

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: P644290

Luminaire Tested: CRQ4DIP-SR4F0-125D25U940-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644290  
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-SR4F0-125D25U940-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: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

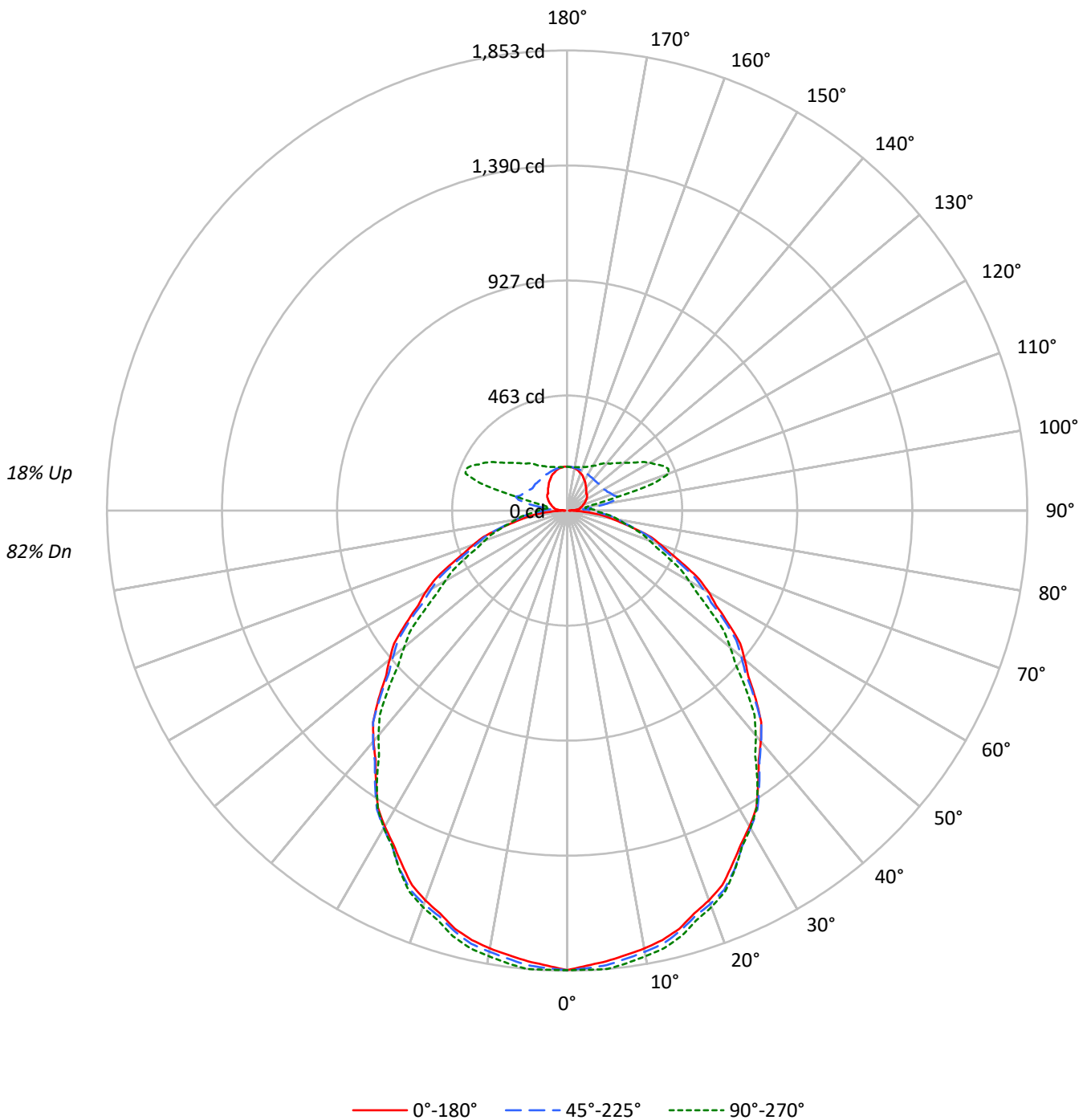
Lumens per Lamp: N/A  
Luminaire Lumens: 5720.8 lumens  
Efficiency: N/A  
Efficacy: 118.4 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: Semi-Direct

Input Watts (W): 48.3  
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	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°	29878	29878	29878
5°	29312	26380	25561
10°	28928	23470	22080
15°	28504	21019	19314
20°	27851	18856	16893
25°	26982	16837	14721
30°	26128	14877	12777
35°	24971	13086	10967
40°	23889	11456	9297
45°	22641	9846	7758
50°	21321	8339	6364
55°	19921	7016	5132
60°	18585	5751	4103
65°	16942	4585	3248
70°	15361	3593	2564
75°	13433	2760	2022
80°	11220	2053	1575
85°	8188	1493	1197

