

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: P644435

Luminaire Tested: CRQ4DIP-SR4F0-75D50U830-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644435
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-SR4F0-75D50U830-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: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

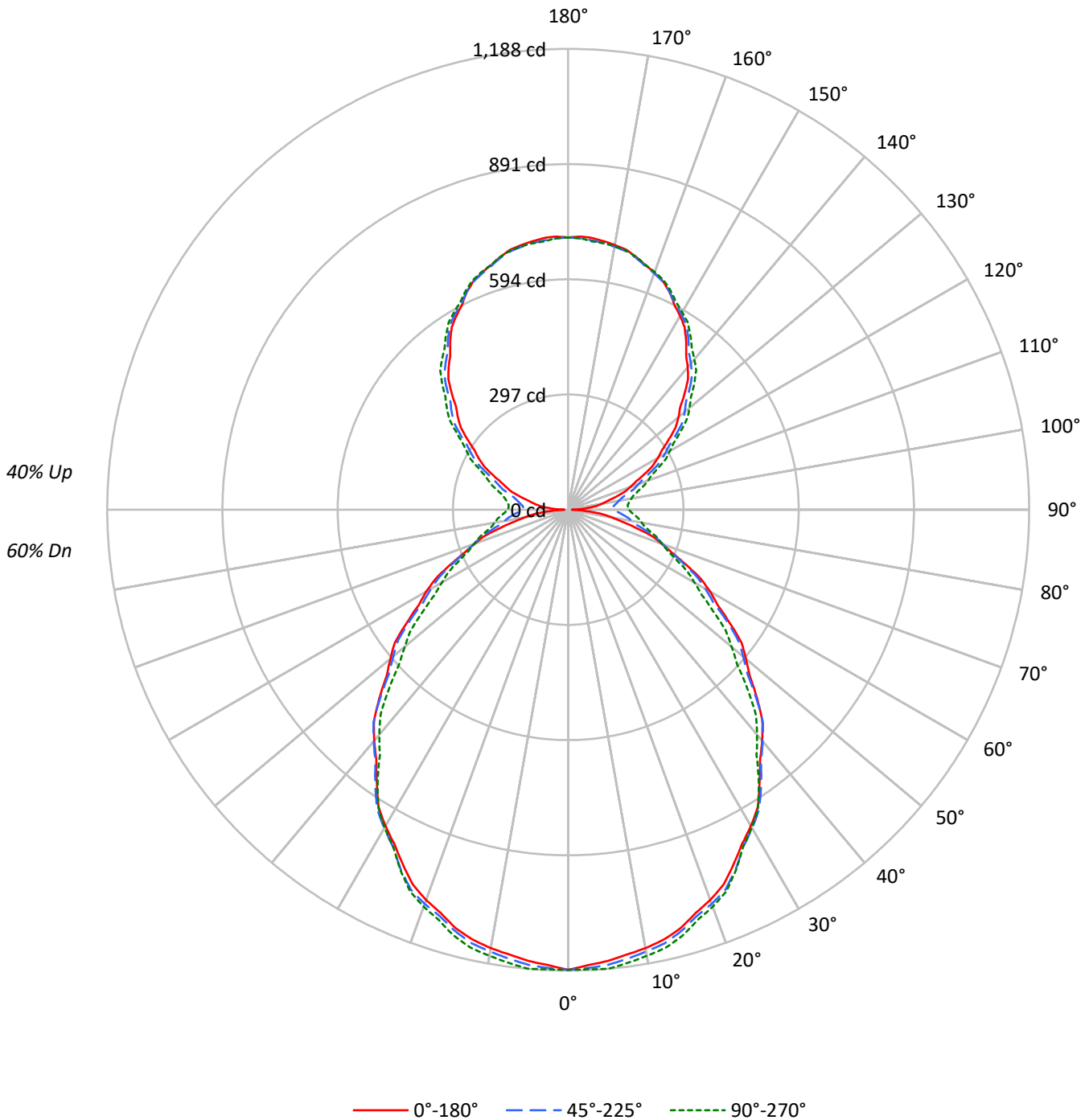
Lumens per Lamp: N/A
Luminaire Lumens: 5130.6 lumens
Efficiency: N/A
Efficacy: 141.0 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

