

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: P644392

Luminaire Tested: CRQ4DIP-SR4F0-75D100U840-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644392
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-SR4F0-75D100U840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

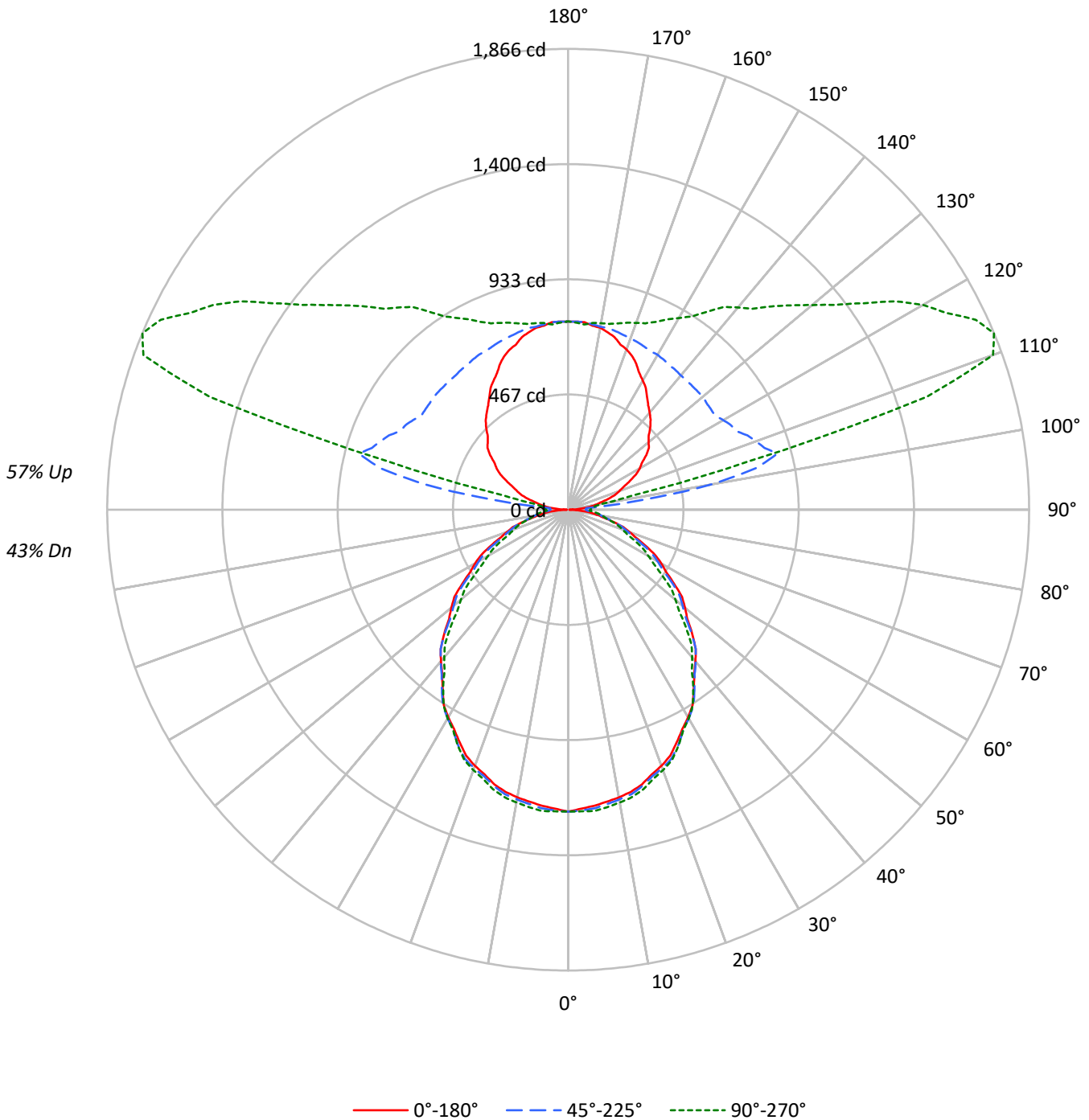
Lumens per Lamp: N/A
Luminaire Lumens: 7247.2 lumens
Efficiency: N/A
Efficacy: 142.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

