

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: P644388

Luminaire Tested: CRQ4DIP-SR4F0-75D100U830-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644388
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-SR4F0-75D100U830-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

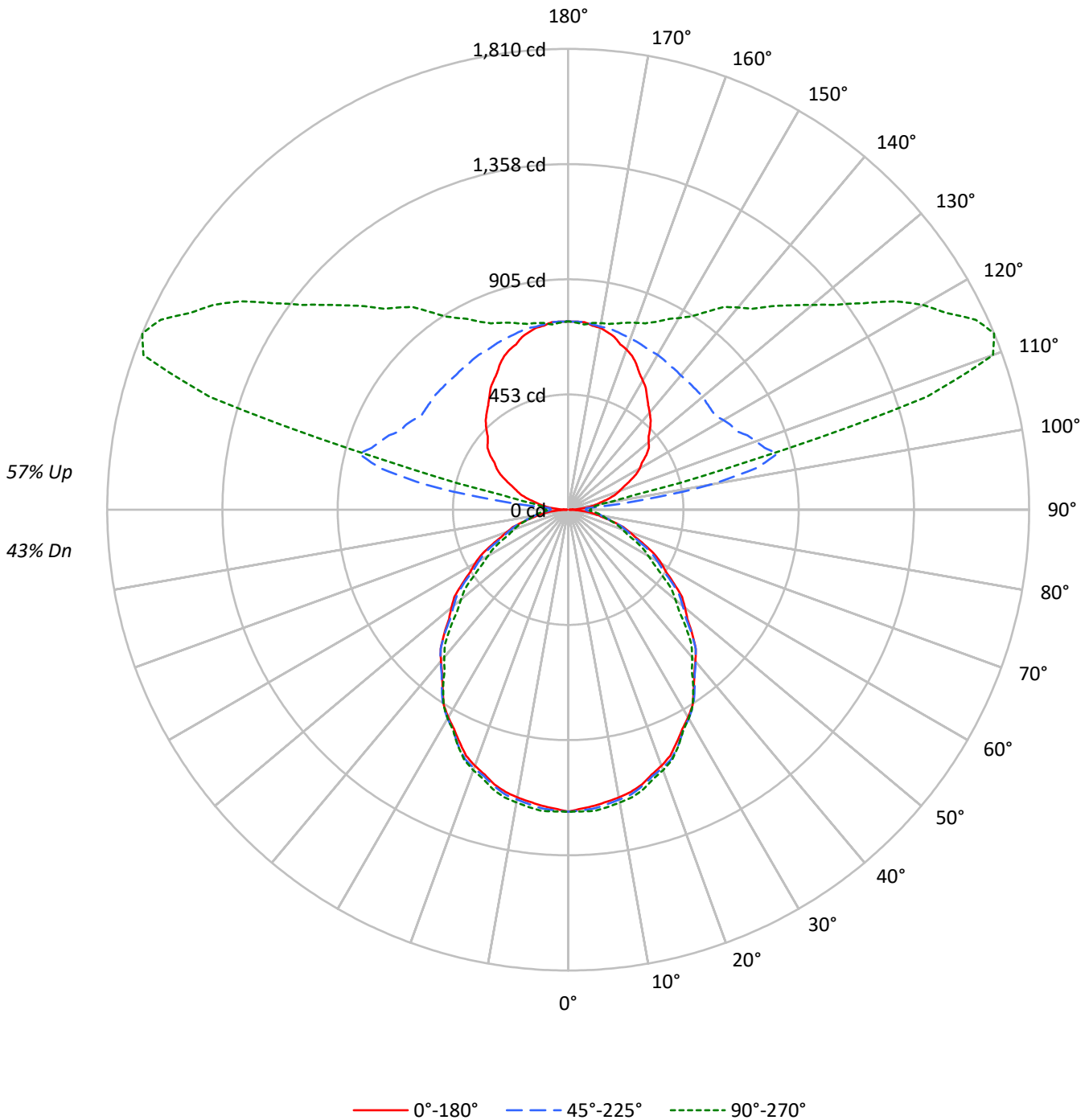
Lumens per Lamp: N/A
Luminaire Lumens: 7031.0 lumens
Efficiency: N/A
Efficacy: 138.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 50.8
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

