

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: P644439

Luminaire Tested: CRQ4DIP-SR4F0-75D50U840-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644439
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-SR4F0-75D50U840-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: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

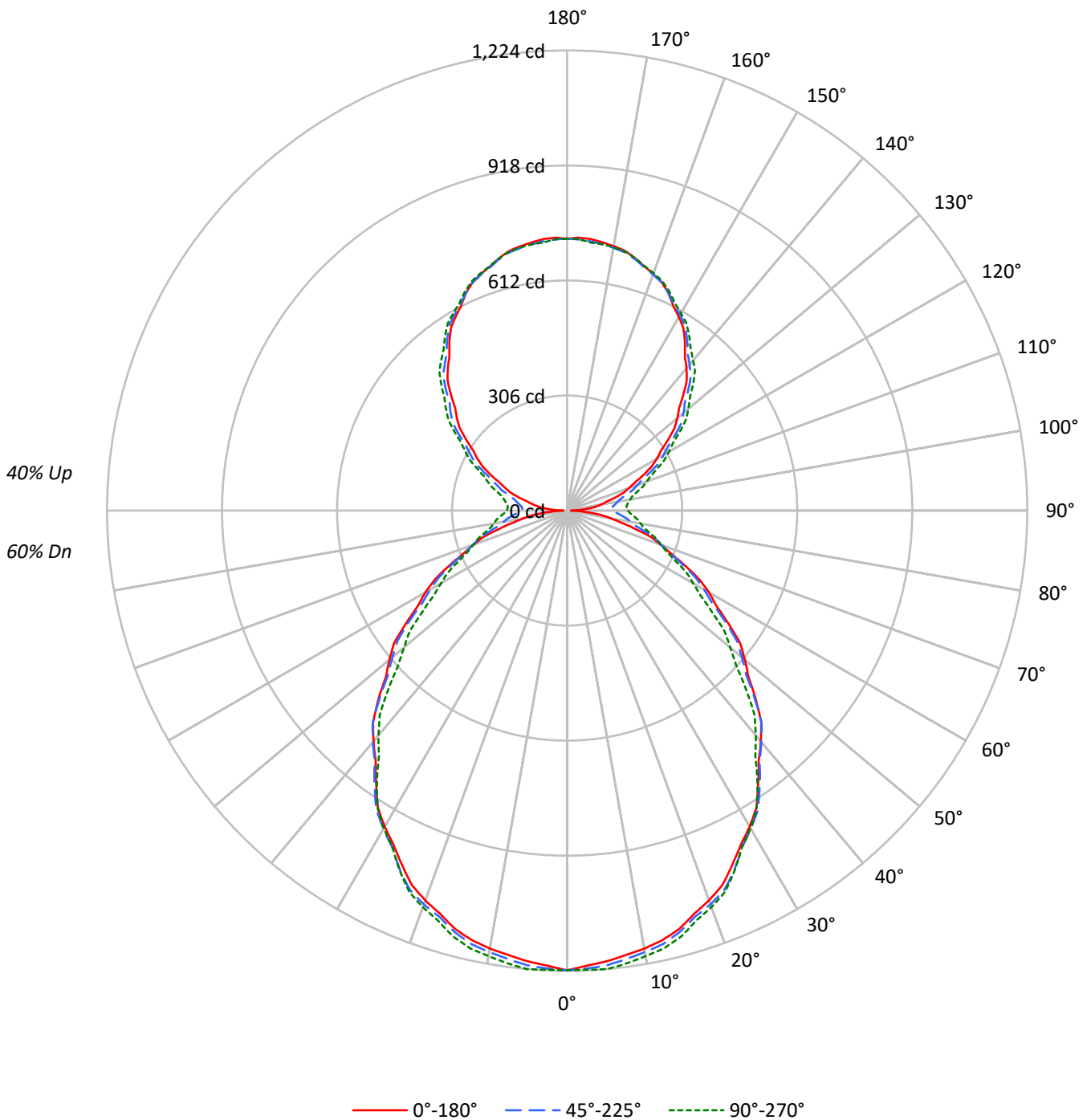
Lumens per Lamp: N/A
Luminaire Lumens: 5288.4 lumens
Efficiency: N/A
Efficacy: 145.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Direct

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: P644439

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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°	19740	19740	19740
5°	19366	17430	16888
10°	19113	15517	14588
15°	18832	13896	12761
20°	18401	12467	11161
25°	17828	11124	9726
30°	17263	9845	8442
35°	16499	8667	7246
40°	15783	7575	6142
45°	14959	6512	5126
50°	14087	5530	4205
55°	13161	4650	3430
60°	12281	3828	2799
65°	11195	3100	2301
70°	10149	2496	1929
75°	8874	2037	1670
80°	7413	1700	1492
85°	5408	1497	1387

MAXIMUM LUMINANCE 45°-90°:

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



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	115.4	2.2
10°-20°	327.6	6.2
20°-30°	483.7	9.1
30°-40°	556.4	10.5
40°-50°	539.9	10.2
50°-60°	453.9	8.6
60°-70°	335.4	6.3
70°-80°	223.2	4.2
80°-90°	143.5	2.7
90°-100°	124.3	2.4
100°-110°	171.3	3.2
110°-120°	243.4	4.6
120°-130°	312.3	5.9
130°-140°	352.1	6.7
140°-150°	347.7	6.6
150°-160°	294.1	5.6
160°-170°	195.8	3.7
170°-180°	68.5	1.3
0°-30°	926.7	17.5
0°-40°	1483.0	28.0
0°-60°	2476.8	46.8
0°-90°	3178.9	60.1
90°-120°	539.0	10.2
90°-150°	1551.1	29.3
90°-180°	2110.0	39.9
0°-180°	5288.4	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	1170	1160	1164	1172	324
25°	1040	1058	1053	1048	1055	479
35°	886	902	893	882	882	555
45°	710	719	705	684	674	547
55°	523	533	513	482	470	469
65°	345	352	338	323	318	344
75°	186	192	212	224	227	199
85°	57	87	144	172	179	60
90°	11	60	120	152	161	10
95°	52	66	122	153	159	50
105°	130	130	162	187	192	139
115°	223	228	246	261	265	222
125°	327	336	351	362	366	293
135°	438	448	456	468	473	338
145°	546	553	556	560	566	341
155°	637	641	638	639	643	293
165°	696	699	694	691	696	196
175°	725	728	719	716	716	69
180°	723	723	723	723	723	



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CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U840-FLLFLL-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	1219.1	1221.2	1222.6
5°	1203.6	1225.5	1214.0	1215.9	1224.3
7.5°	1192.5	1213.4	1203.3	1204.9	1214.7
10°	1182.9	1203.1	1192.3	1195.2	1203.6
12.5°	1170.4	1190.6	1180.6	1184.1	1192.5
15°	1151.8	1170.2	1159.5	1164.1	1172.5
17.5°	1124.2	1143.2	1132.5	1134.7	1143.2
20°	1103.4	1121.1	1114.6	1114.0	1122.4
22.5°	1078.6	1097.6	1092.5	1087.8	1097.6
25°	1039.6	1057.9	1053.4	1048.3	1055.1
27.5°	1000.9	1016.1	1008.4	1002.4	1007.4
30°	970.5	987.2	977.2	970.6	975.7
32.5°	937.3	954.6	944.0	936.0	938.4
35°	885.9	901.6	893.3	882.4	882.4
37.5°	837.2	849.0	841.0	825.7	822.0
40°	801.2	814.4	803.7	785.6	780.5
42.5°	763.9	777.1	765.7	745.5	737.7
45°	709.7	718.7	705.3	683.6	673.5
47.5°	653.8	663.7	645.5	621.4	609.2
50°	616.5	627.2	606.7	579.9	566.4
52.5°	580.6	589.2	568.8	539.1	527.6
55°	523.2	533.0	512.7	482.1	469.9
57.5°	469.7	479.1	456.3	430.8	420.6
60°	435.2	443.2	421.0	396.6	387.0
62.5°	396.5	405.1	384.9	366.5	358.2
65°	345.4	351.6	337.5	323.2	318.5
67.5°	297.4	301.9	293.5	288.0	285.9
70°	264.2	268.7	266.9	266.9	265.4
72.5°	233.8	237.6	243.6	248.3	248.2
75°	186.5	192.5	212.2	224.0	226.6
77.5°	145.1	150.5	186.2	204.0	208.5
80°	117.4	127.9	171.0	193.0	198.0
82.5°	92.6	108.2	159.3	184.5	189.6
85°	57.0	86.8	144.1	171.9	178.7
87.5°	27.0	69.7	130.5	160.4	168.2
90°	10.6	59.5	120.5	151.8	161.0
92.5°	26.5	59.6	119.3	150.0	158.1
95°	51.8	65.9	121.5	152.9	159.1
97.5°	75.2	79.3	129.3	157.9	164.1
100°	90.6	91.6	136.7	163.9	170.3
102.5°	106.4	105.6	145.9	171.9	178.1
105°	130.2	130.5	161.5	186.9	192.5
107.5°	156.7	157.7	182.8	205.9	210.8
110°	174.3	177.9	199.3	219.8	225.2

TEST NUMBER: P644439

CATALOG NUMBER: CRQ4DIP-SR4F0-75D50U840-FLLFLL-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	194.6	198.2	217.1	234.8	240.2
115°	223.3	228.5	246.1	260.8	264.6
117.5°	253.1	260.1	275.9	288.7	292.3
120°	275.1	282.2	296.6	308.8	311.8
122.5°	295.4	303.0	318.1	330.3	333.3
125°	327.1	336.5	351.1	362.5	365.5
127.5°	359.6	369.8	383.2	394.8	398.7
130°	382.8	392.6	404.1	416.3	420.8
132.5°	403.4	413.2	424.2	437.2	442.3
135°	437.7	447.5	456.2	467.8	473.1
137.5°	471.1	480.5	487.2	496.4	503.0
140°	493.8	502.0	506.8	515.4	521.4
142.5°	514.7	522.9	526.5	533.9	539.9
145°	546.0	552.8	556.0	560.0	566.0
147.5°	575.3	581.9	583.3	586.8	590.5
150°	594.4	600.4	600.5	602.2	605.9
152.5°	612.2	617.6	615.9	616.9	621.3
155°	637.4	641.1	638.2	639.0	642.8
157.5°	657.4	661.1	656.4	657.9	660.9
160°	669.6	673.4	668.1	668.9	671.9
162.5°	681.3	683.9	679.2	678.2	682.4
165°	695.8	698.8	693.5	691.2	695.8
167.5°	708.0	711.0	704.0	701.7	706.2
170°	714.2	717.2	709.6	706.6	711.1
172.5°	719.7	722.7	714.5	710.9	714.2
175°	724.9	727.9	718.8	715.7	715.7
177.5°	726.5	728.3	721.6	718.6	722.2
180°	723.4	723.4	723.4	723.4	723.4

(END OF REPORT)