Input Watts (W): 36.4
Input Voltage (V): 120
Input Current (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: P644435

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U830-FLLFLL-1DUDD-WW

Luminous Intensity Polar Plot





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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°	19151	19151	19151
5°	18789	16910	16384
10°	18542	15054	14153
15°	18270	13482	12380
20°	17852	12094	10829
25°	17294	10792	9436
30°	16747	9551	8190
35°	16005	8409	7030
40°	15314	7350	5959
45°	14514	6318	4973
50°	13666	5365	4079
55°	12769	4511	3328
60°	11914	3713	2716
65°	10861	3007	2232
70°	9845	2421	1872
75°	8608	1977	1621
80°	7192	1649	1447
85°	5247	1452	1346

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	2.2
10°-20°	317.8	6.2
20°-30°	469.2	9.1
30°-40°	539.8	10.5
40°-50°	523.8	10.2
50°-60°	440.4	8.6
60°-70°	325.4	6.3
70°-80°	216.5	4.2
80°-90°	139.2	2.7
90°-100°	120.6	2.4
100°-110°	166.2	3.2
110°-120°	236.1	4.6
120°-130°	303.0	5.9
130°-140°	341.6	6.7
140°-150°	337.4	6.6
150°-160°	285.4	5.6
160°-170°	190.0	3.7
170°-180°	66.4	1.3
0°-30°	899.0	17.5
0°-40°	1438.8	28.0
0°-60°	2402.9	46.8
0°-90°	3084.0	60.1
90°-120°	522.9	10.2
90°-150°	1504.8	29.3
90°-180°	2047.0	39.9
0°-180°	5130.6	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	1135	1125	1129	1138	314
25°	1008	1026	1022	1017	1024	465
35°	859	875	867	856	856	538
45°	689	697	684	663	653	531
55°	508	517	497	468	456	455
65°	335	341	327	314	309	333
75°	181	187	206	217	220	193
85°	55	84	140	167	173	59
90°	10	58	117	147	156	10
95°	50	64	118	148	154	49
105°	126	127	157	181	187	135
115°	217	222	239	253	257	215
125°	317	326	341	352	355	284
135°	425	434	443	454	459	328
145°	530	536	539	543	549	331
155°	618	622	619	620	624	284
165°	675	678	673	671	675	190
175°	703	706	697	694	694	67
180°	702	702	702	702	702	



