

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: P644455

Luminaire Tested: CRQ4DIP-SR4F0-75D75U935-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644455  
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-SR4F0-75D75U935-FLLFLL-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT  
UPLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT  
Light Source: 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

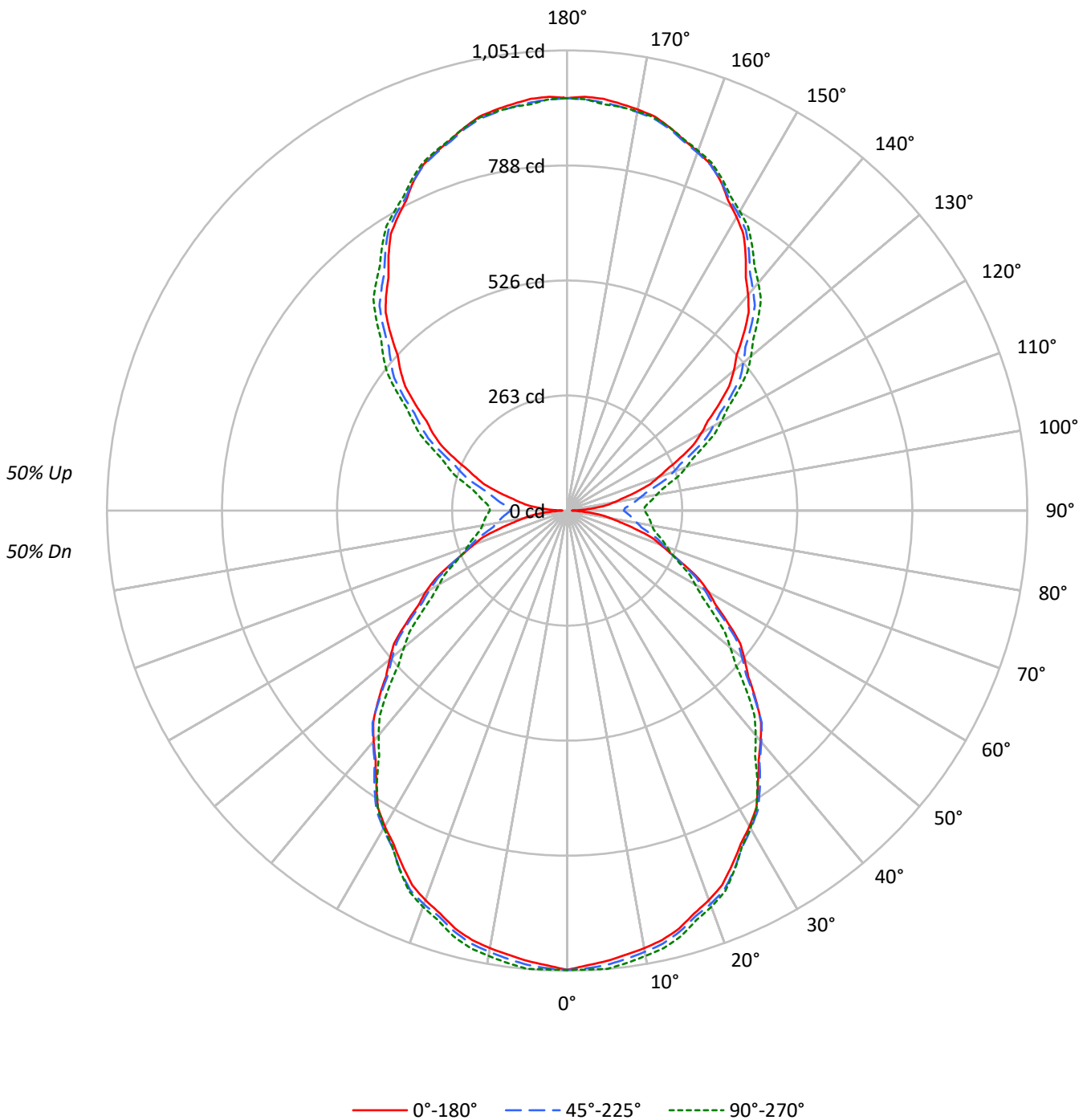
Lumens per Lamp: N/A  
Luminaire Lumens: 5486.7 lumens  
Efficiency: N/A  
Efficacy: 128.8 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: General Diffuse

