

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: P644279

Luminaire Tested: CRQ4DIP-SR4F0-125D25U830-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644279  
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-SR4F0-125D25U830-FLLFLL-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT  
UPLIGHT - CURVED FROSTED LENS - 250 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

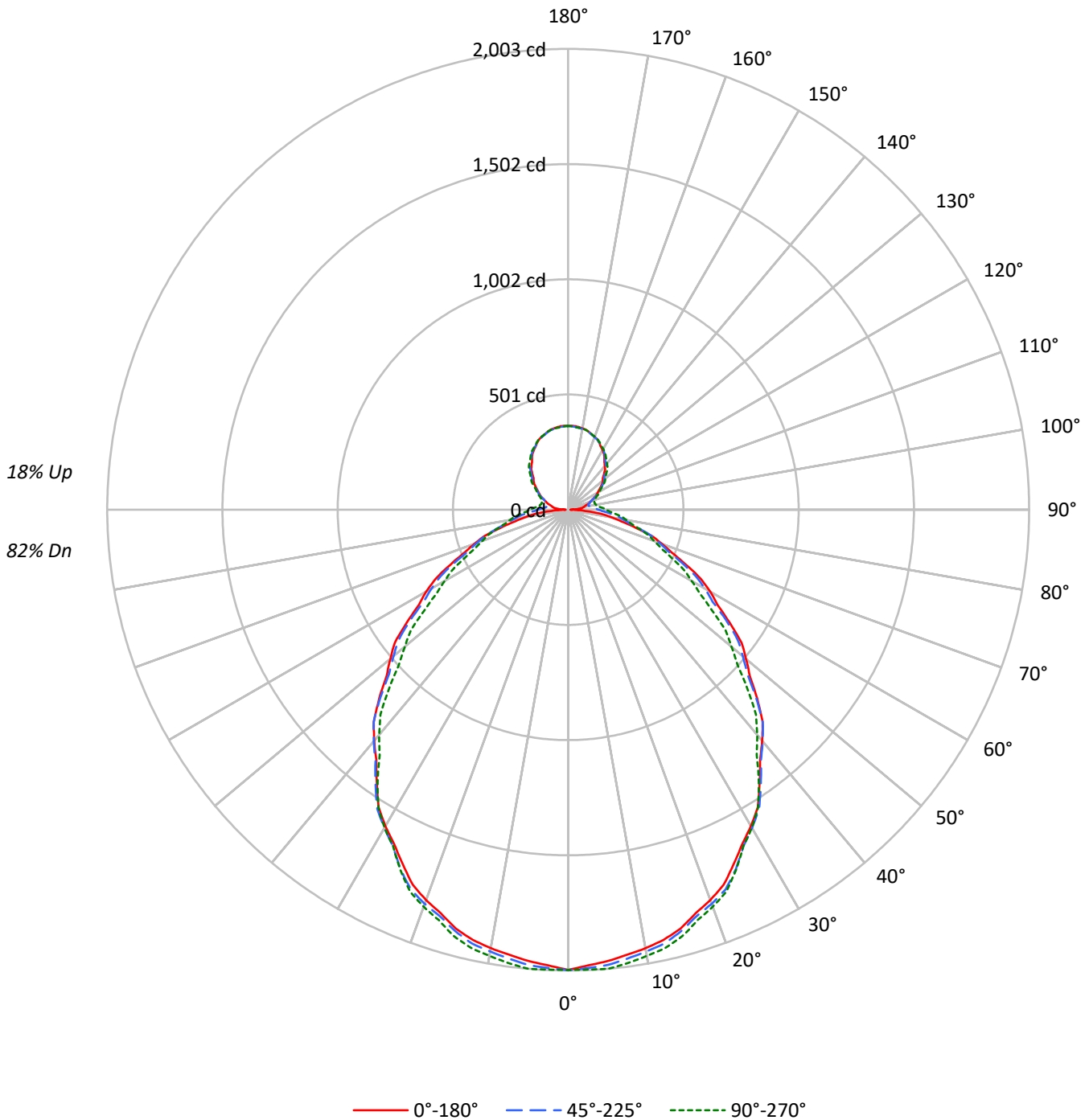
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6231.4 lumens  
Efficiency: N/A  
Efficacy: 129.0 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): 48.3  
Input Voltage (V): 120  
Input Current (A<sub>in</sub>): 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	50	30	10	0	
RCR																						
0	115	115	115	115	110	110	110	110	101	101	101	93	93	93	85	85	85	82				
1	104	100	95	92	100	96	92	88	88	85	82	81	79	77	75	73	71	68				
2	95	87	81	75	91	84	78	73	77	72	68	71	68	64	66	63	60	57				
3	87	77	69	63	83	74	67	61	68	63	58	63	58	54	59	55	51	48				
4	80	68	60	53	76	66	58	52	61	55	49	57	51	47	52	48	44	42				
5	73	61	53	46	70	59	51	45	55	48	43	51	45	41	47	43	39	36				
6	68	55	47	40	65	53	45	39	50	43	38	46	40	36	43	38	34	32				
7	63	50	42	36	60	48	41	35	45	38	34	42	36	32	40	34	31	28				
8	59	46	37	32	56	44	37	31	41	35	30	39	33	29	36	31	28	26				
9	55	42	34	29	52	41	33	28	38	32	27	36	30	26	34	29	25	23				
10	51	39	31	26	49	38	30	26	35	29	25	33	28	24	31	26	23	21				

