

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: P644291

Luminaire Tested: CRQ4DIP-SR4F0-125D50U830-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

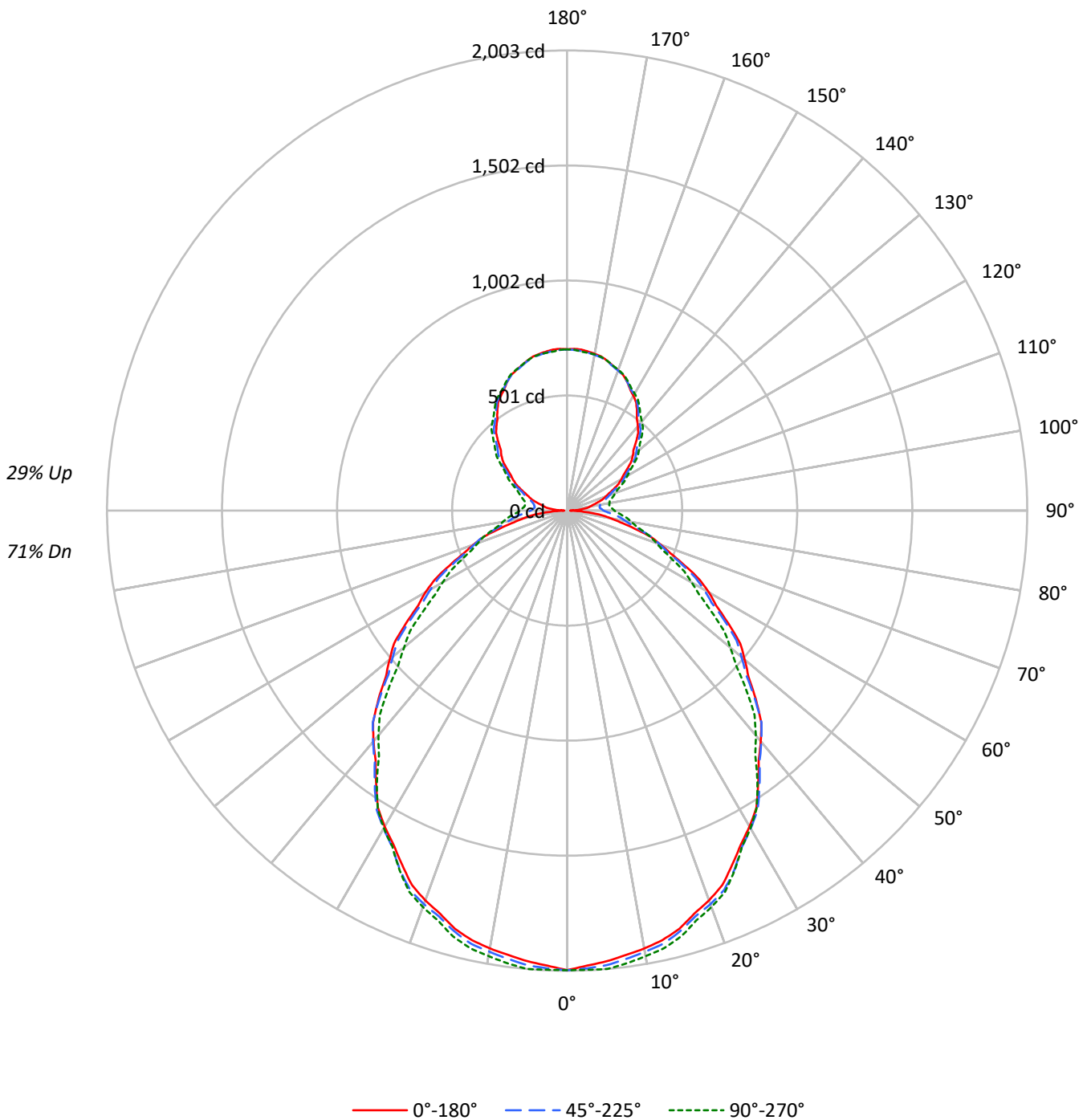
Test Method: LM-79-2019  
Report Number: P644291  
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-28, G2-2206-689-14)  
Test Lab: INNOVATION CENTER  
Issue Date: 2/20/2023  
Manufacturer: COOPER LIGHTING SOLUTIONS  
Product Line: NEO-RAY  
Catalog Number: CRQ4DIP-SR4F0-125D50U830-FLLFLL-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 1250 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: 7230.1 lumens  
Efficiency: N/A  
Efficacy: 132.4 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): 54.6  
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				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	112	112	112	112	106	106	106	106	95	95	95	85	85	85	76	76	76	71
1	102	97	93	89	96	92	88	85	83	80	77	74	72	70	66	64	63	59
2	93	85	78	73	88	81	75	70	73	68	64	65	61	58	58	55	53	49
3	85	75	67	61	80	71	64	59	64	58	54	58	53	49	52	48	45	42
4	78	66	58	52	73	63	56	50	57	51	46	51	47	43	46	42	39	36
5	72	59	51	45	67	57	49	43	51	45	40	46	41	37	42	38	34	31
6	66	53	45	39	62	51	43	38	46	40	35	42	37	33	38	34	30	28
7	61	48	40	34	58	46	39	33	42	36	31	38	33	29	35	30	27	25
8	57	44	36	31	54	42	35	30	39	32	28	35	30	26	32	28	24	22
9	53	40	33	27	50	39	32	27	36	29	25	32	27	23	30	25	22	20
10	50	37	30	25	47	36	29	24	33	27	23	30	25	21	27	23	20	18

