

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: P644245

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

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644245
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2206-689-28, 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-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

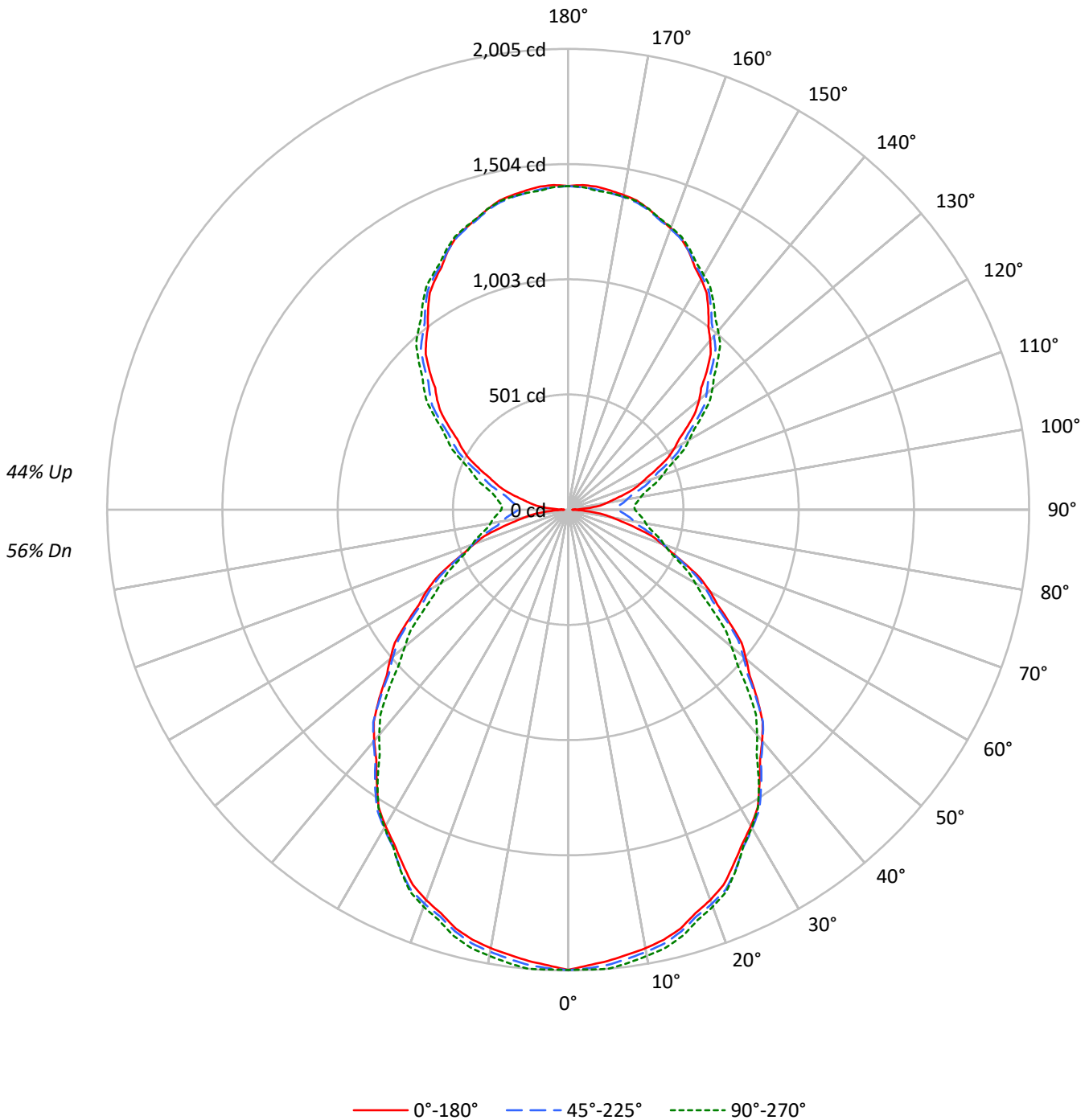
Lumens per Lamp: N/A
Luminaire Lumens: 9320.3 lumens
Efficiency: N/A
Efficacy: 135.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 69
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	109	109	109	109	101	101	101	101	87	87	87	74	74	74	62	62	62	56																				
1	99	94	90	86	91	87	84	80	75	72	70	64	62	60	54	52	51	46																				
2	90	82	75	70	83	76	71	66	66	62	58	56	53	50	47	45	43	38																				
3	82	72	64	58	76	67	60	55	58	53	49	50	46	42	42	39	36	33																				
4	75	64	56	50	69	60	52	47	52	46	42	44	40	36	37	34	31	28																				
5	69	57	49	43	64	53	46	40	46	40	36	40	35	32	34	30	27	24																				
6	63	51	43	37	59	48	41	35	42	36	31	36	31	28	31	27	24	21																				
7	59	46	38	32	54	43	36	31	38	32	28	33	28	25	28	24	22	19																				
8	55	42	34	29	51	40	32	27	35	29	25	30	25	22	26	22	19	17																				
9	51	38	31	26	47	36	29	25	32	26	22	28	23	20	24	20	18	15																				
10	48	35	28	23	44	33	27	22	29	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	25416	23892
15°	30843	22761	20899
20°	30137	20419	18279
25°	29195	18219	15929
30°	28272	16129	13826
35°	27019	14202	11867
40°	25850	12410	10060
45°	24500	10667	8395
50°	23069	9063	6886
55°	21556	7619	5629
60°	20111	6277	4612
65°	18332	5099	3816
70°	16621	4126	3231
75°	14532	3402	2838
80°	12142	2889	2582
85°	8852	2609	2456

