

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: P644387

Luminaire Tested: CRQ4DIP-SR4F0-75D100U830-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644387
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-SR4F0-75D100U830-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 750 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

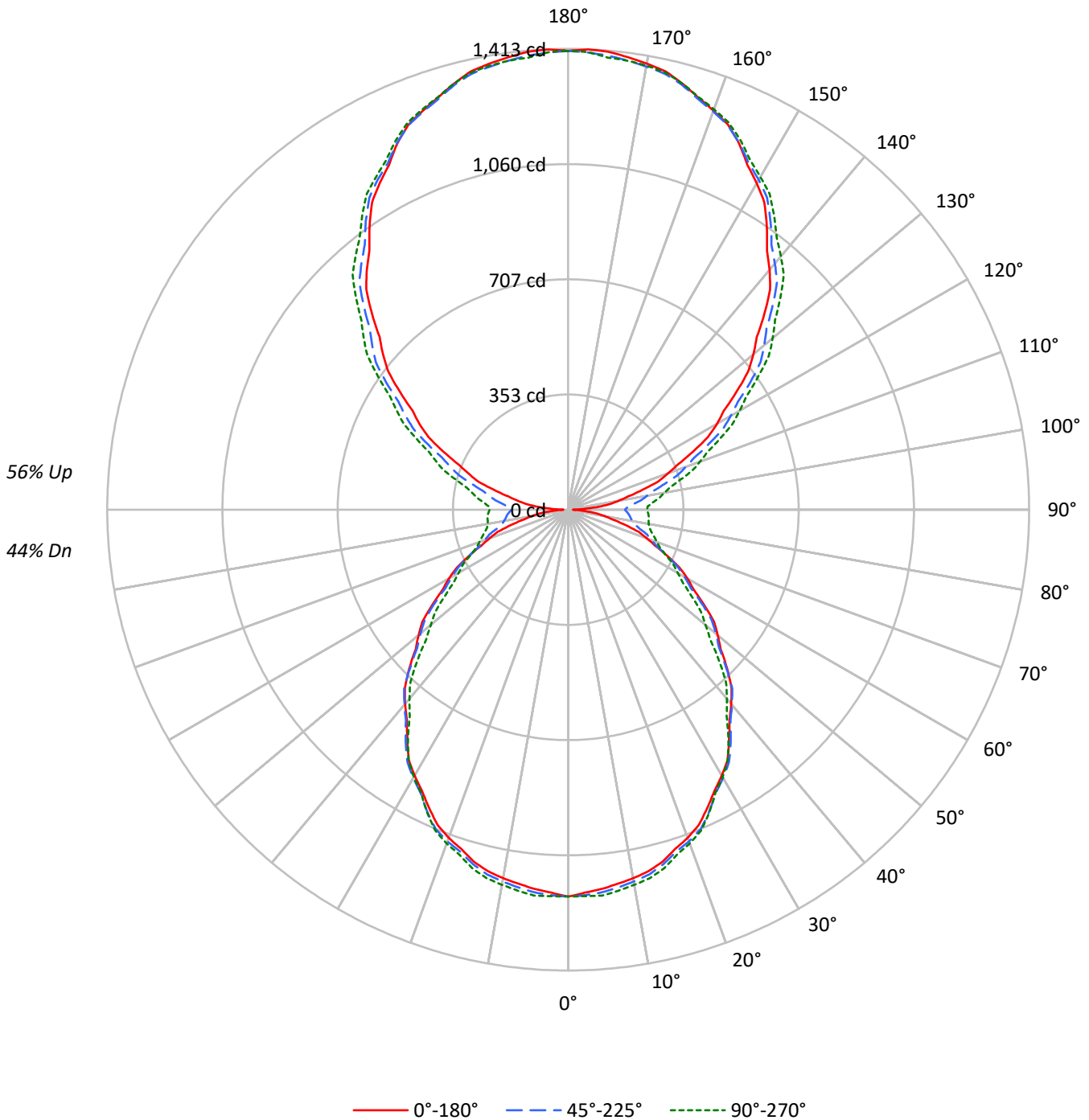
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7212.3 lumens
Efficiency: N/A
Efficacy: 142.0 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): 50.8
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	0
RCR																		
0	106	106	106	106	97	97	97	97	80	80	80	65	65	65	51	51	51	44
1	96	91	87	83	87	83	80	77	69	66	64	56	54	52	44	42	41	36
2	87	79	73	68	79	73	67	63	60	56	53	49	46	43	38	36	35	30
3	79	70	62	56	72	64	58	52	53	48	44	43	40	37	34	31	29	25
4	73	62	54	48	66	57	50	44	47	42	38	38	35	31	30	28	25	21
5	67	55	47	41	61	51	43	38	42	37	33	35	30	27	27	24	22	19
6	61	49	41	35	56	45	38	33	38	33	28	31	27	24	25	22	19	16
7	57	44	37	31	52	41	34	29	35	29	25	28	24	21	23	20	17	15
8	53	40	33	27	48	37	30	26	31	26	22	26	22	19	21	18	16	13
9	49	37	29	24	45	34	27	23	29	24	20	24	20	17	19	16	14	12
10	46	34	27	22	42	31	25	20	27	21	18	22	18	15	18	15	13	11

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	19151	19151	19151
5°	18789	16910	16384
10°	18542	15064	14153
15°	18270	13490	12380
20°	17852	12103	10829
25°	17294	10792	9436
30°	16747	9566	8190
35°	16005	8430	7030
40°	15314	7357	5959
45°	14514	6324	4973
50°	13666	5385	4079
55°	12769	4525	3366
60°	11914	3741	2802
65°	10861	3076	2384
70°	9845	2541	2100
75°	8608	2185	1946
80°	7192	1983	1887
85°	5247	1949	1927

