

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: P644246

Luminaire Tested: CRQ4DIP-SR4F0-125D100U835-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644246
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-SR4F0-125D100U835-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

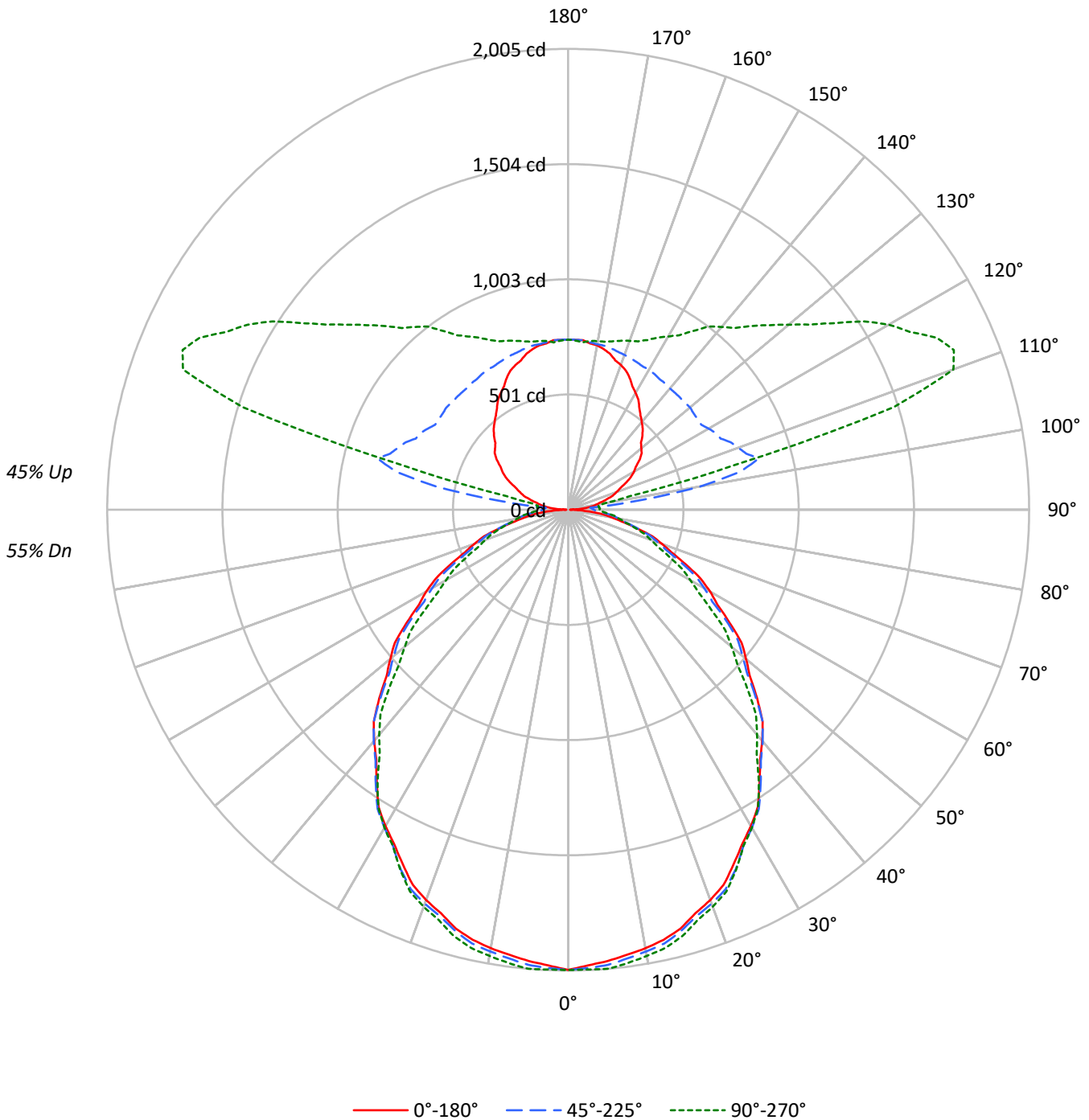
Lumens per Lamp: N/A
Luminaire Lumens: 9138.8 lumens
Efficiency: N/A
Efficacy: 132.4 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 69
Input Voltage (V): 120
Input Current (A_{in}): 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