**MAXIMUM LUMINANCE 45°-90°:**

Horizontal Angle: 0°  
 Vertical Angle: 45°  
 Luminance: 22641 cd/sqm



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	174.7	3.1
10°-20°	495.6	8.7
20°-30°	731.6	12.8
30°-40°	841.2	14.7
40°-50°	816.0	14.3
50°-60°	683.1	11.9
60°-70°	492.2	8.6
70°-80°	300.7	5.3
80°-90°	146.5	2.6
90°-100°	79.6	1.4
100°-110°	175.9	3.1
110°-120°	217.6	3.8
120°-130°	174.2	3.0
130°-140°	138.0	2.4
140°-150°	108.5	1.9
150°-160°	79.4	1.4
160°-170°	49.3	0.9
170°-180°	16.8	0.3
0°-30°	1401.9	24.5
0°-40°	2243.1	39.2
0°-60°	3742.2	65.4
0°-90°	4681.6	81.8
90°-120°	473.0	8.3
90°-150°	893.8	15.6
90°-180°	1039.0	18.2
0°-180°	5720.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1850	1850	1850	1850	1850	
5°	1822	1855	1837	1840	1853	173
15°	1743	1769	1754	1762	1775	490
25°	1573	1599	1594	1587	1597	725
35°	1341	1361	1349	1336	1336	840
45°	1074	1084	1066	1035	1019	828
55°	792	802	774	726	703	710
65°	523	525	499	462	450	520
75°	282	282	288	280	274	302
85°	86	104	144	154	154	91
90°	8	52	96	113	116	10
95°	35	40	64	83	88	32
105°	61	64	214	281	199	64
115°	80	82	179	366	427	78
125°	98	105	166	286	338	87
135°	109	121	165	235	270	85
145°	129	140	166	205	227	81
155°	151	157	169	186	195	69
165°	168	170	174	178	181	47
175°	177	178	177	176	175	17
180°	177	177	177	177	177	

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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1850.5	1850.5	1850.5	1850.5	1850.5
2.5°	1833.7	1860.3	1844.2	1848.4	1850.5
5°	1821.7	1854.9	1837.4	1840.3	1853.1
7.5°	1805.0	1835.7	1820.2	1823.6	1838.5
10°	1790.4	1821.0	1803.4	1808.9	1821.7
12.5°	1771.5	1800.2	1786.7	1792.2	1805.0
15°	1743.3	1768.9	1753.8	1761.9	1774.7
17.5°	1701.5	1729.1	1713.0	1717.5	1730.2
20°	1670.1	1695.7	1685.8	1686.1	1698.9
22.5°	1632.5	1660.1	1652.4	1646.4	1661.2
25°	1573.4	1599.0	1594.3	1586.7	1597.0
27.5°	1514.9	1533.8	1524.8	1517.1	1524.8
30°	1468.9	1491.9	1476.7	1469.1	1476.7
32.5°	1418.7	1441.7	1426.5	1416.7	1420.3
35°	1340.8	1361.3	1348.7	1335.6	1335.6
37.5°	1267.1	1280.4	1271.8	1249.7	1244.1
40°	1212.7	1228.1	1215.4	1189.0	1181.4
42.5°	1156.3	1171.6	1156.8	1128.3	1116.6
45°	1074.2	1084.4	1066.4	1034.7	1019.3
47.5°	989.5	1000.3	975.4	940.5	922.1
50°	933.1	945.9	914.8	877.7	857.3
52.5°	878.7	887.4	858.3	815.0	796.6
55°	791.9	802.2	773.6	726.1	703.1
57.5°	710.9	720.6	686.9	641.5	623.6
60°	658.6	666.3	632.5	585.1	567.2
62.5°	600.1	607.8	576.1	534.9	517.0
65°	522.7	525.3	499.2	462.3	449.6
67.5°	450.1	450.1	428.1	400.7	390.5
70°	399.9	399.9	384.2	363.1	352.8
72.5°	353.9	351.8	342.4	327.6	319.4
75°	282.3	282.3	287.5	279.5	274.4
77.5°	219.5	215.5	237.8	236.7	234.2
80°	177.7	177.7	206.5	211.6	209.1
82.5°	140.1	144.2	181.4	188.6	186.1
85°	86.3	104.1	143.8	154.2	154.2
87.5°	39.2	70.6	113.4	127.2	127.7
90°	7.8	52.4	96.3	113.2	115.7
92.5°	18.9	43.0	82.3	100.1	105.5
95°	35.0	40.1	63.8	83.3	88.0
97.5°	47.2	47.2	105.1	74.2	74.7
100°	52.5	53.1	162.6	83.2	75.2
102.5°	55.7	57.2	200.5	138.1	95.0
105°	60.6	63.8	214.3	280.7	198.9
107.5°	65.5	64.6	199.5	388.9	367.7
110°	68.7	69.0	192.0	403.7	435.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	74.1	74.3	186.7	388.4	440.3
115°	79.5	82.3	178.7	365.8	426.6
117.5°	84.5	90.2	176.2	339.3	401.9
120°	88.7	95.5	170.5	319.5	384.7
122.5°	93.1	98.8	166.1	304.3	364.3
125°	98.3	105.1	166.1	285.8	338.0
127.5°	101.6	111.7	166.3	264.5	316.0
130°	103.1	116.1	167.2	250.2	299.1
132.5°	103.3	116.4	165.1	243.8	284.0
135°	109.0	120.9	164.6	235.4	270.2
137.5°	114.5	127.4	164.6	226.2	256.0
140°	119.0	130.9	164.6	220.8	248.0
142.5°	123.4	134.5	165.5	214.5	240.0
145°	129.0	139.9	165.7	205.1	226.8
147.5°	135.7	145.2	167.0	198.3	215.0
150°	140.1	148.8	167.9	193.8	207.9
152.5°	144.6	152.4	167.9	190.2	201.7
155°	151.2	156.7	169.0	185.9	194.6
157.5°	156.6	161.8	170.3	183.2	189.5
160°	160.1	164.5	171.2	181.4	186.8
162.5°	162.8	167.1	172.1	180.4	184.1
165°	167.9	170.1	173.5	178.0	181.2
167.5°	170.8	172.7	174.6	176.8	178.8
170°	173.5	174.5	174.6	176.8	177.9
172.5°	174.4	176.3	175.5	175.9	177.0
175°	176.8	177.9	176.8	175.7	174.6
177.5°	176.8	177.7	176.8	176.8	175.9
180°	176.8	176.8	176.8	176.8	176.8

(END OF REPORT)