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

	0°	45°	90°
0°	32300	32300	32300
5°	31688	28519	27633
10°	31273	25378	23870
15°	30815	22727	20880
20°	30109	20389	18263
25°	29170	18202	15914
30°	28247	16092	13813
35°	26995	14158	11856
40°	25828	12388	10051
45°	24477	10647	8388
50°	23048	9025	6880
55°	21536	7592	5568
60°	20092	6231	4480
65°	18316	4992	3589
70°	16606	3946	2891
75°	14523	3091	2355
80°	12129	2391	1930
85°	8843	1870	1594

**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	3.0
10°-20°	535.9	8.6
20°-30°	791.1	12.7
30°-40°	909.7	14.6
40°-50°	882.5	14.2
50°-60°	739.8	11.9
60°-70°	537.2	8.6
70°-80°	337.4	5.4
80°-90°	181.6	2.9
90°-100°	105.8	1.7
100°-110°	101.8	1.6
110°-120°	127.8	2.1
120°-130°	159.3	2.6
130°-140°	177.3	2.8
140°-150°	174.8	2.8
150°-160°	147.9	2.4
160°-170°	98.4	1.6
170°-180°	34.4	0.6
0°-30°	1515.8	24.3
0°-40°	2425.5	38.9
0°-60°	4047.8	65.0
0°-90°	5103.9	81.9
90°-120°	335.4	5.4
90°-150°	846.8	13.6
90°-180°	1127.0	18.1
0°-180°	6231.4	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	1913	1896	1905	1919	530
25°	1701	1729	1724	1715	1726	784
35°	1450	1473	1459	1444	1444	908
45°	1161	1174	1153	1119	1102	895
55°	856	869	837	786	763	768
65°	565	570	544	509	497	562
75°	305	308	322	322	320	326
85°	93	122	180	202	205	99
90°	11	68	131	159	165	12
95°	46	51	102	132	137	42
105°	85	74	91	112	118	90
115°	126	121	128	135	137	125
125°	172	173	178	182	184	154
135°	220	225	229	235	238	170
145°	274	278	280	282	284	171
155°	320	322	321	321	323	147
165°	350	351	349	348	350	99
175°	364	366	361	360	360	35
180°	364	364	364	364	364	

