

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: P644340

Luminaire Tested: CRQ4DIP-SR4F0-50D150U830-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644340
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-50D150U830-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

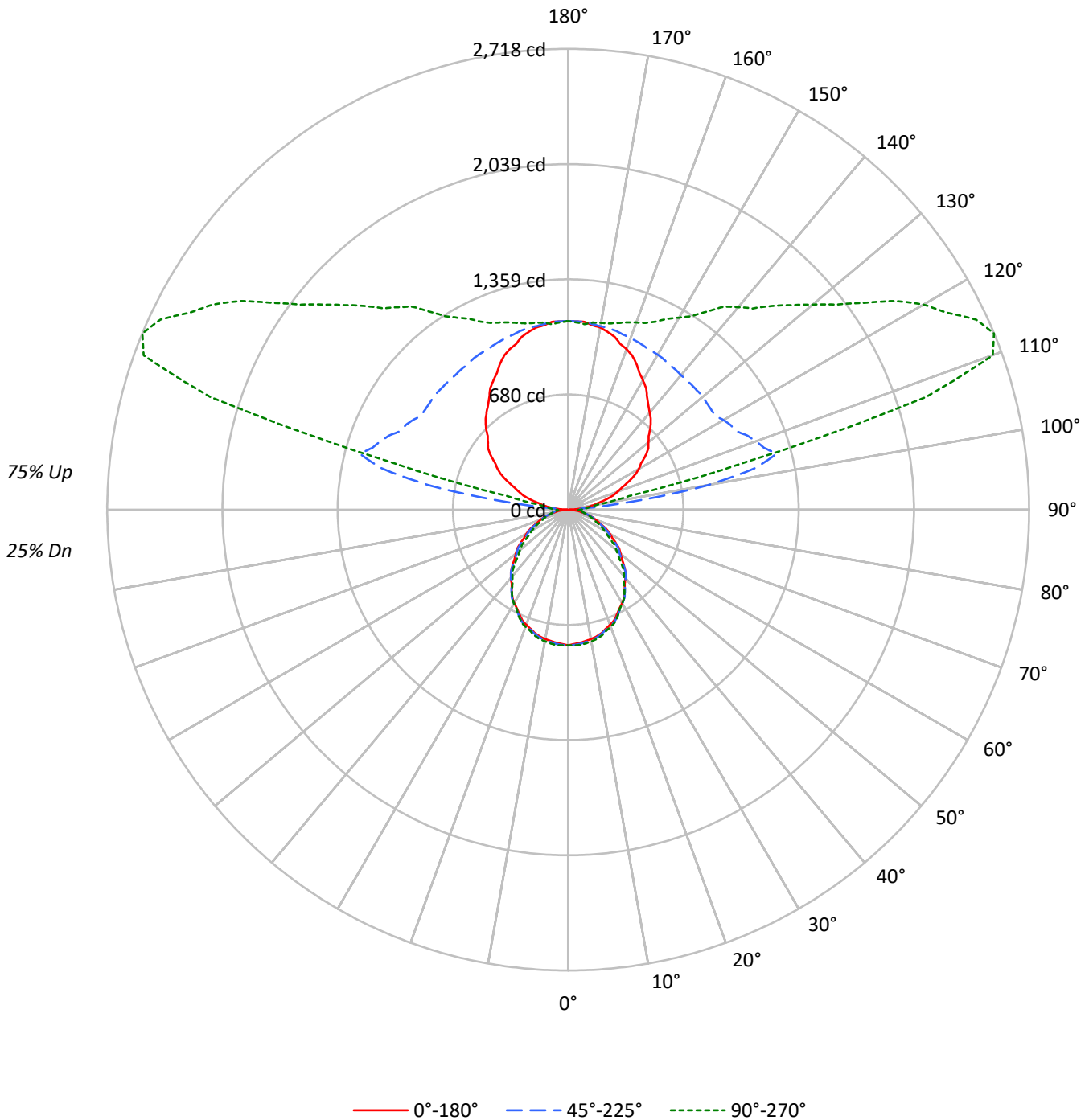
Lumens per Lamp: N/A
Luminaire Lumens: 8040.1 lumens
Efficiency: N/A
Efficacy: 127.8 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 62.9
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: P644340

