

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: P644399

Luminaire Tested: CRQ4DIP-SR4F0-75D125U830-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644399
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-SR4F0-75D125U830-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

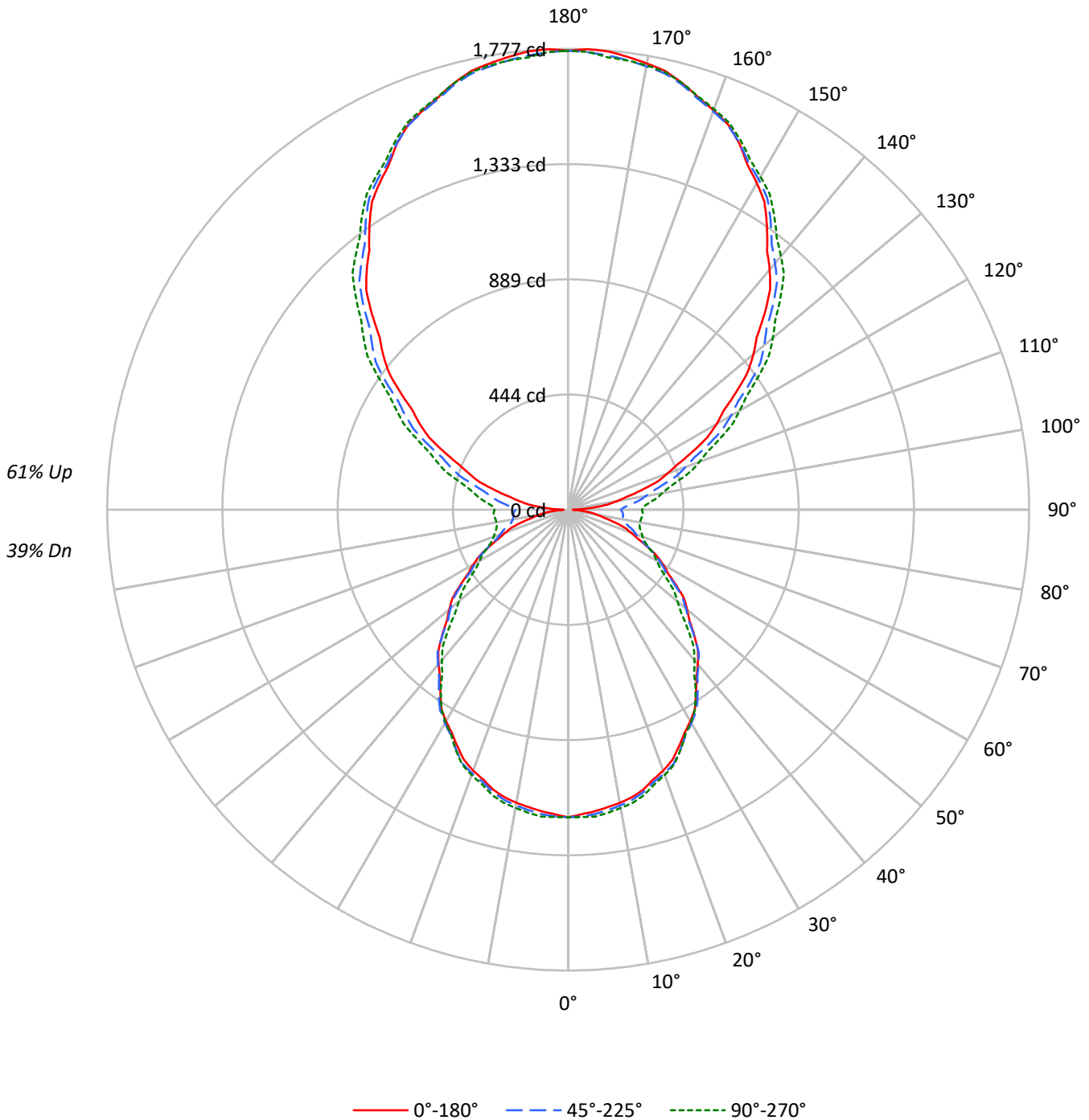
Lumens per Lamp: N/A
Luminaire Lumens: 8285.0 lumens
Efficiency: N/A
Efficacy: 138.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 60
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