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	2.0
10°-20°	536.5	5.8
20°-30°	792.2	8.5
30°-40°	911.4	9.8
40°-50°	884.4	9.5
50°-60°	744.2	8.0
60°-70°	552.4	5.9
70°-80°	373.0	4.0
80°-90°	249.5	2.7
90°-100°	230.1	2.5
100°-110°	329.2	3.5
110°-120°	472.1	5.1
120°-130°	607.2	6.5
130°-140°	685.2	7.4
140°-150°	676.8	7.3
150°-160°	572.5	6.1
160°-170°	381.1	4.1
170°-180°	133.3	1.4
0°-30°	1517.8	16.3
0°-40°	2429.2	26.1
0°-60°	4057.7	43.5
0°-90°	5232.7	56.1
90°-120°	1031.5	11.1
90°-150°	3000.7	32.2
90°-180°	4088.0	43.9
0°-180°	9320.3	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	1917	1899	1906	1920	531
25°	1702	1733	1725	1717	1728	784
35°	1451	1477	1464	1445	1445	908
45°	1162	1178	1155	1120	1103	896
55°	857	874	840	790	771	768
65°	566	577	555	535	528	563
75°	305	317	354	379	385	327
85°	93	148	251	303	316	99
90°	19	105	215	273	290	18
95°	96	124	225	283	294	94
105°	248	252	312	359	369	264
115°	431	443	478	506	514	428
125°	635	654	683	706	712	569
135°	852	871	888	910	921	657
145°	1063	1076	1082	1090	1102	664
155°	1241	1248	1242	1244	1251	570
165°	1354	1360	1350	1345	1354	382
175°	1411	1417	1399	1393	1393	134
180°	1408	1408	1408	1408	1408	