TEST NUMBER: P644435

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U830-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1186.1	<i>1186.1</i>	1186.1	1186.1	1186.1
2.5°	<i>1175.4</i>	<i>1192.4</i>	<i>1182.7</i>	<i>1184.8</i>	<i>1186.1</i>
5°	1167.7	<i>1189.0</i>	1177.8	1179.6	1187.8
7.5°	1157.0	<i>1177.2</i>	1167.4	1168.9	1178.4
10°	1147.6	<i>1167.3</i>	1156.7	1159.5	1167.7
12.5°	1135.5	<i>1155.0</i>	1145.4	1148.8	1157.0
15°	1117.4	<i>1135.3</i>	1124.9	1129.4	1137.5
17.5°	1090.6	<i>1109.1</i>	1098.8	1100.9	1109.1
20°	1070.5	<i>1087.6</i>	1081.3	1080.8	1089.0
22.5°	1046.4	<i>1064.8</i>	1059.9	1055.3	1064.8
25°	1008.5	<i>1026.4</i>	1021.9	1017.1	1023.6
27.5°	971.0	<i>985.8</i>	978.3	972.5	977.4
30°	941.5	<i>957.7</i>	948.0	941.6	946.6
32.5°	909.4	<i>926.1</i>	915.9	908.1	910.4
35°	859.4	<i>874.7</i>	866.7	856.1	856.1
37.5°	812.2	<i>823.6</i>	816.0	801.1	797.5
40°	777.4	<i>790.1</i>	779.8	762.2	757.2
42.5°	741.2	<i>753.9</i>	742.8	723.2	715.7
45°	688.6	<i>697.3</i>	684.3	663.2	653.4
47.5°	634.3	<i>643.9</i>	626.3	602.8	591.1
50°	598.1	<i>608.5</i>	588.6	562.6	549.5
52.5°	563.2	<i>571.6</i>	551.8	523.0	511.8
55°	507.6	<i>517.1</i>	497.4	467.7	455.9
57.5°	455.7	<i>464.8</i>	442.7	417.9	408.1
60°	422.2	<i>430.0</i>	408.4	384.7	375.5
62.5°	384.7	<i>393.1</i>	373.4	355.6	347.5
65°	335.1	<i>341.1</i>	327.4	313.6	309.0
67.5°	288.5	<i>292.9</i>	284.7	279.4	277.4
70°	256.3	<i>260.7</i>	258.9	258.9	257.5
72.5°	226.8	<i>230.5</i>	236.3	240.9	240.8
75°	180.9	<i>186.8</i>	205.9	217.3	219.9
77.5°	140.7	<i>146.0</i>	180.6	197.9	202.3
80°	113.9	<i>124.1</i>	165.9	187.2	192.1
82.5°	89.8	<i>104.9</i>	154.6	179.0	184.0
85°	55.3	<i>84.2</i>	139.8	166.8	173.3
87.5°	26.2	<i>67.6</i>	126.6	155.6	163.2
90°	10.2	<i>57.8</i>	116.9	147.3	156.2
92.5°	25.7	<i>57.8</i>	115.7	145.5	153.4
95°	50.3	<i>63.9</i>	117.9	148.4	154.4
97.5°	73.0	<i>77.0</i>	125.4	153.2	159.2
100°	87.9	<i>88.8</i>	132.6	159.0	165.2
102.5°	103.3	<i>102.4</i>	141.5	166.8	172.8
105°	126.3	<i>126.6</i>	156.6	181.3	186.8
107.5°	152.0	<i>153.0</i>	177.4	199.8	204.5
110°	169.1	<i>172.6</i>	193.3	213.2	218.5

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CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U830-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	188.8	192.2	210.6	227.8	233.1
115°	216.6	221.7	238.8	253.0	256.7
117.5°	245.6	252.4	267.7	280.1	283.6
120°	266.9	273.8	287.8	299.6	302.5
122.5°	286.6	293.9	308.6	320.4	323.3
125°	317.4	326.5	340.7	351.7	354.6
127.5°	348.9	358.8	371.8	383.0	386.8
130°	371.4	380.9	392.1	403.9	408.3
132.5°	391.4	400.8	411.6	424.2	429.1
135°	424.7	434.1	442.6	453.8	458.9
137.5°	457.0	466.2	472.7	481.6	488.0
140°	479.1	487.1	491.7	500.1	505.9
142.5°	499.3	507.3	510.8	517.9	523.8
145°	529.7	536.3	539.4	543.3	549.1
147.5°	558.2	564.6	565.9	569.3	572.9
150°	576.7	582.5	582.6	584.2	587.8
152.5°	593.9	599.2	597.5	598.5	602.7
155°	618.4	622.0	619.1	620.0	623.6
157.5°	637.8	641.4	636.9	638.3	641.2
160°	649.7	653.3	648.2	649.0	651.9
162.5°	661.0	663.5	658.9	658.0	662.0
165°	675.0	677.9	672.8	670.6	675.0
167.5°	686.9	689.8	683.0	680.8	685.1
170°	692.9	695.8	688.4	685.5	689.9
172.5°	698.2	701.2	693.2	689.7	692.9
175°	703.3	706.2	697.4	694.4	694.4
177.5°	704.8	706.6	700.0	697.1	700.6
180°	701.8	701.8	701.8	701.8	701.8

(END OF REPORT)