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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	0
RCR																		
0	104	104	104	104	95	95	95	95	77	77	77	61	61	61	46	46	46	39
1	95	90	86	82	86	82	78	75	66	64	62	52	51	49	39	38	37	31
2	86	78	72	67	78	71	66	61	58	54	51	46	43	41	34	33	31	26
3	78	69	61	56	71	63	56	51	51	46	43	40	37	34	30	28	26	22
4	72	61	53	47	65	55	49	43	45	40	36	36	32	29	27	25	23	19
5	66	54	46	40	59	49	42	37	41	35	31	32	28	25	25	22	20	16
6	60	48	40	35	55	44	37	32	36	31	27	29	25	22	22	20	17	14
7	56	44	36	30	51	40	33	28	33	28	24	27	23	20	20	18	16	13
8	52	40	32	27	47	36	30	25	30	25	21	24	20	17	19	16	14	11
9	48	36	29	24	44	33	27	22	28	22	19	22	18	16	17	15	13	10
10	45	33	26	21	41	30	24	20	25	20	17	21	17	14	16	13	11	9

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19151	19151	19151
5°	18789	16910	16384
10°	18542	15069	14153
15°	18270	13495	12380
20°	17852	12108	10829
25°	17294	10792	9436
30°	16747	9574	8190
35°	16005	8442	7030
40°	15314	7361	5959
45°	14514	6328	4973
50°	13666	5396	4079
55°	12769	4532	3386
60°	11914	3754	2847
65°	10861	3112	2462
70°	9845	2602	2218
75°	8608	2293	2114
80°	7192	2156	2114
85°	5247	2206	2226

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 14514 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	112.0	1.4
10°-20°	318.0	3.8
20°-30°	469.6	5.7
30°-40°	540.7	6.5
40°-50°	524.9	6.3
50°-60°	444.2	5.4
60°-70°	340.5	4.1
70°-80°	252.6	3.0
80°-90°	208.6	2.5
90°-100°	247.7	3.0
100°-110°	398.8	4.8
110°-120°	588.3	7.1
120°-130°	761.1	9.2
130°-140°	861.1	10.4
140°-150°	850.8	10.3
150°-160°	719.6	8.7
160°-170°	479.1	5.8
170°-180°	167.6	2.0
0°-30°	899.6	10.9
0°-40°	1440.3	17.4
0°-60°	2409.4	29.1
0°-90°	3211.1	38.8
90°-120°	1234.7	14.9
90°-150°	3707.7	44.8
90°-180°	5074.0	61.2
0°-180°	8285.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1186	1186	1186	1186	1186	
5°	1168	1189	1178	1180	1188	111
15°	1117	1138	1126	1129	1138	314
25°	1008	1029	1022	1017	1024	465
35°	859	878	870	856	856	538
45°	689	701	685	663	653	531
55°	508	522	500	471	464	455
65°	335	348	339	340	341	333
75°	181	196	239	275	287	193
85°	55	111	212	270	287	59
90°	18	96	203	264	284	16
95°	101	138	244	303	315	102
105°	293	309	382	434	443	312
115°	528	551	597	633	642	525
125°	790	818	857	887	894	708
135°	1071	1095	1116	1144	1157	825
145°	1336	1352	1360	1370	1385	834
155°	1560	1569	1561	1563	1573	716
165°	1702	1710	1697	1691	1702	480
175°	1774	1781	1759	1751	1751	168
180°	1770	1770	1770	1770	1770	