TEST NUMBER: P644246

CATALOG NUMBER: CRQ4DIP-SR4F0-125D100U835-FLLOOB-1DUDD-WW

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	108	108	108	108	101	101	101	101	86	86	86	73	73	73	61	61	61	55																				
1	99	94	90	87	92	88	84	81	75	73	71	64	62	61	54	52	51	46																				
2	90	82	76	71	83	77	71	67	66	62	58	56	53	51	47	45	43	39																				
3	82	73	65	59	76	68	61	56	58	53	49	50	46	43	42	39	37	33																				
4	75	64	56	50	70	60	53	48	52	47	42	45	40	37	38	35	32	28																				
5	69	57	49	43	64	54	46	41	47	41	36	40	36	32	34	31	28	25																				
6	64	52	43	38	59	48	41	36	42	36	32	36	32	28	31	27	25	22																				
7	59	47	39	33	55	44	37	31	38	32	28	33	28	25	28	25	22	19																				
8	55	42	35	29	51	40	33	28	35	29	25	30	26	22	26	22	20	17																				
9	51	39	31	26	47	36	30	25	32	26	23	28	23	20	24	20	18	16																				
10	48	36	28	24	44	34	27	22	30	24	20	26	21	18	22	19	16	14																				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	32329	32329	32329
5°	31717	28545	27658
10°	31302	25396	23892
15°	30843	22743	20899
20°	30137	20402	18279
25°	29195	18219	15929
30°	28272	16099	13826
35°	27019	14159	11867
40°	25850	12396	10060
45°	24500	10654	8395
50°	23069	9022	6886
55°	21556	7592	5554
60°	20111	6223	4439
65°	18332	4962	3513
70°	16621	3888	2775
75°	14532	2987	2189
80°	12142	2220	1704
85°	8852	1615	1296

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 24500 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	189.0	2.1
10°-20°	536.3	5.9
20°-30°	791.7	8.7
30°-40°	910.2	10.0
40°-50°	882.9	9.7
50°-60°	739.1	8.1
60°-70°	532.5	5.8
70°-80°	325.4	3.6
80°-90°	159.7	1.7
90°-100°	153.5	1.7
100°-110°	671.0	7.3
110°-120°	888.1	9.7
120°-130°	719.6	7.9
130°-140°	576.6	6.3
140°-150°	454.2	5.0
150°-160°	332.1	3.6
160°-170°	206.3	2.3
170°-180°	70.3	0.8
0°-30°	1517.0	16.6
0°-40°	2427.2	26.6
0°-60°	4049.3	44.3
0°-90°	5066.9	55.4
90°-120°	1712.6	18.7
90°-150°	3463.1	37.9
90°-180°	4072.0	44.6
0°-180°	9138.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2002	2002	2002	2002	2002	
5°	1971	2007	1988	1991	2005	187
15°	1886	1914	1898	1906	1920	531
25°	1702	1730	1725	1717	1728	784
35°	1451	1473	1459	1445	1445	908
45°	1162	1173	1154	1120	1103	896
55°	857	868	837	786	761	768
65°	566	568	540	500	486	563
75°	305	305	311	302	297	327
85°	93	113	156	167	167	99
90°	8	60	111	133	136	12
95°	66	95	97	121	133	66
105°	173	233	856	1102	743	182
115°	276	319	732	1515	1770	273
125°	379	424	687	1196	1415	336
135°	456	506	689	985	1131	352
145°	540	585	693	858	949	339
155°	633	656	707	778	814	291
165°	703	712	726	745	759	197
175°	740	744	740	735	731	70
180°	740	740	740	740	740	