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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	105	105	105	105	96	96	96	96	79	79	79	64	64	64	49	49	49	43																				
1	96	92	88	84	88	84	80	77	69	67	65	56	54	53	43	42	41	36																				
2	87	80	74	69	80	73	68	64	61	57	54	49	46	44	38	36	35	30																				
3	80	70	63	57	73	65	58	53	54	49	45	43	40	37	34	32	30	25																				
4	73	62	55	49	66	57	50	45	48	43	39	39	35	32	30	28	26	22																				
5	67	56	48	42	61	51	44	39	43	37	33	35	31	28	27	25	22	19																				
6	62	50	42	36	56	46	39	34	38	33	29	31	27	24	25	22	20	17																				
7	57	45	37	32	52	41	34	30	35	29	26	29	25	22	23	20	18	15																				
8	53	41	33	28	48	38	31	26	32	26	23	26	22	19	21	18	16	13																				
9	49	37	30	25	45	34	28	23	29	24	20	24	20	17	19	16	14	12																				
10	46	34	27	22	42	32	25	21	27	22	18	22	18	16	18	15	13	11																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19151	19151	19151
5°	18789	16910	16384
10°	18542	15045	14153
15°	18270	13472	12380
20°	17852	12086	10829
25°	17294	10792	9436
30°	16747	9537	8190
35°	16005	8388	7030
40°	15314	7343	5959
45°	14514	6311	4973
50°	13666	5345	4079
55°	12769	4497	3290
60°	11914	3686	2629
65°	10861	2939	2082
70°	9845	2304	1644
75°	8608	1769	1296
80°	7192	1316	1009
85°	5247	956	767

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14514 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.0	1.6
10°-20°	317.7	4.5
20°-30°	469.0	6.7
30°-40°	539.2	7.7
40°-50°	523.0	7.4
50°-60°	437.9	6.2
60°-70°	315.5	4.5
70°-80°	192.7	2.7
80°-90°	95.3	1.4
90°-100°	128.0	1.8
100°-110°	661.2	9.4
110°-120°	884.1	12.6
120°-130°	717.7	10.2
130°-140°	575.9	8.2
140°-150°	453.8	6.5
150°-160°	331.8	4.7
160°-170°	206.1	2.9
170°-180°	70.3	1.0
0°-30°	898.6	12.8
0°-40°	1437.8	20.4
0°-60°	2398.7	34.1
0°-90°	3002.2	42.7
90°-120°	1673.2	23.8
90°-150°	3420.6	48.6
90°-180°	4029.0	57.3
0°-180°	7031.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1186	1186	1186	1186	1186	
5°	1168	1189	1178	1180	1188	111
15°	1117	1134	1124	1129	1138	314
25°	1008	1025	1022	1017	1024	465
35°	859	872	864	856	856	538
45°	689	695	684	663	653	531
55°	508	514	496	465	451	455
65°	335	337	320	296	288	333
75°	181	181	184	179	176	193
85°	55	67	92	99	99	58
90°	5	37	70	84	86	8
95°	54	84	72	89	100	56
105°	161	228	850	1090	730	170
115°	268	316	729	1511	1766	265
125°	374	421	685	1195	1414	332
135°	456	506	688	984	1130	351
145°	539	585	693	858	949	339
155°	632	655	707	777	814	290
165°	702	711	725	744	758	197
175°	739	744	739	735	730	70
180°	739	739	739	739	739	

