

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: P644266

Luminaire Tested: CRQ4DIP-SR4F0-125D125U940-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



**Test Information**

Test Method: LM-79-2019  
Report Number: P644266  
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-SR4F0-125D125U940-FLLOOB-1DUDD-WW  
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE  
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT  
UPLIGHT - BATWING OPTIC - 1250 LUMENS PER FOOT  
Light Source: 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

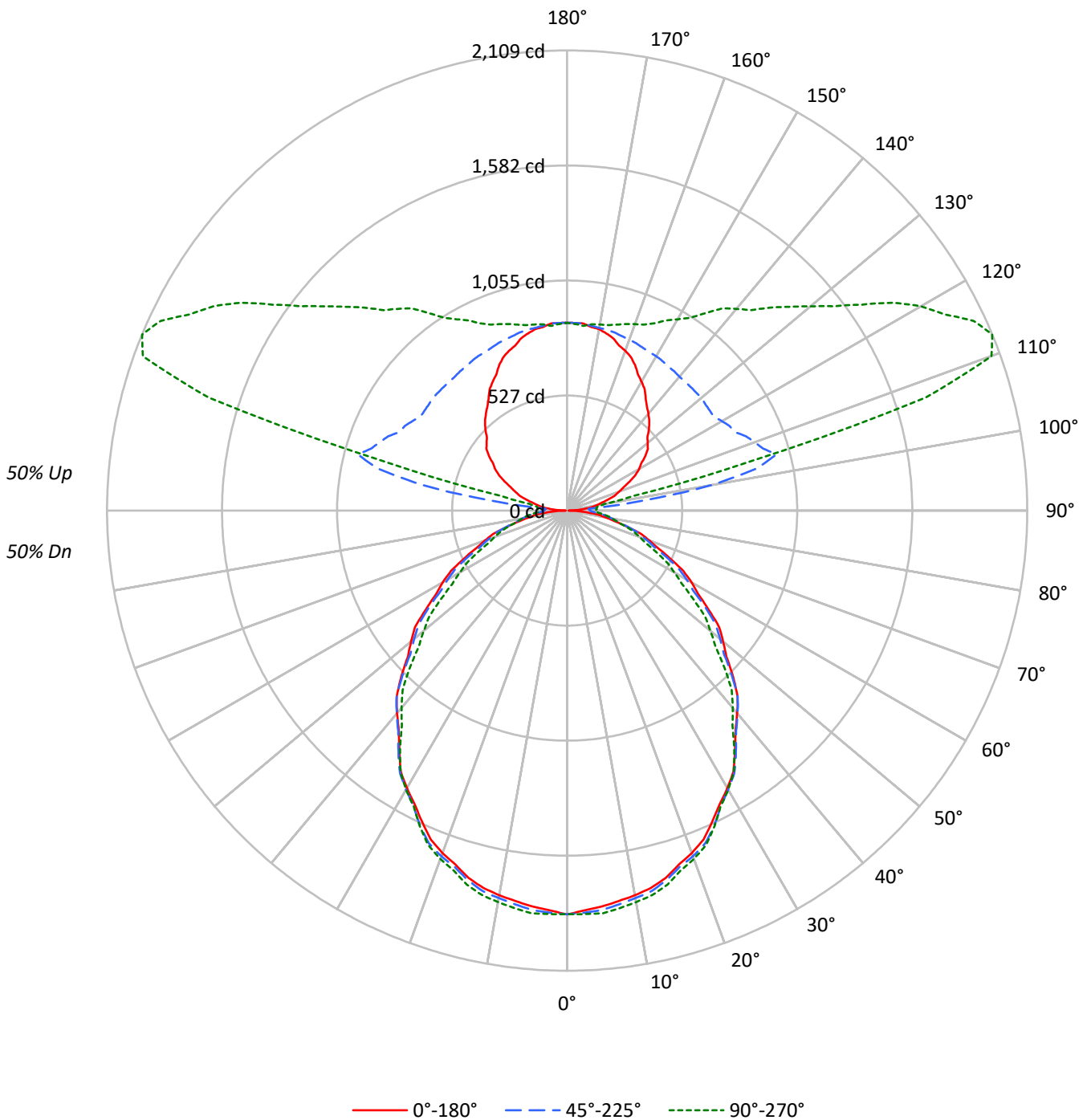
Lumens per Lamp: N/A  
Luminaire Lumens: 9394.7 lumens  
Efficiency: N/A  
Efficacy: 120.1 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3  
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')  
CIE Type: General Diffuse

