

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: P644452

Luminaire Tested: CRQ4DIP-SR4F0-75D75U840-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

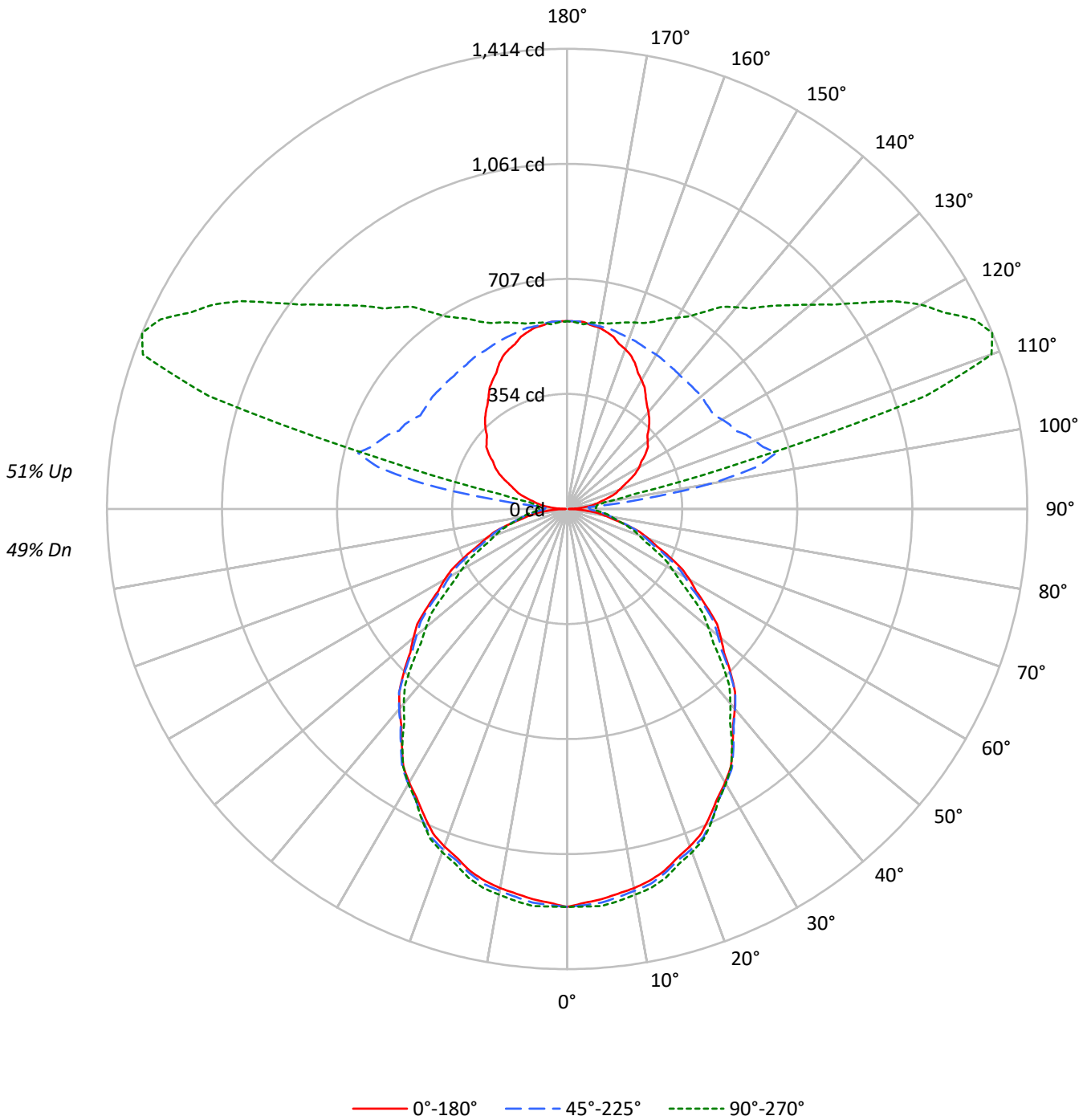
Test Method: LM-79-2019  
Report Number: P644452  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/20/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: CRQ4DIP-SR4F0-75D75U840-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 750 LUMENS PER FOOT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6252.6 lumens  
Efficiency: N/A  
Efficacy: 146.8 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): 42.6  
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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	49						49														
1	97	93	89	86	90	86	83	79	73	70	68	60	58	57	49	48	47	41						41														
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	39	35						35														
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	34	29						29														
4	74	63	55	49	68	59	52	46	50	45	40	42	38	35	34	31	29	25						25														
5	68	57	48	42	63	52	45	40	45	39	35	38	33	30	31	28	25	22						22														
6	63	51	43	37	58	47	40	35	40	35	31	34	30	26	28	25	22	19						19														
7	58	46	38	32	53	43	36	31	37	31	27	31	27	23	26	22	20	17						17														
8	54	42	34	29	50	39	32	27	33	28	24	28	24	21	24	20	18	16						16														
9	50	38	31	26	46	36	29	24	31	25	21	26	22	19	22	19	16	14						14														
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	15	13						13														

