

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: P644328

Luminaire Tested: CRQ4DIP-SR4F0-50D125U830-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644328
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-SR4F0-50D125U830-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 500 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1250 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

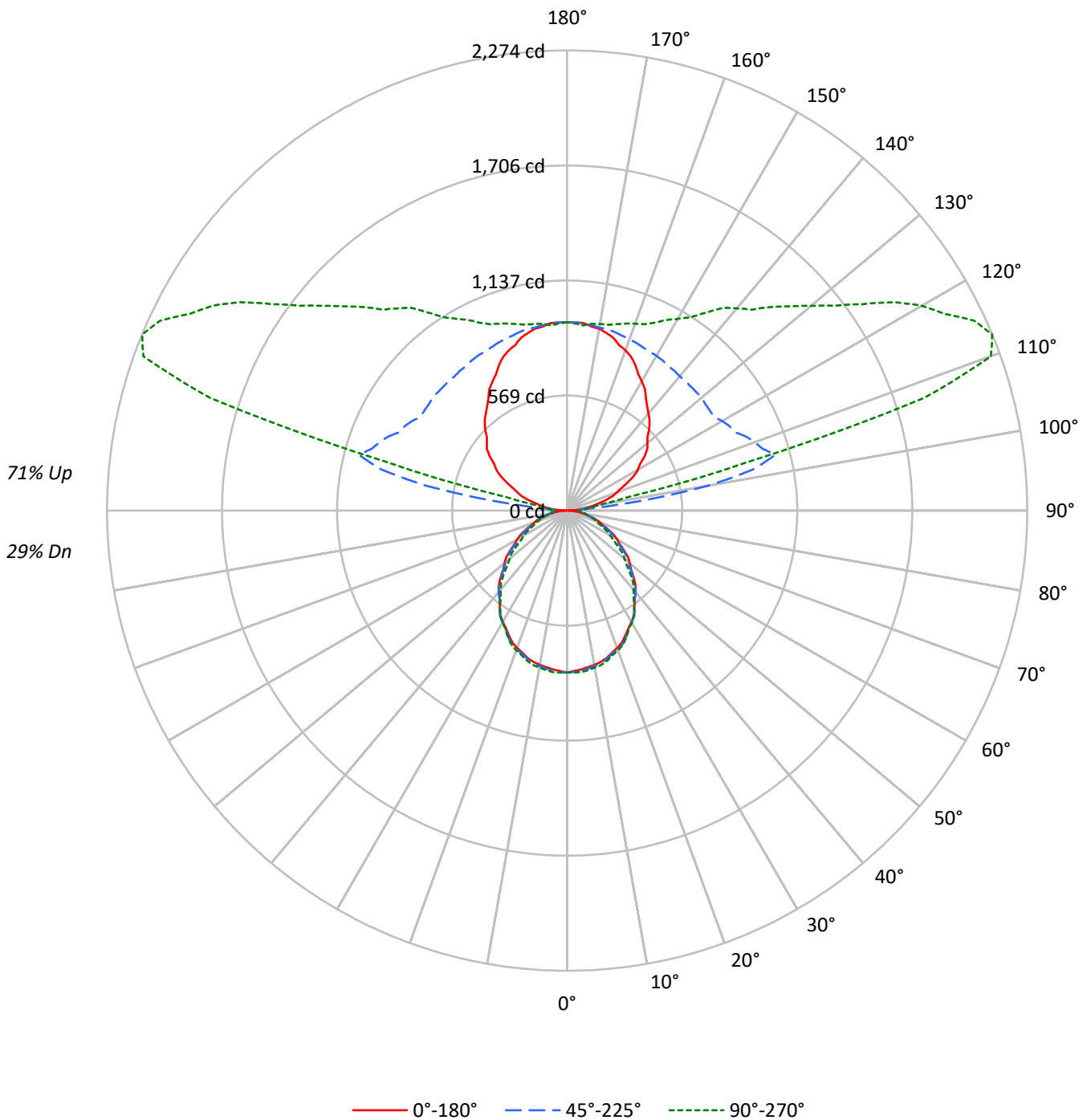
Lumens per Lamp: N/A
Luminaire Lumens: 7062.7 lumens
Efficiency: N/A
Efficacy: 134.5 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 52.5
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

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Luminous Intensity Polar Plot