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1186.1	<i>1186.1</i>	1186.1	1186.1	1186.1
2.5°	1175.4	<i>1192.4</i>	1183.6	1184.8	1186.1
5°	1167.7	<i>1189.0</i>	1177.8	1179.6	1187.8
7.5°	1157.0	<i>1178.1</i>	1168.6	1168.9	1178.4
10°	1147.6	<i>1167.3</i>	1157.9	1159.5	1167.7
12.5°	1135.5	<i>1156.8</i>	1145.6	1148.8	1157.0
15°	1117.4	<i>1137.5</i>	1126.0	1129.4	1137.5
17.5°	1090.6	<i>1110.2</i>	1099.9	1100.9	1109.1
20°	1070.5	<i>1088.8</i>	1082.5	1080.8	1089.0
22.5°	1046.4	<i>1065.9</i>	1061.0	1055.3	1064.8
25°	1008.5	<i>1028.6</i>	1021.9	1017.1	1023.6
27.5°	971.0	<i>989.8</i>	979.6	972.5	977.4
30°	941.5	<i>960.0</i>	950.3	941.6	946.6
32.5°	909.4	<i>929.3</i>	918.2	908.1	910.4
35°	859.4	<i>878.1</i>	870.1	856.1	856.1
37.5°	812.2	<i>828.1</i>	817.1	801.1	797.5
40°	777.4	<i>794.5</i>	780.9	762.2	757.2
42.5°	741.2	<i>758.3</i>	744.9	723.2	715.7
45°	688.6	<i>700.6</i>	685.4	663.2	653.4
47.5°	634.3	<i>648.1</i>	627.9	602.8	591.1
50°	598.1	<i>611.8</i>	592.0	562.6	549.5
52.5°	563.2	<i>575.8</i>	554.3	524.0	513.6
55°	507.6	<i>521.5</i>	499.7	471.2	463.8
57.5°	455.7	<i>469.3</i>	446.3	428.2	420.8
60°	422.2	<i>434.4</i>	412.9	399.6	393.6
62.5°	384.7	<i>398.4</i>	379.8	375.0	372.0
65°	335.1	<i>347.7</i>	338.8	339.8	340.8
67.5°	288.5	<i>299.5</i>	300.3	313.8	318.7
70°	256.3	<i>267.3</i>	278.2	298.8	305.1
72.5°	226.8	<i>238.0</i>	261.9	288.0	295.7
75°	180.9	<i>195.6</i>	238.8	275.3	286.8
77.5°	140.7	<i>157.9</i>	223.5	268.2	281.6
80°	113.9	<i>139.6</i>	216.9	265.7	280.6
82.5°	89.8	<i>124.0</i>	212.8	267.5	282.4
85°	55.3	<i>110.8</i>	212.4	270.2	286.7
87.5°	27.8	<i>101.8</i>	209.2	269.0	287.7
90°	18.2	<i>95.6</i>	203.1	264.3	284.4
92.5°	49.1	<i>107.6</i>	216.4	276.1	291.5
95°	101.3	<i>138.2</i>	243.7	302.7	315.4
97.5°	153.5	<i>179.0</i>	277.6	332.7	345.0
100°	191.1	<i>210.8</i>	303.8	357.5	368.1
102.5°	231.8	<i>247.2</i>	334.5	385.3	397.5
105°	292.9	<i>308.8</i>	382.3	434.3	443.1
107.5°	360.8	<i>377.8</i>	440.2	489.5	498.8
110°	406.1	<i>427.3</i>	482.5	527.4	538.2

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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	455.7	476.9	526.1	568.3	579.1
115°	528.4	551.3	597.1	633.0	642.2
117.5°	604.6	628.6	670.4	704.2	713.1
120°	660.3	682.8	723.2	755.5	762.8
122.5°	709.9	735.5	775.8	808.1	815.4
125°	790.2	818.1	856.6	887.0	894.3
127.5°	872.7	899.7	935.1	966.0	975.5
130°	931.5	955.4	986.2	1018.6	1029.6
132.5°	986.0	1009.8	1037.5	1069.7	1082.2
135°	1071.0	1094.8	1116.0	1144.5	1157.4
137.5°	1152.5	1175.6	1192.0	1214.5	1230.7
140°	1208.1	1228.3	1240.1	1261.1	1275.8
142.5°	1259.2	1279.4	1288.2	1306.1	1320.8
145°	1335.9	1352.4	1360.3	1370.0	1384.7
147.5°	1407.7	1423.8	1427.2	1435.7	1444.9
150°	1454.2	1468.9	1469.3	1473.2	1482.4
152.5°	1497.8	1511.1	1506.9	1509.4	1520.0
155°	1559.5	1568.6	1561.3	1563.4	1572.6
157.5°	1608.3	1617.5	1606.1	1609.6	1617.0
160°	1638.4	1647.6	1634.6	1636.7	1644.0
162.5°	1666.9	1673.2	1661.7	1659.3	1669.6
165°	1702.3	1709.6	1696.6	1691.2	1702.3
167.5°	1732.3	1739.7	1722.5	1716.8	1727.8
170°	1747.4	1754.7	1736.1	1728.8	1739.8
172.5°	1760.9	1768.2	1748.1	1739.3	1747.4
175°	1773.7	1781.0	1758.6	1751.1	1751.1
177.5°	1777.4	1781.8	1765.4	1758.1	1766.9
180°	1769.9	1769.9	1769.9	1769.9	1769.9

(END OF REPORT)