

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: P644280

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

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644280  
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-SR4F0-125D25U830-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 250 LUMENS PER FOOT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

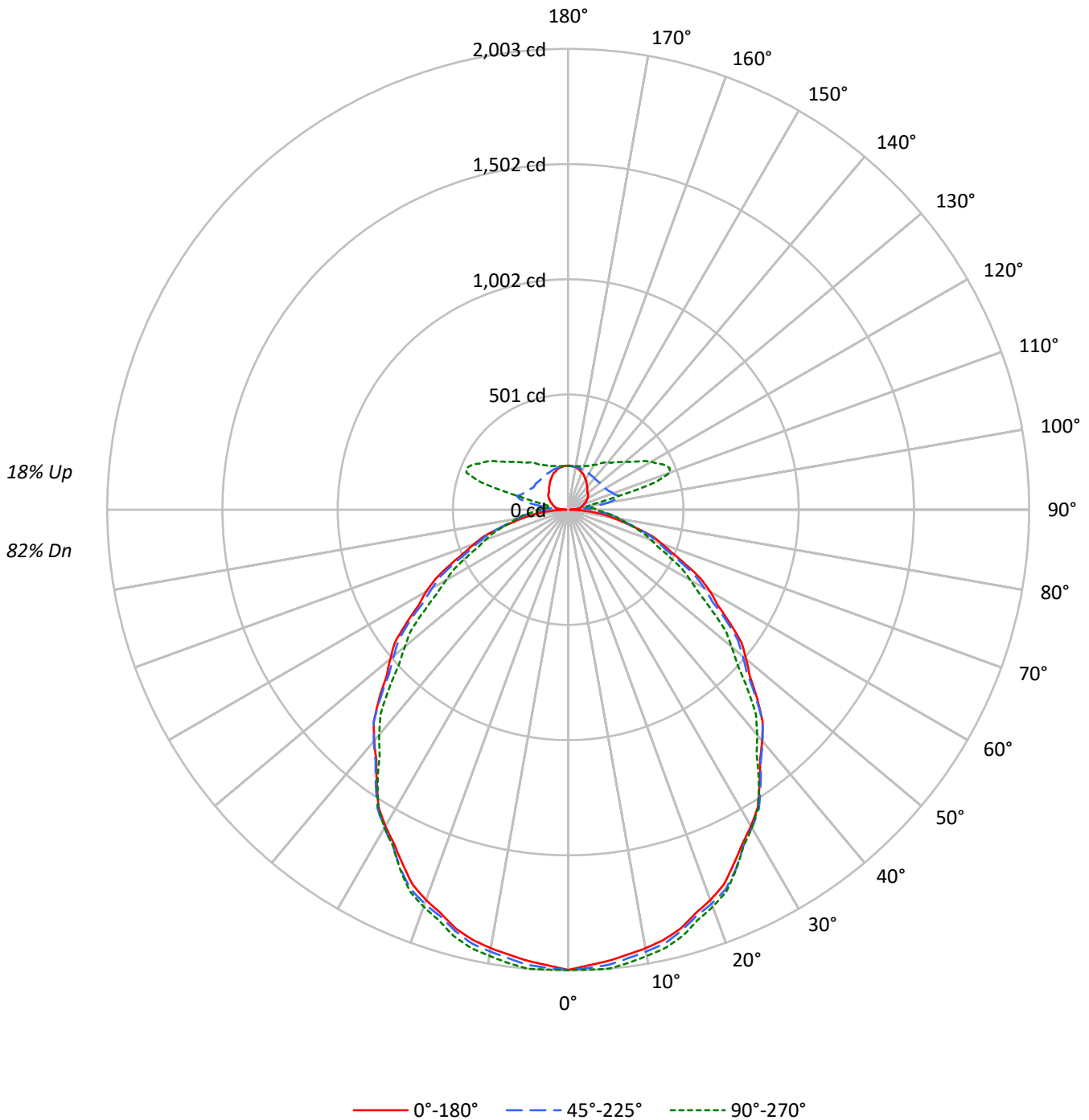
**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6184.5 lumens  
Efficiency: N/A  
Efficacy: 128.0 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										
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	115	115	115	115	110	110	110	110	101	101	101	93	93	93	85	85	85	82																				
1	105	100	96	92	100	96	92	89	88	85	83	81	79	77	75	73	72	68																				
2	95	87	81	75	91	84	78	73	78	73	69	72	68	64	66	63	60	57																				
3	87	77	69	63	83	74	67	61	69	63	58	64	59	55	59	55	52	49																				
4	80	69	60	54	76	66	58	52	61	55	50	57	51	47	53	48	45	42																				
5	74	61	53	46	70	59	51	45	55	48	43	51	46	41	48	43	39	37																				
6	68	55	47	41	65	53	45	40	50	43	38	46	41	36	43	38	35	32																				
7	63	50	42	36	60	49	41	35	45	39	34	42	37	32	40	35	31	29																				
8	59	46	38	32	56	44	37	31	42	35	30	39	33	29	37	32	28	26																				
9	55	42	34	29	53	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	25373	23870
15°	30815	22723	20880
20°	30109	20385	18263
25°	29170	18202	15914
30°	28247	16083	13813
35°	26995	14146	11856
40°	25828	12384	10051
45°	24477	10643	8388
50°	23048	9015	6880
55°	21536	7585	5548
60°	20092	6217	4435
65°	18316	4957	3511
70°	16606	3885	2773
75°	14523	2984	2187
80°	12129	2219	1703
85°	8843	1614	1294