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

TEST NUMBER: P644392

CATALOG NUMBER: CRQ4DIP-SR4F0-75D100U840-FLLOOB-1DUDD-WW

Luminous Intensity Polar Plot





TEST NUMBER: P644392

CATALOG NUMBER: CRQ4DIP-SR4F0-75D100U840-FLLOOB-1DUDD-WW

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	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°	19740	19740	19740
5°	19366	17430	16888
10°	19113	15507	14588
15°	18832	13887	12761
20°	18401	12458	11161
25°	17828	11124	9726
30°	17263	9830	8442
35°	16499	8645	7246
40°	15783	7569	6142
45°	14959	6504	5126
50°	14087	5509	4205
55°	13161	4635	3391
60°	12281	3800	2710
65°	11195	3029	2145
70°	10149	2374	1694
75°	8874	1824	1336
80°	7413	1356	1040
85°	5408	987	791

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14959 cd/sqm



TEST NUMBER: P644392

CATALOG NUMBER: CRQ4DIP-SR4F0-75D100U840-FLLOOB-1DUDD-WW

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.4	1.6
10°-20°	327.5	4.5
20°-30°	483.4	6.7
30°-40°	555.8	7.7
40°-50°	539.1	7.4
50°-60°	451.3	6.2
60°-70°	325.2	4.5
70°-80°	198.7	2.7
80°-90°	98.2	1.4
90°-100°	131.9	1.8
100°-110°	681.5	9.4
110°-120°	911.2	12.6
120°-130°	739.7	10.2
130°-140°	593.6	8.2
140°-150°	467.8	6.5
150°-160°	342.0	4.7
160°-170°	212.4	2.9
170°-180°	72.4	1.0
0°-30°	926.3	12.8
0°-40°	1482.0	20.4
0°-60°	2472.5	34.1
0°-90°	3094.5	42.7
90°-120°	1724.6	23.8
90°-150°	3525.7	48.6
90°-180°	4153.0	57.3
0°-180°	7247.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1223	1223	1223	1223	1223	
5°	1204	1226	1214	1216	1224	114
15°	1152	1169	1159	1164	1172	324
25°	1040	1056	1053	1048	1055	479
35°	886	899	891	882	882	555
45°	710	716	704	684	674	547
55°	523	530	511	480	464	469
65°	345	347	330	306	297	344
75°	186	186	190	185	181	199
85°	57	69	95	102	102	60
90°	5	39	72	87	89	8
95°	56	87	75	92	103	57
105°	166	235	876	1124	752	175
115°	276	325	751	1558	1820	273
125°	386	434	706	1232	1457	342
135°	470	521	709	1015	1165	362
145°	556	603	714	884	978	349
155°	652	675	728	801	839	299
165°	724	733	748	767	781	203
175°	762	767	762	757	752	72
180°	762	762	762	762	762	