TEST NUMBER: P644388

CATALOG NUMBER: CRQ4DIP-SR4F0-75D100U830-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1186.1	1186.1	1186.1	1186.1	1186.1
2.5°	1175.4	1192.4	1182.1	1184.8	1186.1
5°	1167.7	1189.0	1177.8	1179.6	1187.8
7.5°	1157.0	1176.6	1166.7	1168.9	1178.4
10°	1147.6	1167.3	1156.0	1159.5	1167.7
12.5°	1135.5	1153.9	1145.3	1148.8	1157.0
15°	1117.4	1133.8	1124.1	1129.4	1137.5
17.5°	1090.6	1108.3	1098.0	1100.9	1109.1
20°	1070.5	1086.9	1080.6	1080.8	1089.0
22.5°	1046.4	1064.1	1059.1	1055.3	1064.8
25°	1008.5	1024.9	1021.9	1017.1	1023.6
27.5°	971.0	983.1	977.4	972.5	977.4
30°	941.5	956.3	946.6	941.6	946.6
32.5°	909.4	924.1	914.4	908.1	910.4
35°	859.4	872.5	864.5	856.1	856.1
37.5°	812.2	820.7	815.2	801.1	797.5
40°	777.4	787.2	779.0	762.2	757.2
42.5°	741.2	751.0	741.5	723.2	715.7
45°	688.6	695.1	683.5	663.2	653.4
47.5°	634.3	641.2	625.2	602.8	591.1
50°	598.1	606.3	586.4	562.6	549.5
52.5°	563.2	568.8	550.2	522.4	510.6
55°	507.6	514.2	495.9	465.4	450.7
57.5°	455.7	461.9	440.3	411.2	399.7
60°	422.2	427.1	405.4	375.0	363.5
62.5°	384.7	389.6	369.2	342.8	331.4
65°	335.1	336.7	320.0	296.3	288.2
67.5°	288.5	288.5	274.4	256.8	250.3
70°	256.3	256.3	246.3	232.7	226.2
72.5°	226.8	225.5	219.5	210.0	204.7
75°	180.9	180.9	184.3	179.2	175.9
77.5°	140.7	138.1	152.5	151.7	150.1
80°	113.9	113.9	132.4	135.7	134.0
82.5°	89.8	92.4	116.3	120.9	119.3
85°	55.3	66.8	92.1	98.8	98.8
87.5°	25.1	46.0	74.2	83.9	84.2
90°	5.0	37.4	69.6	84.4	86.0
92.5°	21.5	40.8	70.0	88.6	95.2
95°	54.0	84.1	72.4	89.0	99.7
97.5°	86.1	142.4	298.9	115.9	106.9
100°	108.5	174.3	568.8	190.1	138.8
102.5°	129.4	198.9	756.9	449.4	258.6
105°	160.9	228.4	850.0	1090.3	729.9
107.5°	192.4	241.1	808.2	1574.2	1476.7
110°	213.3	259.7	784.5	1650.9	1775.3



TEST NUMBER: P644388

CATALOG NUMBER: CRQ4DIP-SR4F0-75D100U830-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	235.7	282.0	762.2	1601.8	1809.8
115°	267.5	315.5	728.7	1511.0	1765.6
117.5°	299.9	348.9	720.0	1411.5	1673.4
120°	324.6	371.3	703.8	1336.0	1608.8
122.5°	343.2	392.2	685.2	1272.3	1523.3
125°	374.0	420.8	685.2	1195.3	1413.5
127.5°	399.0	448.6	686.1	1106.0	1321.5
130°	412.5	467.1	689.8	1046.2	1250.8
132.5°	428.5	483.0	688.5	1019.3	1187.6
135°	455.7	505.7	688.2	984.4	1129.9
137.5°	478.9	532.6	688.2	945.8	1070.4
140°	497.5	547.5	688.2	923.2	1036.9
142.5°	516.1	562.5	691.9	897.0	1003.4
145°	539.4	584.8	692.8	857.6	948.6
147.5°	567.3	607.3	698.4	829.3	899.3
150°	585.9	622.3	702.1	810.4	869.5
152.5°	604.5	637.2	702.1	795.3	843.5
155°	632.4	655.1	706.8	777.3	813.7
157.5°	654.7	676.5	712.4	766.0	792.3
160°	669.6	687.8	716.1	758.4	781.2
162.5°	680.7	698.9	719.8	754.6	770.0
165°	702.1	711.2	725.4	744.3	757.9
167.5°	714.2	722.4	730.0	739.5	747.7
170°	725.4	729.9	730.0	739.4	744.0
172.5°	729.1	737.3	733.7	735.7	740.3
175°	739.3	743.9	739.3	734.6	730.0
177.5°	739.3	743.0	739.3	739.2	735.6
180°	739.3	739.3	739.3	739.3	739.3

(END OF REPORT)