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

	0°	45°	90°
0°	32300	32300	32300
5°	31688	28519	27633
10°	31273	25383	23870
15°	30815	22731	20880
20°	30109	20392	18263
25°	29170	18202	15914
30°	28247	16099	13813
35°	26995	14167	11856
40°	25828	12391	10051
45°	24477	10651	8388
50°	23048	9035	6880
55°	21536	7599	5586
60°	20092	6245	4522
65°	18316	5025	3662
70°	16606	4003	3000
75°	14523	3191	2510
80°	12129	2551	2141
85°	8843	2109	1873

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 24477 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	188.9	2.6
10°-20°	535.9	7.4
20°-30°	791.2	10.9
30°-40°	910.0	12.6
40°-50°	882.9	12.2
50°-60°	741.0	10.2
60°-70°	542.0	7.5
70°-80°	348.8	4.8
80°-90°	203.5	2.8
90°-100°	146.0	2.0
100°-110°	175.4	2.4
110°-120°	239.3	3.3
120°-130°	304.3	4.2
130°-140°	341.8	4.7
140°-150°	337.4	4.7
150°-160°	285.4	3.9
160°-170°	190.0	2.6
170°-180°	66.4	0.9
0°-30°	1516.0	21.0
0°-40°	2426.0	33.6
0°-60°	4049.8	56.0
0°-90°	5144.1	71.1
90°-120°	560.8	7.8
90°-150°	1544.2	21.4
90°-180°	2086.0	28.9
0°-180°	7230.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2000	2000	2000	2000	2000	
5°	1969	2005	1986	1990	2003	187
15°	1885	1914	1897	1905	1919	530
25°	1701	1730	1724	1715	1726	784
35°	1450	1474	1460	1444	1444	908
45°	1161	1174	1154	1119	1102	895
55°	856	870	838	787	765	768
65°	565	572	547	517	507	562
75°	305	311	332	340	341	326
85°	93	130	203	235	241	99
90°	14	80	158	196	206	14
95°	62	74	142	181	188	59
105°	138	131	162	192	200	147
115°	225	225	241	255	259	223
125°	322	329	342	352	355	288
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	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2000.5	2000.5	2000.5	2000.5	2000.5
2.5°	1982.4	2011.2	1994.3	1998.3	2000.5
5°	1969.4	2005.3	1986.4	1989.5	2003.3
7.5°	1951.3	1985.1	1968.5	1971.5	1987.5
10°	1935.5	1968.7	1950.4	1955.6	1969.4
12.5°	1915.2	1947.3	1931.7	1937.5	1951.3
15°	1884.7	1913.7	1896.7	1904.8	1918.6
17.5°	1839.4	1870.0	1852.6	1856.7	1870.5
20°	1805.5	1833.9	1823.2	1822.8	1836.6
22.5°	1764.9	1795.4	1787.1	1779.9	1795.9
25°	1701.0	1730.1	1723.6	1715.4	1726.4
27.5°	1637.7	1660.8	1649.3	1640.2	1648.4
30°	1588.0	1614.3	1597.9	1588.2	1596.4
32.5°	1533.7	1560.6	1543.7	1531.5	1535.4
35°	1449.5	1473.8	1460.2	1443.9	1443.9
37.5°	1369.8	1387.1	1375.7	1351.1	1345.0
40°	1311.1	1330.6	1314.6	1285.4	1277.2
42.5°	1250.0	1269.5	1251.9	1219.8	1207.1
45°	1161.3	1174.5	1153.6	1118.6	1102.0
47.5°	1069.8	1084.1	1055.5	1016.8	996.9
50°	1008.7	1024.7	991.2	948.9	926.8
52.5°	950.0	962.1	929.6	881.7	862.4
55°	856.1	870.1	837.9	787.2	765.3
57.5°	768.6	782.0	744.9	700.3	682.5
60°	712.0	723.2	686.8	642.2	625.1
62.5°	648.8	660.5	626.9	591.0	575.0
65°	565.1	572.2	547.1	517.0	506.9
67.5°	486.6	490.9	473.1	455.8	449.3
70°	432.3	436.7	428.0	418.7	412.7
72.5°	382.6	385.3	387.0	385.1	381.3
75°	305.2	311.0	332.4	340.3	340.6
77.5°	237.3	240.8	285.3	302.1	305.3
80°	192.1	202.3	256.7	280.4	284.2
82.5°	151.5	168.4	234.4	262.1	265.9
85°	93.2	130.1	203.1	234.7	241.2
87.5°	43.4	98.5	176.3	211.3	219.1
90°	13.7	80.3	158.3	195.6	205.7
92.5°	32.9	75.1	149.8	186.5	196.4
95°	61.8	74.3	142.0	180.6	187.7
97.5°	86.8	83.8	142.9	177.4	184.8
100°	101.7	94.7	146.4	178.6	187.0
102.5°	116.1	107.4	151.7	182.7	190.0
105°	137.8	131.4	162.4	191.7	199.5
107.5°	162.1	156.6	180.6	206.2	212.1
110°	178.3	176.2	195.6	217.8	224.2



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	198.0	195.8	212.9	230.6	237.0
115°	224.7	225.3	241.1	255.3	259.0
117.5°	252.3	255.9	269.7	281.0	284.5
120°	272.7	277.3	288.9	299.6	302.5
122.5°	292.3	296.5	309.8	320.4	323.3
125°	322.0	328.8	341.8	351.7	354.6
127.5°	352.1	361.1	373.0	383.0	386.8
130°	373.7	383.2	393.2	403.9	408.3
132.5°	391.8	401.3	411.8	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)