

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: P644315

Luminaire Tested: CRQ4DIP-SR4F0-50D100U830-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644315
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-SR4F0-50D100U830-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

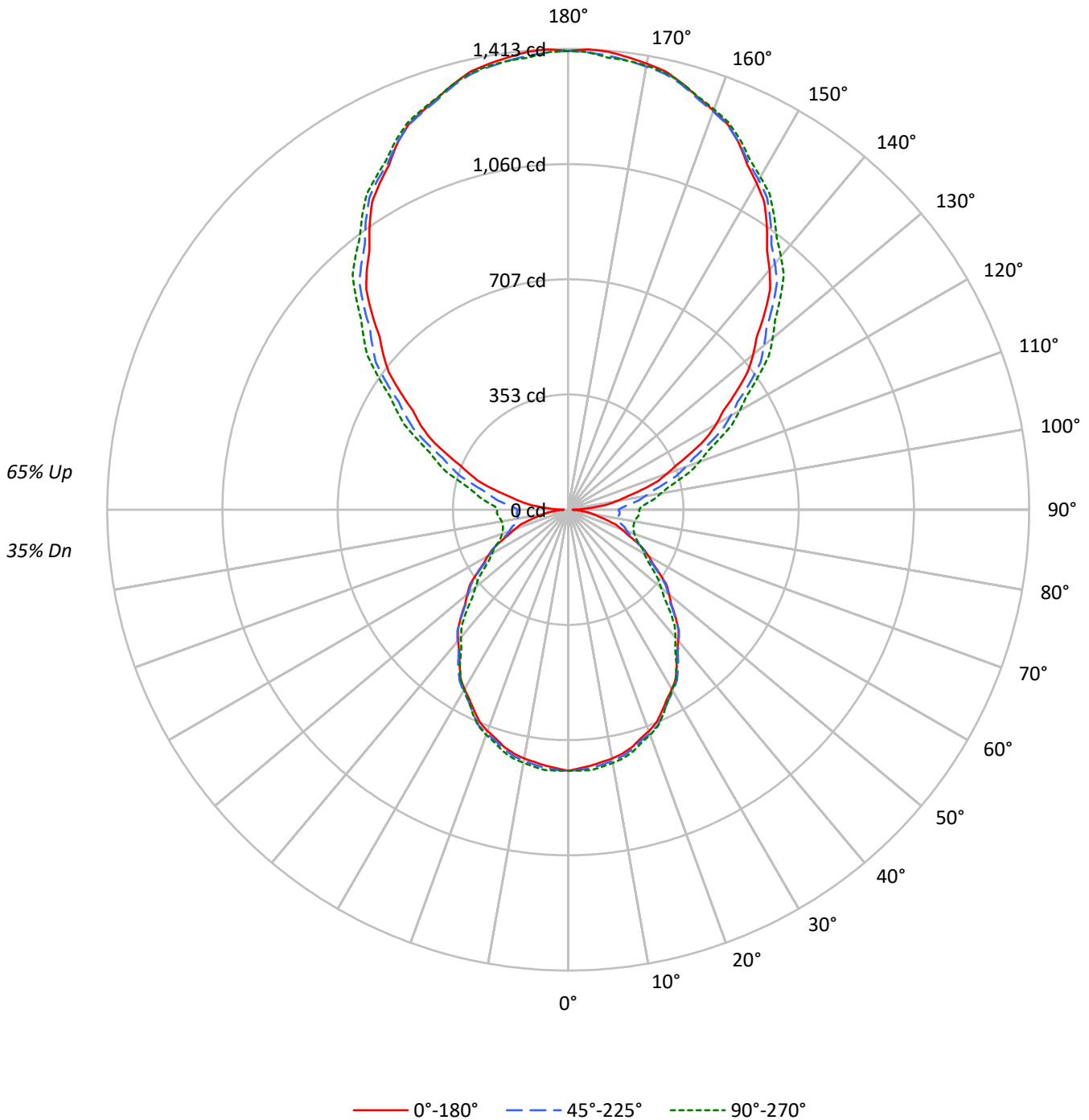
Lumens per Lamp: N/A
Luminaire Lumens: 6218.2 lumens
Efficiency: N/A
Efficacy: 143.6 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 43.3
Input Voltage (V): 120
Input Current (A_{in}): 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: P644315