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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	102	102	102	102	91	91	91	91	72	72	72	53	53	53	37	37	37	29																				
1	93	89	85	81	83	80	76	73	62	60	58	47	45	44	32	31	31	24																				
2	85	77	71	66	75	69	64	60	55	51	48	41	39	37	28	27	26	20																				
3	77	68	61	55	69	61	55	50	48	44	41	36	33	31	25	23	22	17																				
4	71	60	53	47	63	54	48	43	43	38	34	32	29	27	22	21	19	15																				
5	65	53	46	40	58	48	41	36	38	33	30	29	26	23	20	18	17	13																				
6	59	48	40	34	53	43	36	32	34	29	26	26	23	20	18	16	15	11																				
7	55	43	35	30	49	39	32	28	31	26	23	24	20	18	17	15	13	10																				
8	51	39	32	26	45	35	29	24	28	23	20	22	18	16	15	13	12	9																				
9	47	35	28	23	42	32	26	21	26	21	18	20	16	14	14	12	10	8																				
10	44	32	25	21	39	29	23	19	24	19	16	18	15	13	13	11	9	7																				

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.6	1.1
10°-20°	214.4	3.0
20°-30°	316.5	4.5
30°-40°	363.9	5.2
40°-50°	353.0	5.0
50°-60°	295.5	4.2
60°-70°	212.9	3.0
70°-80°	130.1	1.8
80°-90°	65.3	0.9
90°-100°	139.4	2.0
100°-110°	824.0	11.7
110°-120°	1109.6	15.7
120°-130°	901.8	12.8
130°-140°	724.4	10.3
140°-150°	571.0	8.1
150°-160°	417.5	5.9
160°-170°	259.3	3.7
170°-180°	88.4	1.3
0°-30°	606.5	8.6
0°-40°	970.4	13.7
0°-60°	1618.8	22.9
0°-90°	2027.1	28.7
90°-120°	2073.0	29.4
90°-150°	4270.3	60.5
90°-180°	5036.0	71.3
0°-180°	7062.7	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	28	52	65	66	6
95°	58	97	70	85	97	62
105°	193	283	1065	1363	908	203
115°	330	394	915	1899	2220	327
125°	467	527	861	1504	1778	415
135°	573	636	866	1239	1422	441
145°	679	736	872	1079	1194	426
155°	796	824	889	978	1024	365
165°	883	895	913	936	954	248
175°	930	936	930	924	918	88
180°	930	930	930	930	930	



TEST NUMBER: P644328

CATALOG NUMBER: CRQ4DIP-SR4F0-50D125U830-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	31.6	51.2	58.2	58.5
90°	3.4	27.9	52.4	65.1	66.2
92.5°	21.1	36.7	59.2	76.7	83.2
95°	58.1	97.0	70.5	84.6	97.1
97.5°	96.6	173.3	361.2	125.3	112.9
100°	124.7	214.2	703.9	222.5	156.0
102.5°	151.9	246.0	943.7	551.9	310.7
105°	192.7	283.3	1064.6	1363.0	907.6
107.5°	233.4	300.2	1014.1	1975.1	1851.5
110°	260.6	323.7	985.1	2073.3	2228.8



TEST NUMBER: P644328

CATALOG NUMBER: CRQ4DIP-SR4F0-50D125U830-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	288.7	351.8	957.0	2013.0	2273.8
115°	329.7	393.9	914.9	1899.2	2219.6
117.5°	371.6	436.0	904.2	1775.2	2104.7
120°	403.5	464.2	884.5	1681.0	2024.2
122.5°	426.9	491.3	861.1	1600.8	1916.6
125°	466.7	527.4	861.1	1503.9	1778.5
127.5°	499.3	562.5	862.3	1391.5	1662.7
130°	517.1	585.7	867.0	1316.3	1573.8
132.5°	538.7	607.3	866.1	1282.5	1494.2
135°	573.3	636.3	865.9	1238.6	1421.7
137.5°	602.6	670.1	865.9	1190.0	1346.8
140°	626.0	688.9	865.9	1161.6	1304.6
142.5°	649.4	707.7	870.5	1128.7	1262.5
145°	678.6	735.9	871.7	1079.1	1193.5
147.5°	713.8	764.1	878.7	1043.4	1131.5
150°	737.2	782.9	883.4	1019.7	1094.0
152.5°	760.6	801.7	883.4	1000.6	1061.3
155°	795.7	824.3	889.3	978.1	1023.8
157.5°	823.7	851.2	896.3	963.7	996.9
160°	842.5	865.3	901.0	954.3	982.9
162.5°	856.5	879.4	905.6	949.4	968.8
165°	883.4	894.9	912.7	936.5	953.6
167.5°	898.6	908.9	918.5	930.4	940.7
170°	912.7	918.4	918.5	930.3	936.1
172.5°	917.3	927.6	923.2	925.7	931.4
175°	930.2	935.9	930.2	924.2	918.5
177.5°	930.2	934.8	930.2	930.1	925.5
180°	930.2	930.2	930.2	930.2	930.2

(END OF REPORT)