TEST NUMBER: P644392

CATALOG NUMBER: CRQ4DIP-SR4F0-75D100U840-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1222.6	1222.6	1222.6	1222.6	1222.6
2.5°	1211.5	1229.1	1218.5	1221.2	1222.6
5°	1203.6	1225.5	1214.0	1215.9	1224.3
7.5°	1192.5	1212.8	1202.6	1204.9	1214.7
10°	1182.9	1203.1	1191.5	1195.2	1203.6
12.5°	1170.4	1189.4	1180.5	1184.1	1192.5
15°	1151.8	1168.7	1158.7	1164.1	1172.5
17.5°	1124.2	1142.4	1131.8	1134.7	1143.2
20°	1103.4	1120.3	1113.8	1114.0	1122.4
22.5°	1078.6	1096.8	1091.7	1087.8	1097.6
25°	1039.6	1056.4	1053.4	1048.3	1055.1
27.5°	1000.9	1013.4	1007.4	1002.4	1007.4
30°	970.5	985.7	975.7	970.6	975.7
32.5°	937.3	952.5	942.5	936.0	938.4
35°	885.9	899.4	891.0	882.4	882.4
37.5°	837.2	845.9	840.3	825.7	822.0
40°	801.2	811.4	803.0	785.6	780.5
42.5°	763.9	774.1	764.3	745.5	737.7
45°	709.7	716.5	704.5	683.6	673.5
47.5°	653.8	660.9	644.5	621.4	609.2
50°	616.5	624.9	604.4	579.9	566.4
52.5°	580.6	586.3	567.1	538.5	526.3
55°	523.2	530.0	511.1	479.7	464.5
57.5°	469.7	476.1	453.8	423.8	412.0
60°	435.2	440.2	417.9	386.5	374.7
62.5°	396.5	401.5	380.6	353.4	341.6
65°	345.4	347.1	329.8	305.5	297.0
67.5°	297.4	297.4	282.9	264.7	258.0
70°	264.2	264.2	253.8	239.9	233.1
72.5°	233.8	232.5	226.2	216.4	211.0
75°	186.5	186.5	190.0	184.7	181.3
77.5°	145.1	142.4	157.1	156.4	154.7
80°	117.4	117.4	136.4	139.8	138.1
82.5°	92.6	95.3	119.8	124.6	123.0
85°	57.0	68.8	95.0	101.9	101.9
87.5°	25.9	47.4	76.5	86.5	86.8
90°	5.2	38.6	71.8	86.9	88.6
92.5°	22.2	42.1	72.2	91.3	98.1
95°	55.6	86.7	74.6	91.7	102.8
97.5°	88.8	146.7	308.1	119.4	110.2
100°	111.8	179.6	586.3	195.9	143.0
102.5°	133.4	205.0	780.1	463.2	266.5
105°	165.8	235.4	876.1	1123.8	752.3
107.5°	198.3	248.5	833.0	1622.6	1522.1
110°	219.9	267.7	808.6	1701.7	1829.9



TEST NUMBER: P644392

CATALOG NUMBER: CRQ4DIP-SR4F0-75D100U840-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	242.9	290.7	785.6	1651.0	1865.5
115°	275.7	325.2	751.1	1557.5	1819.9
117.5°	309.1	359.7	742.2	1454.9	1724.9
120°	334.5	382.7	725.4	1377.1	1658.3
122.5°	353.7	404.3	706.3	1311.4	1570.1
125°	385.5	433.7	706.3	1232.1	1457.0
127.5°	411.3	462.4	707.2	1140.0	1362.1
130°	425.2	481.5	711.1	1078.4	1289.3
132.5°	441.6	497.9	709.7	1050.7	1224.1
135°	469.7	521.2	709.3	1014.7	1164.6
137.5°	493.7	549.0	709.3	974.9	1103.3
140°	512.8	564.4	709.3	951.6	1068.8
142.5°	532.0	579.8	713.2	924.6	1034.3
145°	556.0	602.8	714.1	884.0	977.7
147.5°	584.7	626.0	719.9	854.8	926.9
150°	603.9	641.4	723.7	835.3	896.2
152.5°	623.1	656.8	723.7	819.7	869.4
155°	651.8	675.2	728.5	801.2	838.7
157.5°	674.8	697.3	734.3	789.5	816.7
160°	690.2	708.9	738.1	781.8	805.2
162.5°	701.7	720.4	741.9	777.7	793.7
165°	723.7	733.1	747.7	767.2	781.2
167.5°	736.2	744.6	752.5	762.2	770.7
170°	747.7	752.4	752.5	762.2	766.8
172.5°	751.5	759.9	756.3	758.3	763.0
175°	762.1	766.7	762.1	757.2	752.5
177.5°	762.1	765.8	762.1	762.0	758.2
180°	762.1	762.1	762.1	762.1	762.1

(END OF REPORT)