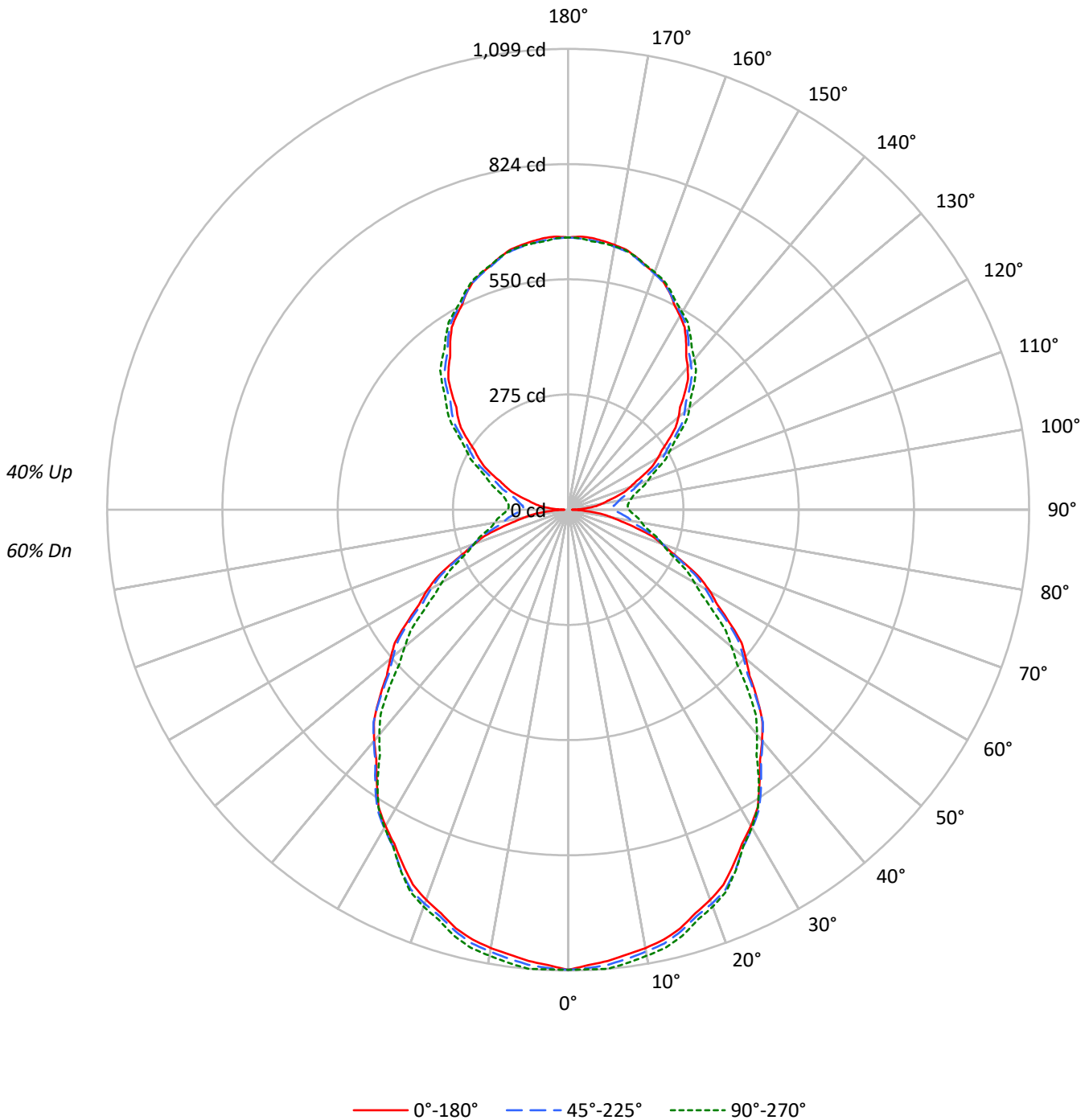
Lumens per Lamp: N/A  
Luminaire Lumens: 4745.8 lumens  
Efficiency: N/A  
Efficacy: 130.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: Semi-Direct

Input Watts (W): 36.4  
Input Voltage (V): 120  
Input Current (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

TEST NUMBER: P644445

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U940-FLLFLL-1DUDD-WW

### Luminous Intensity Polar Plot





TEST NUMBER: P644445

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U940-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	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°	17715	17715	17715
5°	17379	15641	15155
10°	17151	13925	13091
15°	16900	12470	11451
20°	16513	11187	10016
25°	15998	9983	8729
30°	15491	8835	7576
35°	14806	7778	6503
40°	14166	6799	5513
45°	13424	5844	4600
50°	12640	4963	3774
55°	11813	4173	3078
60°	11019	3435	2512
65°	10044	2782	2064
70°	9108	2240	1731
75°	7966	1829	1499
80°	6655	1525	1339
85°	4848	1343	1245