Input Watts (W): 78.2  
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	50	30	10	0	
RCR																						
0	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50				
1	98	93	89	86	90	86	83	80	73	70	68	60	59	57	49	48	47	42				
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	40	35				
3	81	72	64	58	75	66	60	55	56	51	47	47	44	41	39	36	34	30				
4	74	63	56	50	68	59	52	46	50	45	41	42	38	35	34	32	29	26				
5	68	57	48	42	63	53	45	40	45	39	35	38	34	30	31	28	26	22				
6	63	51	43	37	58	47	40	35	40	35	31	34	30	27	28	25	23	20				
7	58	46	38	32	54	43	36	31	37	31	27	31	27	24	26	23	20	17				
8	54	42	34	29	50	39	32	27	34	28	24	29	24	21	24	20	18	16				
9	50	38	31	26	46	36	29	24	31	25	22	26	22	19	22	19	16	14				
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	15	13				

**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	1.9
10°-20°	495.6	5.3
20°-30°	731.6	7.8
30°-40°	841.2	9.0
40°-50°	816.0	8.7
50°-60°	683.1	7.3
60°-70°	492.2	5.2
70°-80°	300.7	3.2
80°-90°	148.0	1.6
90°-100°	163.6	1.7
100°-110°	774.8	8.2
110°-120°	1030.8	11.0
120°-130°	836.0	8.9
130°-140°	670.3	7.1
140°-150°	528.2	5.6
150°-160°	386.2	4.1
160°-170°	239.9	2.6
170°-180°	81.8	0.9
0°-30°	1401.9	14.9
0°-40°	2243.1	23.9
0°-60°	3742.2	39.8
0°-90°	4683.1	49.8
90°-120°	1969.2	21.0
90°-150°	4003.7	42.6
90°-180°	4712.0	50.2
0°-180°	9394.7	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	57	105	126	129	12
95°	69	104	98	122	135	71
105°	194	268	993	1275	857	205
115°	316	369	849	1760	2056	313
125°	438	491	798	1391	1645	389
135°	530	588	801	1146	1315	409
145°	628	681	806	998	1104	394
155°	736	762	823	905	947	338
165°	817	828	844	866	882	229
175°	860	866	860	855	850	81
180°	860	860	860	860	860	

TEST NUMBER: P644266

CATALOG NUMBER: CRQ4DIP-SR4F0-125D125U940-FLLOOB-1DUDD-WW

**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	71.4	115.1	129.8	130.3
90°	7.8	56.6	104.9	126.1	128.6
92.5°	29.2	57.5	101.2	126.8	135.6
95°	69.4	103.9	98.2	122.2	135.3
97.5°	108.2	169.6	357.9	148.8	139.2
100°	134.2	206.3	669.9	232.5	174.1
102.5°	158.1	234.4	886.7	532.2	310.9
105°	193.9	268.5	992.6	1274.9	856.7
107.5°	229.7	282.6	942.5	1835.8	1723.0
110°	253.6	304.3	914.4	1924.1	2069.5



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	279.6	330.3	888.4	1865.8	2108.6
115°	315.9	369.2	849.4	1759.9	2056.2
117.5°	352.8	408.1	839.2	1643.3	1948.1
120°	381.1	434.2	819.8	1554.9	1872.4
122.5°	402.7	458.0	798.1	1480.8	1772.9
125°	438.0	491.1	798.1	1391.2	1645.1
127.5°	466.2	523.4	799.2	1287.2	1538.0
130°	481.5	544.9	803.5	1217.6	1455.7
132.5°	498.9	562.4	801.4	1186.4	1382.1
135°	530.3	588.5	800.9	1145.7	1315.0
137.5°	557.4	619.8	800.9	1100.8	1245.8
140°	579.0	637.3	800.9	1074.5	1206.8
142.5°	600.7	654.7	805.3	1044.0	1167.8
145°	627.8	680.7	806.3	998.1	1104.0
147.5°	660.2	706.8	812.8	965.1	1046.6
150°	681.9	724.2	817.2	943.2	1012.0
152.5°	703.5	741.6	817.2	925.6	981.7
155°	736.0	762.4	822.6	904.7	947.0
157.5°	762.0	787.4	829.1	891.5	922.1
160°	779.3	800.4	833.4	882.7	909.2
162.5°	792.3	813.4	837.7	878.2	896.2
165°	817.2	827.7	844.2	866.2	882.1
167.5°	831.2	840.8	849.6	860.7	870.2
170°	844.2	849.5	849.6	860.6	865.9
172.5°	848.5	858.1	854.0	856.2	861.5
175°	860.5	865.7	860.5	854.9	849.6
177.5°	860.5	864.7	860.5	860.4	856.1
180°	860.5	860.5	860.5	860.5	860.5

(END OF REPORT)