

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: P644286

Luminaire Tested: CRQ4DIP-SR4F0-125D25U930-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644286  
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-SR4F0-125D25U930-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, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

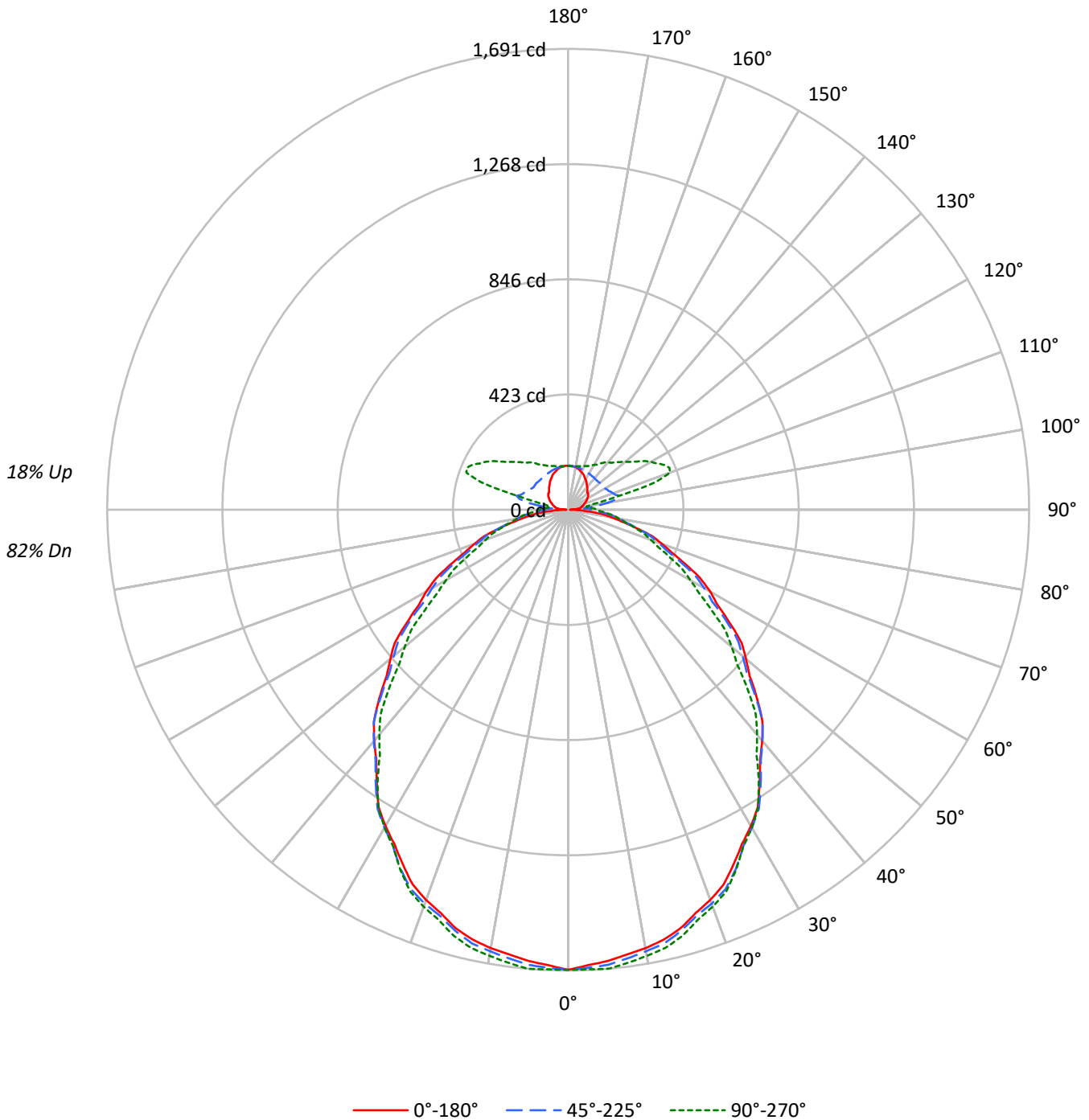
Lumens per Lamp: N/A  
Luminaire Lumens: 5219.5 lumens  
Efficiency: N/A  
Efficacy: 108.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: Semi-Direct

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									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°	27259	27259	27259
5°	26744	24068	23321
10°	26393	21414	20146
15°	26007	19177	17622
20°	25411	17204	15413
25°	24619	15361	13431
30°	23839	13574	11658
35°	22782	11939	10006
40°	21797	10452	8483
45°	20658	8982	7078
50°	19452	7608	5807
55°	18175	6402	4683
60°	16957	5247	3743
65°	15457	4184	2963
70°	14017	3278	2340
75°	12253	2518	1846
80°	10241	1873	1437
85°	7467	1363	1092