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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	1996.7	2000.1	2002.3
5°	1971.2	2007.2	1988.2	1991.3	2005.1
7.5°	1953.1	1987.5	1971.0	1973.3	1989.3
10°	1937.3	1970.4	1952.9	1957.4	1971.2
12.5°	1916.9	1950.2	1933.6	1939.3	1953.1
15°	1886.4	1916.9	1899.2	1906.5	1920.3
17.5°	1841.1	1872.4	1855.0	1858.4	1872.2
20°	1807.2	1836.3	1825.6	1824.5	1838.3
22.5°	1766.4	1797.8	1789.4	1781.5	1797.6
25°	1702.5	1733.1	1725.2	1716.9	1728.0
27.5°	1639.2	1664.9	1651.7	1641.6	1649.9
30°	1589.4	1617.2	1600.9	1589.6	1597.9
32.5°	1535.1	1564.1	1546.6	1532.9	1536.8
35°	1450.8	1477.3	1463.8	1445.2	1445.2
37.5°	1371.1	1391.3	1377.7	1352.3	1346.2
40°	1312.2	1334.7	1316.6	1286.6	1278.3
42.5°	1251.2	1273.6	1254.4	1220.9	1208.2
45°	1162.4	1177.8	1155.4	1119.6	1103.0
47.5°	1070.7	1087.9	1057.5	1017.7	997.8
50°	1009.6	1027.9	994.3	949.7	927.6
52.5°	950.8	965.8	932.0	883.1	864.4
55°	856.9	873.8	840.1	790.3	771.2
57.5°	769.2	785.6	748.0	707.7	691.5
60°	712.7	726.8	690.4	652.6	637.6
62.5°	649.3	664.6	631.7	604.3	591.7
65°	565.6	577.2	555.1	534.8	528.3
67.5°	487.0	495.8	483.9	478.9	476.9
70°	432.7	441.5	441.1	445.4	444.6
72.5°	382.9	390.7	404.3	416.6	417.9
75°	305.4	317.1	354.4	379.0	385.1
77.5°	237.6	248.9	313.9	348.8	358.0
80°	192.3	212.8	290.7	332.4	342.8
82.5°	151.6	181.1	273.1	320.7	331.1
85°	93.3	147.8	251.2	303.2	316.3
87.5°	44.5	121.2	231.0	286.4	301.6
90°	18.9	105.4	215.4	273.1	290.5
92.5°	48.3	108.0	216.4	272.9	287.8
95°	95.5	123.5	225.3	282.7	294.3
97.5°	140.1	151.3	243.6	296.1	307.6
100°	170.0	175.4	259.6	309.9	321.3
102.5°	201.2	203.1	279.3	327.2	338.7
105°	248.0	251.9	311.6	359.0	368.9
107.5°	300.2	305.2	354.4	397.8	406.7
110°	335.0	344.6	386.8	425.6	435.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	374.5	384.0	421.5	455.7	465.8
115°	430.8	443.1	478.0	506.5	513.8
117.5°	489.6	504.7	536.0	561.4	568.4
120°	532.8	547.7	576.8	601.0	606.8
122.5°	572.2	588.5	618.6	642.8	648.7
125°	634.6	653.9	682.9	705.6	711.5
127.5°	698.4	718.7	745.4	768.4	776.0
130°	744.0	763.0	786.0	810.3	819.1
132.5°	784.9	803.9	825.6	851.0	860.9
135°	852.0	870.9	887.8	910.5	920.7
137.5°	916.8	935.2	948.2	966.1	979.0
140°	961.1	977.1	986.5	1003.2	1014.9
142.5°	1001.7	1017.8	1024.7	1039.0	1050.7
145°	1062.7	1075.8	1082.1	1089.9	1101.6
147.5°	1119.8	1132.7	1135.3	1142.1	1149.4
150°	1156.9	1168.5	1168.8	1172.0	1179.3
152.5°	1191.5	1202.1	1198.7	1200.7	1209.2
155°	1240.6	1247.9	1242.1	1243.7	1251.0
157.5°	1279.4	1286.7	1277.6	1280.4	1286.3
160°	1303.3	1310.6	1300.3	1302.0	1307.8
162.5°	1326.1	1331.0	1321.9	1320.0	1328.1
165°	1354.2	1360.0	1349.7	1345.4	1354.2
167.5°	1378.1	1383.9	1370.3	1365.7	1374.5
170°	1390.0	1395.9	1381.1	1375.3	1384.0
172.5°	1400.8	1406.6	1390.6	1383.6	1390.0
175°	1410.9	1416.8	1399.0	1393.0	1393.0
177.5°	1413.9	1417.4	1404.4	1398.6	1405.6
180°	1408.0	1408.0	1408.0	1408.0	1408.0

(END OF REPORT)