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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	1994.0	1998.3	2000.5
5°	1969.4	2005.3	1986.4	1989.5	2003.3
7.5°	1951.3	1984.8	1968.1	1971.5	1987.5
10°	1935.5	1968.7	1950.0	1955.6	1969.4
12.5°	1915.2	1946.7	1931.6	1937.5	1951.3
15°	1884.7	1913.0	1896.3	1904.8	1918.6
17.5°	1839.4	1869.7	1852.3	1856.7	1870.5
20°	1805.5	1833.5	1822.9	1822.8	1836.6
22.5°	1764.9	1795.1	1786.7	1779.9	1795.9
25°	1701.0	1729.4	1723.6	1715.4	1726.4
27.5°	1637.7	1659.5	1648.9	1640.2	1648.4
30°	1588.0	1613.6	1597.2	1588.2	1596.4
32.5°	1533.7	1559.6	1543.0	1531.5	1535.4
35°	1449.5	1472.8	1459.2	1443.9	1443.9
37.5°	1369.8	1385.7	1375.3	1351.1	1345.0
40°	1311.1	1329.2	1314.3	1285.4	1277.2
42.5°	1250.0	1268.1	1251.3	1219.8	1207.1
45°	1161.3	1173.5	1153.2	1118.6	1102.0
47.5°	1069.8	1082.8	1055.0	1016.8	996.9
50°	1008.7	1023.7	990.1	948.9	926.8
52.5°	950.0	960.8	928.8	881.4	861.9
55°	856.1	868.7	837.1	786.1	762.8
57.5°	768.6	780.6	743.8	697.0	678.5
60°	712.0	721.8	685.3	637.5	619.3
62.5°	648.8	658.9	624.9	584.8	567.2
65°	565.1	570.1	543.5	508.7	496.8
67.5°	486.6	488.8	468.2	444.9	436.2
70°	432.3	434.6	421.9	406.1	397.7
72.5°	382.6	382.9	378.9	370.2	364.0
75°	305.2	308.2	322.0	322.0	319.5
77.5°	237.3	237.0	271.7	279.9	280.2
80°	192.1	197.4	240.6	255.5	256.2
82.5°	151.5	162.4	215.9	234.1	234.7
85°	93.2	121.6	180.1	201.9	205.3
87.5°	42.9	87.7	150.2	175.4	179.7
90°	11.2	68.3	131.1	158.6	165.1
92.5°	25.5	59.3	117.9	145.2	152.7
95°	45.6	50.8	102.2	131.7	136.8
97.5°	61.3	51.5	94.8	120.5	126.0
100°	69.0	56.1	92.2	115.8	122.8
102.5°	75.4	61.6	90.6	113.5	118.9
105°	85.0	73.7	91.0	111.7	118.3
107.5°	96.0	85.4	97.4	114.5	118.9
110°	103.3	95.5	104.1	118.3	123.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	113.5	105.7	113.1	122.8	127.4
115°	125.9	120.9	127.6	135.0	136.9
117.5°	138.6	136.8	142.2	146.7	148.5
120°	148.1	147.8	151.1	155.2	156.7
122.5°	158.3	156.7	161.9	166.0	167.5
125°	172.3	173.2	178.5	182.3	183.8
127.5°	186.3	189.9	194.6	198.5	200.4
130°	196.4	201.3	205.1	209.3	211.6
132.5°	203.6	208.5	213.7	219.8	222.4
135°	220.0	225.0	229.3	235.2	237.8
137.5°	236.8	241.6	244.9	249.5	252.9
140°	248.2	252.4	254.8	259.1	262.1
142.5°	258.7	262.9	264.7	268.4	271.4
145°	274.5	277.9	279.5	281.5	284.5
147.5°	289.2	292.6	293.2	295.0	296.9
150°	298.8	301.8	301.9	302.7	304.6
152.5°	307.8	310.5	309.6	310.1	312.3
155°	320.4	322.3	320.8	321.2	323.1
157.5°	330.5	332.3	330.0	330.7	332.2
160°	336.6	338.5	335.9	336.3	337.8
162.5°	342.5	343.8	341.4	340.9	343.0
165°	349.8	351.3	348.6	347.5	349.8
167.5°	355.9	357.4	353.9	352.7	355.0
170°	359.0	360.5	356.7	355.2	357.5
172.5°	361.8	363.3	359.2	357.4	359.0
175°	364.4	365.9	361.3	359.8	359.8
177.5°	365.2	366.1	362.7	361.2	363.0
180°	363.7	363.7	363.7	363.7	363.7

(END OF REPORT)