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 20658 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	159.4	3.1
10°-20°	452.2	8.7
20°-30°	667.5	12.8
30°-40°	767.5	14.7
40°-50°	744.5	14.3
50°-60°	623.2	11.9
60°-70°	449.0	8.6
70°-80°	274.4	5.3
80°-90°	133.7	2.6
90°-100°	72.6	1.4
100°-110°	160.4	3.1
110°-120°	198.5	3.8
120°-130°	158.9	3.0
130°-140°	125.9	2.4
140°-150°	99.0	1.9
150°-160°	72.4	1.4
160°-170°	45.0	0.9
170°-180°	15.3	0.3
0°-30°	1279.1	24.5
0°-40°	2046.6	39.2
0°-60°	3414.3	65.4
0°-90°	4271.4	81.8
90°-120°	431.5	8.3
90°-150°	815.4	15.6
90°-180°	948.0	18.2
0°-180°	5219.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1688	1688	1688	1688	1688	
5°	1662	1692	1676	1679	1691	158
15°	1591	1614	1600	1608	1619	447
25°	1436	1459	1455	1448	1457	661
35°	1223	1242	1230	1219	1219	766
45°	980	989	973	944	930	755
55°	722	732	706	662	642	648
65°	477	479	456	422	410	474
75°	258	258	262	255	250	275
85°	79	95	131	141	141	83
90°	7	48	88	103	106	9
95°	32	37	58	76	80	29
105°	55	58	196	256	181	58
115°	72	75	163	334	389	72
125°	90	96	152	261	308	79
135°	99	110	150	215	246	77
145°	118	128	151	187	207	74
155°	138	143	154	170	178	63
165°	153	155	158	162	165	43
175°	161	162	161	160	159	15
180°	161	161	161	161	161	



TEST NUMBER: P644286

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1688.3	1688.3	1688.3	1688.3	1688.3
2.5°	1673.1	1697.3	1682.6	1686.5	1688.3
5°	1662.1	1692.4	1676.4	1679.1	1690.7
7.5°	1646.8	1674.8	1660.7	1663.8	1677.4
10°	1633.5	1661.5	1645.4	1650.4	1662.1
12.5°	1616.3	1642.4	1630.1	1635.2	1646.8
15°	1590.6	1613.9	1600.1	1607.5	1619.2
17.5°	1552.4	1577.6	1562.9	1567.0	1578.6
20°	1523.8	1547.1	1538.1	1538.4	1550.0
22.5°	1489.5	1514.6	1507.6	1502.2	1515.7
25°	1435.6	1458.9	1454.6	1447.7	1457.0
27.5°	1382.1	1399.4	1391.2	1384.2	1391.2
30°	1340.2	1361.2	1347.3	1340.3	1347.3
32.5°	1294.4	1315.4	1301.5	1292.6	1295.8
35°	1223.3	1242.0	1230.5	1218.6	1218.6
37.5°	1156.1	1168.2	1160.4	1140.2	1135.1
40°	1106.5	1120.5	1108.9	1084.9	1077.9
42.5°	1055.0	1069.0	1055.4	1029.4	1018.7
45°	980.1	989.4	972.9	944.0	930.0
47.5°	902.8	912.6	890.0	858.1	841.3
50°	851.3	863.0	834.6	800.8	782.2
52.5°	801.7	809.6	783.1	743.6	726.8
55°	722.5	731.9	705.9	662.5	641.5
57.5°	648.6	657.5	626.7	585.3	569.0
60°	600.9	607.9	577.1	533.8	517.5
62.5°	547.5	554.5	525.6	488.0	471.7
65°	476.9	479.3	455.5	421.8	410.2
67.5°	410.6	410.6	390.6	365.6	356.3
70°	364.9	364.9	350.5	331.3	321.9
72.5°	322.9	321.0	312.4	298.9	291.4
75°	257.5	257.5	262.3	255.1	250.4
77.5°	200.3	196.6	217.0	216.0	213.7
80°	162.2	162.2	188.4	193.1	190.8
82.5°	127.8	131.5	165.5	172.1	169.8
85°	78.7	95.0	131.2	140.7	140.7
87.5°	35.8	64.4	103.4	116.0	116.5
90°	7.2	47.8	87.9	103.3	105.6
92.5°	17.2	39.2	75.0	91.3	96.3
95°	32.0	36.6	58.2	76.0	80.3
97.5°	43.0	43.0	95.9	67.7	68.2
100°	47.9	48.4	148.3	75.9	68.6
102.5°	50.9	52.2	182.9	126.0	86.7
105°	55.3	58.2	195.5	256.1	181.4
107.5°	59.7	58.9	182.0	354.8	335.5
110°	62.7	62.9	175.2	368.3	397.4

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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	67.6	67.8	170.3	354.4	401.7
115°	72.5	75.1	163.0	333.7	389.3
117.5°	77.1	82.3	160.7	309.6	366.7
120°	80.9	87.2	155.6	291.5	351.0
122.5°	85.0	90.1	151.5	277.6	332.3
125°	89.7	95.9	151.5	260.8	308.4
127.5°	92.7	102.0	151.7	241.3	288.3
130°	94.0	105.9	152.5	228.3	272.9
132.5°	94.3	106.2	150.6	222.4	259.1
135°	99.4	110.3	150.1	214.8	246.5
137.5°	104.5	116.2	150.1	206.4	233.5
140°	108.6	119.5	150.1	201.4	226.2
142.5°	112.6	122.7	151.0	195.7	218.9
145°	117.7	127.6	151.2	187.1	207.0
147.5°	123.8	132.5	152.4	180.9	196.2
150°	127.8	135.8	153.2	176.8	189.7
152.5°	131.9	139.0	153.2	173.5	184.0
155°	138.0	142.9	154.2	169.6	177.5
157.5°	142.8	147.6	155.4	167.1	172.9
160°	146.1	150.1	156.2	165.5	170.4
162.5°	148.5	152.5	157.0	164.6	168.0
165°	153.2	155.2	158.3	162.4	165.4
167.5°	155.8	157.6	159.3	161.3	163.1
170°	158.3	159.3	159.3	161.3	162.3
172.5°	159.1	160.9	160.1	160.5	161.5
175°	161.3	162.3	161.3	160.3	159.3
177.5°	161.3	162.1	161.3	161.3	160.5
180°	161.3	161.3	161.3	161.3	161.3

(END OF REPORT)