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	84	84	84	69	69	69	57	57	57	50																				
1	97	93	88	85	89	86	82	79	72	70	67	60	58	56	49	48	46	41																				
2	88	81	74	69	81	75	69	64	63	59	55	53	50	47	43	41	39	34																				
3	81	71	63	57	74	66	59	54	56	51	47	47	43	40	38	35	33	29																				
4	74	63	55	49	68	58	51	46	50	44	40	42	37	34	34	31	29	25																				
5	68	56	48	42	62	52	45	39	44	39	34	37	33	30	31	28	25	22																				
6	62	50	42	36	57	47	39	34	40	34	30	34	29	26	28	25	22	19																				
7	58	45	37	32	53	42	35	30	36	31	26	31	26	23	26	22	20	17																				
8	54	41	33	28	49	38	31	27	33	28	24	28	24	21	23	20	18	15																				
9	50	38	30	25	46	35	28	24	30	25	21	26	22	18	22	18	16	14																				
10	47	35	27	22	43	32	26	21	28	23	19	24	20	17	20	17	14	12																				

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	16939	16939	16939
5°	16618	14956	14492
10°	16400	13319	12518
15°	16159	11928	10950
20°	15789	10701	9577
25°	15297	9546	8345
30°	14812	8455	7244
35°	14156	7448	6218
40°	13543	6504	5270
45°	12836	5591	4399
50°	12087	4755	3608
55°	11295	3996	2961
60°	10537	3297	2441
65°	9604	2691	2043
70°	8708	2196	1759
75°	7613	1843	1582
80°	6364	1611	1480
85°	4640	1511	1455