CATALOG NUMBER: CRQ4DIP-SR4F0-50D100U830-FLLFLL-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644315

CATALOG NUMBER: CRQ4DIP-SR4F0-50D100U830-FLLFLL-1DUDD-WW

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	104	104	104	104	94	94	94	94	75	75	75	58	58	58	43	43	43	35																				
1	94	89	85	81	84	81	77	74	65	62	60	50	48	47	36	35	34	28																				
2	85	78	71	66	77	70	65	60	56	53	49	44	41	39	32	30	29	23																				
3	78	68	61	55	70	62	55	50	50	45	41	39	35	33	28	26	24	20																				
4	71	60	52	46	64	55	48	43	44	39	35	34	31	28	25	23	21	17																				
5	65	54	46	40	58	49	42	36	39	34	30	31	27	24	23	20	18	15																				
6	60	48	40	34	54	44	37	32	35	30	26	28	24	21	21	18	16	13																				
7	55	43	35	30	50	39	32	28	32	27	23	25	21	19	19	16	14	11																				
8	51	39	32	26	46	36	29	24	29	24	20	23	19	17	17	15	13	10																				
9	48	36	28	23	43	33	26	22	27	22	18	21	17	15	16	13	12	9																				
10	44	33	26	21	40	30	24	19	25	20	16	20	16	13	15	12	10	8																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12925	12925	12925
5°	12681	11411	11057
10°	12514	10172	9552
15°	12330	9111	8355
20°	12049	8174	7308
25°	11671	7284	6368
30°	11302	6466	5527
35°	10802	5704	4744
40°	10334	4969	4021
45°	9795	4273	3356
50°	9222	3648	2753
55°	8618	3063	2296
60°	8039	2542	1947
65°	7328	2121	1707
70°	6645	1792	1566
75°	5810	1610	1524
80°	4855	1556	1559
85°	3539	1639	1677

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 9795 cd/sqm



TEST NUMBER: P644315

CATALOG NUMBER: CRQ4DIP-SR4F0-50D100U830-FLLFLL-1DUDD-WW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.6	1.2
10°-20°	214.6	3.5
20°-30°	317.0	5.1
30°-40°	365.1	5.9
40°-50°	354.4	5.7
50°-60°	300.5	4.8
60°-70°	232.8	3.7
70°-80°	177.7	2.9
80°-90°	154.6	2.5
90°-100°	192.5	3.1
100°-110°	315.3	5.1
110°-120°	467.0	7.5
120°-130°	604.7	9.7
130°-140°	684.3	11.0
140°-150°	676.2	10.9
150°-160°	571.9	9.2
160°-170°	380.8	6.1
170°-180°	133.2	2.1
0°-30°	607.2	9.8
0°-40°	972.3	15.6
0°-60°	1627.3	26.2
0°-90°	2192.3	35.3
90°-120°	974.7	15.7
90°-150°	2940.0	47.3
90°-180°	4026.0	64.7
0°-180°	6218.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	800	800	800	800	800	
5°	788	802	795	796	802	75
15°	754	768	760	762	768	212
25°	681	695	690	686	691	314
35°	580	593	588	578	578	363
45°	465	474	463	448	441	358
55°	343	353	338	319	315	307
65°	226	236	231	234	236	225
75°	122	134	168	197	207	131
85°	37	80	158	203	216	40
90°	14	72	154	202	217	12
95°	78	108	190	235	245	79
105°	231	245	303	343	350	246
115°	419	438	474	503	510	416
125°	627	650	681	705	711	562
135°	851	870	887	910	920	656
145°	1062	1075	1081	1089	1101	663
155°	1239	1247	1241	1243	1250	569
165°	1353	1359	1348	1344	1353	381
175°	1410	1416	1398	1392	1392	134
180°	1407	1407	1407	1407	1407	