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 13424 cd/sqm



TEST NUMBER: P644445

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U940-FLLFLL-1DUDD-WW

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.6	2.2
10°-20°	294.0	6.2
20°-30°	434.0	9.1
30°-40°	499.3	10.5
40°-50°	484.5	10.2
50°-60°	407.3	8.6
60°-70°	301.0	6.3
70°-80°	200.3	4.2
80°-90°	128.8	2.7
90°-100°	111.5	2.4
100°-110°	153.7	3.2
110°-120°	218.4	4.6
120°-130°	280.2	5.9
130°-140°	316.0	6.7
140°-150°	312.1	6.6
150°-160°	264.0	5.6
160°-170°	175.7	3.7
170°-180°	61.5	1.3
0°-30°	831.6	17.5
0°-40°	1330.9	28.0
0°-60°	2222.7	46.8
0°-90°	2852.7	60.1
90°-120°	483.7	10.2
90°-150°	1391.9	29.3
90°-180°	1893.0	39.9
0°-180°	4745.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1097	1097	1097	1097	1097	
5°	1080	1100	1089	1091	1099	102
15°	1034	1050	1040	1045	1052	291
25°	933	949	945	941	947	430
35°	795	809	802	792	792	498
45°	637	645	633	614	604	491
55°	470	478	460	433	422	421
65°	310	316	303	290	286	308
75°	167	173	190	201	203	179
85°	51	78	129	154	160	54
90°	10	53	108	136	144	9
95°	46	59	109	137	143	45
105°	117	117	145	168	173	124
115°	200	205	221	234	237	199
125°	294	302	315	325	328	263
135°	393	402	409	420	424	303
145°	490	496	499	502	508	306
155°	572	575	573	574	577	263
165°	624	627	622	620	624	176
175°	651	653	645	642	642	62
180°	649	649	649	649	649	

TEST NUMBER: P644445

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U940-FLLFLL-1DUDD-WW

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1097.2	1097.2	1097.2	1097.2	1097.2
2.5°	1087.3	1103.0	1094.0	1096.0	1097.2
5°	1080.1	1099.8	1089.4	1091.1	1098.7
7.5°	1070.2	1088.9	1079.9	1081.3	1090.0
10°	1061.5	1079.7	1070.0	1072.6	1080.1
12.5°	1050.4	1068.4	1059.5	1062.6	1070.2
15°	1033.6	1050.1	1040.5	1044.7	1052.2
17.5°	1008.8	1025.9	1016.4	1018.3	1025.9
20°	990.2	1006.1	1000.2	999.7	1007.3
22.5°	967.9	985.0	980.4	976.2	985.0
25°	932.9	949.4	945.3	940.8	946.9
27.5°	898.2	911.8	904.9	899.5	904.1
30°	870.9	885.9	876.9	871.0	875.6
32.5°	841.2	856.7	847.2	840.0	842.1
35°	795.0	809.1	801.7	791.9	791.9
37.5°	751.3	761.9	754.8	741.0	737.6
40°	719.1	730.8	721.3	705.0	700.5
42.5°	685.6	697.4	687.1	669.0	662.0
45°	636.9	645.0	633.0	613.5	604.4
47.5°	586.7	595.6	579.3	557.6	546.7
50°	553.2	562.8	544.5	520.4	508.3
52.5°	521.0	528.7	510.4	483.8	473.4
55°	469.6	478.3	460.1	432.6	421.7
57.5°	421.5	430.0	409.5	386.6	377.5
60°	390.5	397.8	377.8	355.9	347.3
62.5°	355.8	363.6	345.4	328.9	321.4
65°	309.9	315.5	302.9	290.0	285.8
67.5°	266.9	270.9	263.3	258.5	256.6
70°	237.1	241.1	239.5	239.5	238.2
72.5°	209.8	213.2	218.6	222.9	222.7
75°	167.4	172.8	190.5	201.0	203.4
77.5°	130.2	135.0	167.1	183.1	187.1
80°	105.4	114.8	153.4	173.2	177.7
82.5°	83.1	97.1	143.0	165.6	170.2
85°	51.1	77.9	129.3	154.3	160.3
87.5°	24.2	62.5	117.1	143.9	151.0
90°	9.5	53.4	108.2	136.3	144.5
92.5°	23.8	53.5	107.1	134.6	141.9
95°	46.5	59.1	109.0	137.2	142.8
97.5°	67.5	71.2	116.0	141.7	147.3
100°	81.3	82.2	122.7	147.1	152.8
102.5°	95.5	94.7	130.9	154.2	159.8
105°	116.8	117.1	144.9	167.7	172.8
107.5°	140.6	141.5	164.1	184.8	189.1
110°	156.4	159.6	178.8	197.2	202.1

TEST NUMBER: P644445

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U940-FLLFLL-1DUDD-WW

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	174.6	177.8	194.8	210.7	215.6
115°	200.4	205.1	220.9	234.0	237.4
117.5°	227.2	233.4	247.6	259.1	262.3
120°	246.9	253.3	266.2	277.1	279.8
122.5°	265.1	271.9	285.5	296.4	299.1
125°	293.6	302.0	315.1	325.3	328.0
127.5°	322.7	331.9	343.9	354.3	357.8
130°	343.5	352.3	362.7	373.6	377.7
132.5°	362.0	370.8	380.7	392.4	397.0
135°	392.8	401.6	409.4	419.8	424.5
137.5°	422.7	431.2	437.2	445.5	451.4
140°	443.1	450.5	454.8	462.6	467.9
142.5°	461.9	469.3	472.5	479.1	484.5
145°	490.0	496.1	499.0	502.5	507.9
147.5°	516.3	522.3	523.5	526.6	530.0
150°	533.4	538.8	538.9	540.4	543.7
152.5°	549.4	554.3	552.7	553.6	557.5
155°	572.0	575.4	572.7	573.5	576.8
157.5°	589.9	593.3	589.1	590.4	593.1
160°	600.9	604.3	599.6	600.3	603.0
162.5°	611.4	613.7	609.5	608.6	612.4
165°	624.4	627.1	622.3	620.3	624.4
167.5°	635.4	638.1	631.8	629.7	633.8
170°	640.9	643.6	636.8	634.1	638.2
172.5°	645.9	648.6	641.2	638.0	640.9
175°	650.6	653.3	645.1	642.3	642.3
177.5°	651.9	653.6	647.5	644.9	648.1
180°	649.2	649.2	649.2	649.2	649.2

(END OF REPORT)