CATALOG NUMBER: CRQ4DIP-SR4F0-50D150U830-FLLOOB-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644340

CATALOG NUMBER: CRQ4DIP-SR4F0-50D150U830-FLLOOB-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	101	101	101	101	90	90	90	90	70	70	70	51	51	51	33	33	33	25																				
1	92	88	84	81	82	78	75	72	61	59	57	44	43	42	29	29	28	21																				
2	84	77	71	66	74	69	64	59	53	50	47	39	37	35	26	25	24	18																				
3	76	67	60	55	68	60	54	50	47	43	39	34	32	30	23	21	20	15																				
4	70	60	52	46	62	53	47	42	42	37	33	31	28	25	20	19	17	13																				
5	64	53	45	39	57	47	41	36	37	32	29	27	24	22	18	17	15	11																				
6	59	47	40	34	52	42	36	31	33	29	25	25	22	19	17	15	13	10																				
7	54	43	35	30	48	38	32	27	30	25	22	22	19	17	15	13	12	9																				
8	50	39	31	26	45	35	28	24	27	23	19	20	17	15	14	12	11	8																				
9	47	35	28	23	42	32	25	21	25	20	17	19	16	13	13	11	9	7																				
10	44	32	25	20	39	29	23	19	23	18	15	17	14	12	12	10	9	6																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	12925	12925	12925
5°	12681	11411	11057
10°	12514	10153	9552
15°	12330	9093	8355
20°	12049	8157	7308
25°	11671	7284	6368
30°	11302	6436	5527
35°	10802	5660	4744
40°	10334	4955	4021
45°	9795	4259	3356
50°	9222	3607	2753
55°	8618	3035	2220
60°	8039	2488	1774
65°	7328	1984	1405
70°	6645	1554	1109
75°	5810	1194	875
80°	4855	888	682
85°	3539	646	518

MAXIMUM LUMINANCE 45°-90°:

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



TEST NUMBER: P644340

CATALOG NUMBER: CRQ4DIP-SR4F0-50D150U830-FLLOOB-1DUDD-WW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.6	0.9
10°-20°	214.4	2.7
20°-30°	316.5	3.9
30°-40°	363.9	4.5
40°-50°	353.0	4.4
50°-60°	295.5	3.7
60°-70°	212.9	2.6
70°-80°	130.1	1.6
80°-90°	65.7	0.8
90°-100°	161.8	2.0
100°-110°	983.4	12.2
110°-120°	1325.9	16.5
120°-130°	1077.9	13.4
130°-140°	866.1	10.8
140°-150°	682.6	8.5
150°-160°	499.1	6.2
160°-170°	310.0	3.9
170°-180°	105.7	1.3
0°-30°	606.5	7.5
0°-40°	970.4	12.1
0°-60°	1618.8	20.1
0°-90°	2027.5	25.2
90°-120°	2471.1	30.7
90°-150°	5097.7	63.4
90°-180°	6013.0	74.8
0°-180°	8040.1	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	765	759	762	768	212
25°	681	692	690	686	691	314
35°	580	589	583	578	578	363
45°	465	469	461	448	441	358
55°	343	347	335	314	304	307
65°	226	227	216	200	194	225
75°	122	122	124	121	119	131
85°	37	45	62	67	67	39
90°	3	29	55	68	70	7
95°	67	114	80	95	110	72
105°	228	338	1272	1628	1083	241
115°	393	470	1093	2270	2653	390
125°	557	630	1029	1798	2126	495
135°	685	761	1035	1481	1700	528
145°	811	880	1042	1290	1427	510
155°	951	985	1063	1169	1224	437
165°	1056	1070	1091	1120	1140	297
175°	1112	1119	1112	1105	1098	105
180°	1112	1112	1112	1112	1112	