**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°	188.8	3.1
10°-20°	535.8	8.7
20°-30°	791.0	12.8
30°-40°	909.4	14.7
40°-50°	882.2	14.3
50°-60°	738.5	11.9
60°-70°	532.0	8.6
70°-80°	325.1	5.3
80°-90°	158.4	2.6
90°-100°	86.0	1.4
100°-110°	190.1	3.1
110°-120°	235.2	3.8
120°-130°	188.3	3.0
130°-140°	149.2	2.4
140°-150°	117.3	1.9
150°-160°	85.8	1.4
160°-170°	53.3	0.9
170°-180°	18.2	0.3
0°-30°	1515.6	24.5
0°-40°	2425.0	39.2
0°-60°	4045.6	65.4
0°-90°	5061.1	81.8
90°-120°	511.3	8.3
90°-150°	966.2	15.6
90°-180°	1123.0	18.2
0°-180°	6184.5	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	1912	1896	1905	1919	530
25°	1701	1729	1724	1715	1726	784
35°	1450	1472	1458	1444	1444	908
45°	1161	1172	1153	1119	1102	895
55°	856	867	836	785	760	768
65°	565	568	540	500	486	562
75°	305	305	311	302	297	326
85°	93	113	155	167	167	98
90°	8	57	104	122	125	11
95°	38	43	69	90	95	35
105°	66	69	232	304	215	69
115°	86	89	193	395	461	85
125°	106	114	180	309	365	94
135°	118	131	178	254	292	91
145°	139	151	179	222	245	88
155°	164	169	183	201	210	75
165°	182	184	188	192	196	51
175°	191	192	191	190	189	18
180°	191	191	191	191	191	