**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



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	115.4	1.8
10°-20°	327.5	5.2
20°-30°	483.4	7.7
30°-40°	555.8	8.9
40°-50°	539.1	8.6
50°-60°	451.3	7.2
60°-70°	325.2	5.2
70°-80°	198.7	3.2
80°-90°	97.8	1.6
90°-100°	109.1	1.7
100°-110°	519.3	8.3
110°-120°	691.1	11.1
120°-130°	560.6	9.0
130°-140°	449.5	7.2
140°-150°	354.2	5.7
150°-160°	259.0	4.1
160°-170°	160.9	2.6
170°-180°	54.9	0.9
0°-30°	926.3	14.8
0°-40°	1482.0	23.7
0°-60°	2472.5	39.5
0°-90°	3094.1	49.5
90°-120°	1319.6	21.1
90°-150°	2683.8	42.9
90°-180°	3159.0	50.5
0°-180°	6252.6	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	37	69	84	85	8
95°	46	69	65	81	90	47
105°	130	180	665	855	574	137
115°	212	248	570	1180	1379	210
125°	294	329	535	933	1103	261
135°	356	395	537	768	882	274
145°	421	456	541	669	740	264
155°	494	511	552	607	635	227
165°	548	555	566	581	592	154
175°	577	580	577	573	570	55
180°	577	577	577	577	577	



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**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	47.2	76.1	85.8	86.1
90°	5.2	37.4	69.4	83.5	85.1
92.5°	19.4	38.2	67.1	84.1	90.0
95°	46.3	69.4	65.3	81.2	90.0
97.5°	72.3	113.6	239.6	99.3	92.8
100°	89.7	138.2	448.9	155.5	116.3
102.5°	105.7	157.0	594.4	356.5	208.1
105°	129.8	179.9	665.4	854.7	574.2
107.5°	153.8	189.4	631.9	1230.9	1155.2
110°	169.9	204.0	613.1	1290.1	1387.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	187.3	221.4	595.7	1251.1	1413.8
115°	211.7	247.5	569.5	1180.1	1378.8
117.5°	236.5	273.6	562.7	1101.9	1306.3
120°	255.4	291.0	549.7	1042.7	1255.6
122.5°	269.9	307.0	535.2	992.9	1188.8
125°	293.6	329.2	535.2	932.8	1103.2
127.5°	312.6	350.9	535.9	863.1	1031.3
130°	322.8	365.4	538.8	816.5	976.2
132.5°	334.5	377.1	537.4	795.5	926.8
135°	355.6	394.7	537.1	768.3	881.8
137.5°	373.8	415.6	537.1	738.1	835.4
140°	388.3	427.3	537.1	720.5	809.2
142.5°	402.8	439.0	540.0	700.1	783.1
145°	420.9	456.4	540.7	669.3	740.3
147.5°	442.7	473.9	545.0	647.2	701.8
150°	457.2	485.6	548.0	632.5	678.6
152.5°	471.7	497.3	548.0	620.7	658.3
155°	493.5	511.3	551.6	606.7	635.0
157.5°	510.9	528.0	555.9	597.8	618.3
160°	522.5	536.7	558.8	591.9	609.6
162.5°	531.3	545.5	561.7	588.9	600.9
165°	548.0	555.0	566.1	580.9	591.5
167.5°	557.4	563.8	569.7	577.1	583.5
170°	566.1	569.6	569.7	577.1	580.6
172.5°	569.0	575.4	572.6	574.2	577.7
175°	577.0	580.5	577.0	573.3	569.7
177.5°	577.0	579.8	577.0	576.9	574.1
180°	577.0	577.0	577.0	577.0	577.0

(END OF REPORT)