TEST NUMBER: P644340

CATALOG NUMBER: CRQ4DIP-SR4F0-50D150U830-FLLOOB-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	797.8	799.6	800.5
5°	788.1	802.4	794.8	796.1	801.6
7.5°	780.8	794.1	787.4	788.9	795.3
10°	774.5	787.8	780.1	782.5	788.1
12.5°	766.3	778.7	772.9	775.3	780.8
15°	754.1	765.2	758.7	762.2	767.7
17.5°	736.0	748.0	741.0	743.0	748.5
20°	722.5	733.5	729.3	729.4	734.9
22.5°	706.2	718.1	714.8	712.2	718.6
25°	680.6	691.7	689.7	686.4	690.8
27.5°	655.3	663.5	659.6	656.3	659.6
30°	635.4	645.4	638.8	635.5	638.8
32.5°	613.7	623.7	617.1	612.8	614.4
35°	580.0	588.9	583.4	577.8	577.8
37.5°	548.1	553.9	550.2	540.6	538.2
40°	524.6	531.3	525.7	514.4	511.0
42.5°	500.2	506.8	500.4	488.1	483.0
45°	464.7	469.1	461.3	447.6	440.9
47.5°	428.1	432.7	422.0	406.8	398.9
50°	403.6	409.2	395.7	379.7	370.9
52.5°	380.1	383.9	371.3	352.6	344.6
55°	342.6	347.0	334.7	314.1	304.1
57.5°	307.5	311.7	297.1	277.5	269.8
60°	284.9	288.2	273.6	253.1	245.3
62.5°	259.6	262.9	249.2	231.4	223.6
65°	226.1	227.2	216.0	200.0	194.5
67.5°	194.7	194.7	185.2	173.3	168.9
70°	173.0	173.0	166.2	157.1	152.6
72.5°	153.1	152.2	148.1	141.7	138.2
75°	122.1	122.1	124.4	120.9	118.7
77.5°	95.0	93.2	102.9	102.4	101.3
80°	76.9	76.9	89.3	91.6	90.5
82.5°	60.6	62.4	78.5	81.6	80.5
85°	37.3	45.0	62.2	66.7	66.7
87.5°	17.0	31.8	51.6	58.9	59.1
90°	3.4	29.0	54.7	68.5	69.6
92.5°	23.8	40.6	64.2	83.8	91.2
95°	67.3	114.0	79.7	94.9	109.7
97.5°	112.9	205.9	428.5	145.1	130.0
100°	146.5	255.0	838.9	262.2	182.4
102.5°	179.1	293.1	1126.2	656.7	368.1
105°	228.1	337.8	1271.6	1627.5	1082.6
107.5°	277.1	358.3	1211.8	2360.1	2212.1
110°	309.8	386.3	1177.3	2477.7	2663.5



TEST NUMBER: P644340

CATALOG NUMBER: CRQ4DIP-SR4F0-50D150U830-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	343.4	419.9	1143.7	2406.0	2717.6
115°	392.6	470.2	1093.4	2270.1	2653.1
117.5°	443.0	520.6	1080.6	2122.1	2516.1
120°	481.3	554.3	1057.3	2009.7	2420.0
122.5°	509.2	586.8	1029.3	1913.8	2291.3
125°	557.1	630.1	1029.3	1798.0	2126.3
127.5°	596.3	672.0	1030.7	1663.6	1987.8
130°	617.8	699.8	1036.3	1573.7	1881.5
132.5°	643.9	726.0	1035.4	1533.3	1786.3
135°	685.4	760.7	1035.2	1480.8	1699.6
137.5°	720.4	801.1	1035.2	1422.7	1610.1
140°	748.4	823.6	1035.2	1388.8	1559.7
142.5°	776.4	846.1	1040.8	1349.3	1509.4
145°	811.3	879.7	1042.2	1290.1	1426.8
147.5°	853.3	913.5	1050.5	1247.4	1352.7
150°	881.3	936.0	1056.1	1219.0	1307.9
152.5°	909.3	958.5	1056.1	1196.3	1268.8
155°	951.2	985.4	1063.1	1169.3	1224.0
157.5°	984.8	1017.6	1071.5	1152.2	1191.8
160°	1007.2	1034.5	1077.1	1140.8	1175.0
162.5°	1024.0	1051.3	1082.7	1135.0	1158.3
165°	1056.1	1069.8	1091.1	1119.6	1140.1
167.5°	1074.3	1086.6	1098.1	1112.4	1124.7
170°	1091.1	1098.0	1098.1	1112.3	1119.1
172.5°	1096.7	1109.0	1103.7	1106.7	1113.5
175°	1112.1	1118.9	1112.1	1104.9	1098.1
177.5°	1112.1	1117.6	1112.1	1112.0	1106.5
180°	1112.1	1112.1	1112.1	1112.1	1112.1

(END OF REPORT)