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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	1993.7	1998.3	2000.5
5°	1969.4	2005.3	1986.4	1989.5	2003.3
7.5°	1951.3	1984.5	1967.7	1971.5	1987.5
10°	1935.5	1968.7	1949.6	1955.6	1969.4
12.5°	1915.2	1946.1	1931.6	1937.5	1951.3
15°	1884.7	1912.3	1896.0	1904.8	1918.6
17.5°	1839.4	1869.3	1851.9	1856.7	1870.5
20°	1805.5	1833.2	1822.5	1822.8	1836.6
22.5°	1764.9	1794.7	1786.3	1779.9	1795.9
25°	1701.0	1728.6	1723.6	1715.4	1726.4
27.5°	1637.7	1658.1	1648.4	1640.2	1648.4
30°	1588.0	1612.8	1596.4	1588.2	1596.4
32.5°	1533.7	1558.6	1542.2	1531.5	1535.4
35°	1449.5	1471.6	1458.0	1443.9	1443.9
37.5°	1369.8	1384.2	1374.9	1351.1	1345.0
40°	1311.1	1327.6	1313.9	1285.4	1277.2
42.5°	1250.0	1266.6	1250.6	1219.8	1207.1
45°	1161.3	1172.4	1152.8	1118.6	1102.0
47.5°	1069.8	1081.4	1054.5	1016.8	996.9
50°	1008.7	1022.5	989.0	948.9	926.8
52.5°	950.0	959.4	927.9	881.1	861.2
55°	856.1	867.2	836.4	784.9	760.1
57.5°	768.6	779.1	742.6	693.5	674.2
60°	712.0	720.3	683.8	632.5	613.1
62.5°	648.8	657.0	622.8	578.2	558.9
65°	565.1	567.9	539.7	499.8	486.0
67.5°	486.6	486.6	462.8	433.2	422.1
70°	432.3	432.3	415.4	392.5	381.5
72.5°	382.6	380.4	370.2	354.1	345.3
75°	305.2	305.2	310.8	302.2	296.7
77.5°	237.3	232.9	257.1	255.9	253.2
80°	192.1	192.1	223.2	228.8	226.0
82.5°	151.5	155.9	196.1	203.9	201.2
85°	93.2	112.6	155.4	166.7	166.7
87.5°	42.4	76.3	122.5	137.5	138.0
90°	8.5	56.6	104.1	122.3	125.1
92.5°	20.4	46.4	88.9	108.2	114.1
95°	37.9	43.3	69.0	90.1	95.2
97.5°	51.0	51.0	113.6	80.3	80.8
100°	56.7	57.4	175.8	89.9	81.3
102.5°	60.3	61.8	216.7	149.2	102.7
105°	65.5	68.9	231.7	303.5	215.0
107.5°	70.8	69.8	215.6	420.4	397.5
110°	74.3	74.6	207.6	436.4	470.9

TEST NUMBER: P644280

CATALOG NUMBER: CRQ4DIP-SR4F0-125D25U830-FLLOOB-1DUDD-WW

**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	80.1	80.4	201.8	419.9	476.0
115°	85.9	88.9	193.2	395.4	461.2
117.5°	91.4	97.5	190.4	366.8	434.5
120°	95.9	103.3	184.3	345.4	415.9
122.5°	100.7	106.8	179.5	328.9	393.8
125°	106.3	113.7	179.5	309.0	365.4
127.5°	109.8	120.8	179.8	285.9	341.6
130°	111.4	125.5	180.7	270.5	323.4
132.5°	111.7	125.8	178.5	263.5	307.0
135°	117.8	130.7	177.9	254.5	292.1
137.5°	123.8	137.7	177.9	244.5	276.7
140°	128.6	141.6	177.9	238.7	268.1
142.5°	133.4	145.4	178.9	231.9	259.4
145°	139.4	151.2	179.1	221.7	245.2
147.5°	146.7	157.0	180.6	214.4	232.5
150°	151.5	160.9	181.5	209.5	224.8
152.5°	156.3	164.7	181.5	205.6	218.1
155°	163.5	169.4	182.7	201.0	210.4
157.5°	169.3	174.9	184.2	198.0	204.8
160°	173.1	177.8	185.1	196.1	201.9
162.5°	176.0	180.7	186.1	195.1	199.1
165°	181.5	183.9	187.5	192.4	195.9
167.5°	184.6	186.8	188.7	191.2	193.3
170°	187.5	188.7	188.7	191.2	192.3
172.5°	188.5	190.6	189.7	190.2	191.4
175°	191.1	192.3	191.1	189.9	188.7
177.5°	191.1	192.1	191.1	191.1	190.2
180°	191.1	191.1	191.1	191.1	191.1

(END OF REPORT)