TEST NUMBER: P644315

CATALOG NUMBER: CRQ4DIP-SR4F0-50D100U830-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	800.5	800.5	800.5	800.5	800.5
2.5°	793.3	804.8	799.0	799.6	800.5
5°	788.1	802.4	794.8	796.1	801.6
7.5°	780.8	795.3	788.9	788.9	795.3
10°	774.5	787.8	781.6	782.5	788.1
12.5°	766.3	781.1	773.2	775.3	780.8
15°	754.1	768.1	760.2	762.2	767.7
17.5°	736.0	749.4	742.5	743.0	748.5
20°	722.5	735.0	730.8	729.4	734.9
22.5°	706.2	719.6	716.3	712.2	718.6
25°	680.6	694.6	689.7	686.4	690.8
27.5°	655.3	668.8	661.4	656.3	659.6
30°	635.4	648.3	641.8	635.5	638.8
32.5°	613.7	627.7	620.1	612.8	614.4
35°	580.0	593.2	587.9	577.8	577.8
37.5°	548.1	559.7	551.7	540.6	538.2
40°	524.6	537.1	527.2	514.4	511.0
42.5°	500.2	512.7	503.1	488.1	483.0
45°	464.7	473.5	462.8	447.6	440.9
47.5°	428.1	438.3	424.0	406.8	398.9
50°	403.6	413.5	400.2	379.7	370.9
52.5°	380.1	389.4	374.6	353.8	347.0
55°	342.6	352.8	337.7	318.7	314.6
57.5°	307.5	317.6	301.9	291.0	286.5
60°	284.9	294.1	279.6	272.6	269.2
62.5°	259.6	269.9	257.6	256.9	255.9
65°	226.1	236.0	230.9	234.5	236.3
67.5°	194.7	203.5	205.8	218.6	223.3
70°	173.0	181.7	191.6	209.6	215.4
72.5°	153.1	162.1	181.9	203.8	210.4
75°	122.1	133.8	167.7	197.4	206.8
77.5°	95.0	109.0	159.3	195.0	205.8
80°	76.9	97.3	156.5	194.9	206.9
82.5°	60.6	87.5	155.2	198.1	210.1
85°	37.3	80.1	157.8	202.9	216.0
87.5°	19.1	75.5	157.6	204.1	218.9
90°	13.8	72.1	154.2	201.7	217.4
92.5°	37.8	82.5	166.1	212.3	224.2
95°	78.5	108.1	189.5	235.0	244.8
97.5°	119.6	141.1	217.6	260.2	269.7
100°	149.5	166.5	239.1	280.7	288.8
102.5°	182.0	195.6	264.1	303.4	312.9
105°	230.8	244.6	302.8	343.3	349.9
107.5°	285.0	299.6	349.3	387.9	395.1
110°	321.1	339.0	383.1	418.4	426.8



TEST NUMBER: P644315

CATALOG NUMBER: CRQ4DIP-SR4F0-50D100U830-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	360.6	378.4	417.7	451.2	459.6
115°	418.6	437.5	474.1	502.7	510.0
117.5°	479.3	499.0	532.5	559.6	566.6
120°	523.8	542.1	574.6	600.4	606.3
122.5°	563.3	584.1	616.4	642.3	648.1
125°	627.2	649.8	680.6	705.0	710.8
127.5°	693.1	714.7	743.0	767.7	775.3
130°	740.0	758.9	783.6	809.6	818.3
132.5°	783.5	802.5	824.5	850.2	860.1
135°	851.2	870.2	887.0	909.7	919.9
137.5°	916.0	934.4	947.4	965.3	978.1
140°	960.2	976.3	985.6	1002.3	1014.0
142.5°	1000.8	1016.9	1023.8	1038.1	1049.8
145°	1061.7	1074.9	1081.1	1088.9	1100.6
147.5°	1118.8	1131.6	1134.3	1141.0	1148.3
150°	1155.8	1167.5	1167.8	1170.9	1178.2
152.5°	1190.5	1201.0	1197.6	1199.6	1208.1
155°	1239.4	1246.7	1240.9	1242.6	1249.9
157.5°	1278.3	1285.6	1276.5	1279.3	1285.1
160°	1302.2	1309.5	1299.2	1300.8	1306.6
162.5°	1324.9	1329.8	1320.7	1318.8	1326.9
165°	1352.9	1358.8	1348.5	1344.2	1352.9
167.5°	1376.8	1382.7	1369.1	1364.5	1373.2
170°	1388.8	1394.6	1379.8	1374.0	1382.8
172.5°	1399.5	1405.4	1389.4	1382.3	1388.8
175°	1409.7	1415.5	1397.7	1391.8	1391.8
177.5°	1412.7	1416.2	1403.1	1397.3	1404.3
180°	1406.7	1406.7	1406.7	1406.7	1406.7

(END OF REPORT)