TEST NUMBER: P644246

CATALOG NUMBER: CRQ4DIP-SR4F0-125D100U835-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2002.3	2002.3	2002.3	2002.3	2002.3
2.5°	1984.2	2013.0	1995.5	2000.1	2002.3
5°	1971.2	2007.2	1988.2	1991.3	2005.1
7.5°	1953.1	1986.3	1969.5	1973.3	1989.3
10°	1937.3	1970.4	1951.4	1957.4	1971.2
12.5°	1916.9	1947.9	1933.3	1939.3	1953.1
15°	1886.4	1914.0	1897.7	1906.5	1920.3
17.5°	1841.1	1871.0	1853.6	1858.4	1872.2
20°	1807.2	1834.8	1824.1	1824.5	1838.3
22.5°	1766.4	1796.3	1787.9	1781.5	1797.6
25°	1702.5	1730.2	1725.2	1716.9	1728.0
27.5°	1639.2	1659.6	1649.9	1641.6	1649.9
30°	1589.4	1614.3	1597.9	1589.6	1597.9
32.5°	1535.1	1560.0	1543.6	1532.9	1536.8
35°	1450.8	1472.9	1459.3	1445.2	1445.2
37.5°	1371.1	1385.5	1376.2	1352.3	1346.2
40°	1312.2	1328.8	1315.1	1286.6	1278.3
42.5°	1251.2	1267.8	1251.7	1220.9	1208.2
45°	1162.4	1173.4	1153.9	1119.6	1103.0
47.5°	1070.7	1082.3	1055.5	1017.7	997.8
50°	1009.6	1023.5	989.8	949.7	927.6
52.5°	950.8	960.2	928.8	881.9	862.0
55°	856.9	868.0	837.1	785.7	760.8
57.5°	769.2	779.8	743.2	694.1	674.8
60°	712.7	721.0	684.4	633.1	613.7
62.5°	649.3	657.6	623.3	578.8	559.4
65°	565.6	568.4	540.2	500.3	486.4
67.5°	487.0	487.0	463.2	433.6	422.5
70°	432.7	432.7	415.7	392.9	381.8
72.5°	382.9	380.7	370.5	354.4	345.6
75°	305.4	305.4	311.1	302.5	297.0
77.5°	237.6	233.1	257.4	256.2	253.4
80°	192.3	192.3	223.4	229.0	226.2
82.5°	151.6	156.0	196.3	204.1	201.4
85°	93.3	112.7	155.5	166.9	166.9
87.5°	42.4	77.1	124.0	139.7	140.2
90°	8.5	60.0	111.1	132.8	135.6
92.5°	28.7	58.1	104.2	129.7	138.4
95°	65.5	94.6	96.6	121.3	133.2
97.5°	100.0	149.3	316.6	140.2	132.6
100°	122.4	180.4	583.1	209.9	160.8
102.5°	142.4	204.1	767.7	465.7	276.1
105°	172.6	233.3	856.5	1101.7	743.2
107.5°	202.7	244.9	812.1	1582.1	1485.6
110°	222.7	263.5	787.5	1657.0	1782.7



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CATALOG NUMBER: CRQ4DIP-SR4F0-125D100U835-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	245.1	285.9	765.2	1606.0	1815.4
115°	275.8	319.3	731.7	1514.7	1769.5
117.5°	306.8	352.8	722.7	1413.7	1675.8
120°	330.6	375.1	705.6	1337.3	1610.3
122.5°	349.2	395.2	687.0	1273.5	1524.7
125°	379.0	423.5	687.0	1196.4	1414.8
127.5°	402.6	451.3	687.9	1107.0	1322.7
130°	415.2	469.8	691.6	1047.2	1251.9
132.5°	429.3	483.9	689.4	1020.3	1188.6
135°	456.1	506.2	688.8	985.3	1130.9
137.5°	479.4	533.1	688.8	946.7	1071.4
140°	498.0	548.0	688.8	924.1	1037.8
142.5°	516.6	563.0	692.5	897.9	1004.3
145°	539.9	585.4	693.4	858.4	949.4
147.5°	567.8	607.8	699.0	830.0	900.1
150°	586.4	622.8	702.8	811.1	870.3
152.5°	605.0	637.8	702.8	796.0	844.2
155°	632.9	655.7	707.4	778.0	814.5
157.5°	655.3	677.1	713.0	766.7	793.0
160°	670.2	688.4	716.7	759.1	781.9
162.5°	681.3	699.6	720.4	755.2	770.7
165°	702.8	711.9	726.0	745.0	758.6
167.5°	714.9	723.0	730.7	740.2	748.4
170°	726.0	730.6	730.7	740.1	744.6
172.5°	729.8	737.9	734.4	736.4	740.9
175°	740.0	744.5	740.0	735.2	730.7
177.5°	740.0	743.6	740.0	739.9	736.3
180°	740.0	740.0	740.0	740.0	740.0

(END OF REPORT)