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 12836 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.1	1.8
10°-20°	281.1	5.1
20°-30°	415.1	7.6
30°-40°	477.7	8.7
40°-50°	463.6	8.4
50°-60°	390.6	7.1
60°-70°	292.3	5.3
70°-80°	202.4	3.7
80°-90°	144.0	2.6
90°-100°	144.9	2.6
100°-110°	217.0	4.0
110°-120°	314.8	5.7
120°-130°	405.8	7.4
130°-140°	458.4	8.4
140°-150°	452.8	8.3
150°-160°	383.0	7.0
160°-170°	255.0	4.6
170°-180°	89.2	1.6
0°-30°	795.3	14.5
0°-40°	1273.0	23.2
0°-60°	2127.2	38.8
0°-90°	2765.9	50.4
90°-120°	676.6	12.3
90°-150°	1993.6	36.3
90°-180°	2721.0	49.6
0°-180°	5486.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1049	1049	1049	1049	1049	
5°	1033	1052	1042	1043	1051	98
15°	988	1005	995	999	1006	278
25°	892	908	904	900	905	411
35°	760	775	768	757	757	476
45°	609	618	606	587	578	469
55°	449	459	441	415	406	403
65°	296	304	293	285	283	295
75°	160	168	192	210	215	171
85°	49	82	146	179	187	52
90°	11	62	129	166	177	10
95°	60	79	142	178	185	59
105°	162	167	206	236	242	172
115°	285	295	319	338	343	283
125°	423	437	456	472	476	379
135°	570	583	594	609	616	439
145°	711	720	724	729	737	444
155°	830	835	831	832	837	381
165°	906	910	903	900	906	255
175°	944	948	936	932	932	90
180°	942	942	942	942	942	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1049.1	1049.1	1049.1	1049.1	1049.1
2.5°	1039.6	1054.7	1046.3	1047.9	1049.1
5°	1032.8	1051.6	1041.7	1043.3	1050.6
7.5°	1023.3	1041.5	1032.9	1033.9	1042.3
10°	1015.0	1032.4	1023.4	1025.5	1032.8
12.5°	1004.3	1022.1	1013.1	1016.0	1023.3
15°	988.3	1004.8	995.3	998.9	1006.1
17.5°	964.6	981.2	972.1	973.7	980.9
20°	946.8	962.3	956.7	955.9	963.1
22.5°	925.5	942.1	937.8	933.4	941.8
25°	892.0	908.5	903.9	899.6	905.3
27.5°	858.8	873.1	865.7	860.1	864.5
30°	832.7	847.7	839.2	832.8	837.2
32.5°	804.3	820.1	810.7	803.2	805.2
35°	760.1	774.7	767.6	757.2	757.2
37.5°	718.4	729.8	722.0	708.5	705.3
40°	687.5	700.1	690.0	674.1	669.7
42.5°	655.5	668.1	657.6	639.7	633.0
45°	609.0	617.7	605.6	586.6	577.9
47.5°	561.0	570.8	554.4	533.2	522.8
50°	529.0	539.2	521.6	497.6	486.0
52.5°	498.2	506.8	488.8	462.9	453.2
55°	449.0	458.7	440.6	414.7	405.6
57.5°	403.0	412.5	392.6	372.7	364.7
60°	373.4	381.7	362.6	344.7	337.5
62.5°	340.2	349.2	332.2	320.3	314.7
65°	296.3	303.7	293.0	285.2	282.9
67.5°	255.2	261.0	256.5	257.5	257.8
70°	226.7	232.6	234.8	241.0	242.0
72.5°	200.6	206.1	216.7	227.3	229.5
75°	160.0	167.9	192.0	209.7	214.6
77.5°	124.5	132.7	172.6	196.2	202.8
80°	100.8	114.4	162.1	189.2	196.5
82.5°	79.4	98.6	154.2	184.9	192.3
85°	48.9	82.5	145.5	178.6	187.4
87.5°	23.6	70.0	136.8	171.7	181.8
90°	11.4	62.5	129.3	165.5	176.7
92.5°	29.8	66.1	132.7	168.0	177.2
95°	59.8	78.9	142.1	177.7	185.0
97.5°	88.8	98.8	156.7	189.5	196.7
100°	108.8	115.3	168.8	200.3	207.2
102.5°	130.0	134.1	183.2	213.2	220.4
105°	161.8	166.8	206.4	236.5	242.3
107.5°	197.2	202.9	235.9	263.8	269.4
110°	220.9	229.3	258.0	283.1	289.4



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	247.3	255.7	281.2	303.9	310.2
115°	285.4	295.2	319.0	338.1	343.0
117.5°	325.2	336.4	357.9	375.3	380.0
120°	354.4	365.2	385.5	402.1	406.0
122.5°	380.8	392.8	413.5	430.1	434.0
125°	422.9	436.7	456.5	472.1	476.0
127.5°	466.1	480.0	498.3	514.1	519.2
130°	497.0	509.7	525.5	542.1	548.0
132.5°	525.0	537.7	552.3	569.4	576.0
135°	570.0	582.7	594.0	609.2	616.0
137.5°	613.4	625.7	634.4	646.4	655.0
140°	643.0	653.8	660.0	671.2	679.0
142.5°	670.2	681.0	685.6	695.2	703.0
145°	711.0	719.8	724.0	729.2	737.0
147.5°	749.2	757.8	759.6	764.1	769.0
150°	774.0	781.8	782.0	784.1	789.0
152.5°	797.2	804.2	802.0	803.3	809.0
155°	830.0	834.9	831.0	832.1	837.0
157.5°	856.0	860.9	854.8	856.7	860.6
160°	872.0	876.9	870.0	871.1	875.0
162.5°	887.2	890.5	884.4	883.1	888.6
165°	906.0	909.9	903.0	900.1	906.0
167.5°	922.0	925.9	916.8	913.7	919.6
170°	930.0	933.9	924.0	920.1	926.0
172.5°	937.2	941.1	930.4	925.7	930.0
175°	944.0	947.9	936.0	932.0	932.0
177.5°	946.0	948.3	939.6	935.7	940.4
180°	942.0	942.0	942.0	942.0	942.0

(END OF REPORT)