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	1.6
10°-20°	317.9	4.4
20°-30°	469.5	6.5
30°-40°	540.4	7.5
40°-50°	524.5	7.3
50°-60°	442.9	6.1
60°-70°	335.4	4.6
70°-80°	240.3	3.3
80°-90°	185.0	2.6
90°-100°	204.5	2.8
100°-110°	319.7	4.4
110°-120°	468.5	6.5
120°-130°	605.3	8.4
130°-140°	684.4	9.5
140°-150°	676.2	9.4
150°-160°	571.9	7.9
160°-170°	380.8	5.3
170°-180°	133.2	1.8
0°-30°	899.4	12.5
0°-40°	1439.8	20.0
0°-60°	2407.2	33.4
0°-90°	3167.9	43.9
90°-120°	992.7	13.8
90°-150°	2958.6	41.0
90°-180°	4044.0	56.1
0°-180°	7212.3	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	1137	1126	1129	1138	314
25°	1008	1028	1022	1017	1024	465
35°	859	877	869	856	856	538
45°	689	700	685	663	653	531
55°	508	520	499	470	461	455
65°	335	346	335	331	330	333
75°	181	193	228	256	264	193
85°	55	102	188	235	248	59
90°	16	83	174	224	241	14
95°	84	113	201	250	261	84
105°	236	247	306	348	356	252
115°	422	439	475	504	511	419
125°	629	651	681	705	711	564
135°	851	870	887	910	920	656
145°	1062	1075	1081	1089	1101	663
155°	1239	1247	1241	1243	1250	569
165°	1353	1359	1348	1344	1353	381
175°	1410	1416	1398	1392	1392	134
180°	1407	1407	1407	1407	1407	

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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>	1183.3	1184.8	1186.1
5°	1167.7	<i>1189.0</i>	1177.8	1179.6	1187.8
7.5°	1157.0	<i>1177.8</i>	1168.2	1168.9	1178.4
10°	1147.6	<i>1167.3</i>	1157.5	1159.5	1167.7
12.5°	1135.5	<i>1156.2</i>	1145.6	1148.8	1157.0
15°	1117.4	<i>1136.7</i>	1125.6	1129.4	1137.5
17.5°	1090.6	<i>1109.8</i>	1099.5	1100.9	1109.1
20°	1070.5	<i>1088.4</i>	1082.1	1080.8	1089.0
22.5°	1046.4	<i>1065.6</i>	1060.6	1055.3	1064.8
25°	1008.5	<i>1027.8</i>	1021.9	1017.1	1023.6
27.5°	971.0	<i>988.4</i>	979.2	972.5	977.4
30°	941.5	<i>959.2</i>	949.5	941.6	946.6
32.5°	909.4	<i>928.2</i>	917.4	908.1	910.4
35°	859.4	<i>876.9</i>	868.9	856.1	856.1
37.5°	812.2	<i>826.6</i>	816.7	801.1	797.5
40°	777.4	<i>793.0</i>	780.5	762.2	757.2
42.5°	741.2	<i>756.8</i>	744.2	723.2	715.7
45°	688.6	<i>699.5</i>	685.0	663.2	653.4
47.5°	634.3	<i>646.7</i>	627.3	602.8	591.1
50°	598.1	<i>610.7</i>	590.8	562.6	549.5
52.5°	563.2	<i>574.4</i>	553.5	523.7	513.0
55°	507.6	<i>520.0</i>	498.9	470.0	461.1
57.5°	455.7	<i>467.8</i>	445.1	424.7	416.5
60°	422.2	<i>432.9</i>	411.4	394.5	387.4
62.5°	384.7	<i>396.6</i>	377.6	368.4	363.6
65°	335.1	<i>345.5</i>	334.9	330.9	330.0
67.5°	288.5	<i>297.3</i>	295.0	302.1	304.6
70°	256.3	<i>265.1</i>	271.7	285.2	288.9
72.5°	226.8	<i>235.5</i>	253.2	272.0	277.0
75°	180.9	<i>192.6</i>	227.6	255.6	264.0
77.5°	140.7	<i>153.9</i>	208.9	244.3	254.6
80°	113.9	<i>134.4</i>	199.5	239.0	250.5
82.5°	89.8	<i>117.5</i>	193.0	237.4	248.9
85°	55.3	<i>101.8</i>	187.7	235.0	248.2
87.5°	27.2	<i>90.1</i>	181.1	230.5	245.4
90°	15.5	<i>82.7</i>	173.8	224.5	240.8
92.5°	41.1	<i>90.6</i>	182.2	231.7	244.5
95°	84.0	<i>113.0</i>	200.9	250.2	260.6
97.5°	126.1	<i>144.3</i>	225.9	271.7	281.8
100°	156.0	<i>169.3</i>	245.6	290.0	299.1
102.5°	188.1	<i>198.0</i>	268.9	311.0	321.1
105°	236.3	<i>246.9</i>	305.5	348.3	355.9
107.5°	289.8	<i>301.3</i>	350.8	390.9	398.7
110°	325.5	<i>340.7</i>	384.1	420.5	429.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	364.9	380.1	418.8	452.5	461.5
115°	422.4	439.2	475.2	503.8	511.1
117.5°	482.5	500.7	533.4	560.0	567.0
120°	526.6	543.7	575.1	600.4	606.3
122.5°	566.0	585.3	616.9	642.3	648.1
125°	629.4	651.0	681.1	705.0	710.8
127.5°	694.6	715.8	743.5	767.7	775.3
130°	741.0	760.0	784.2	809.6	818.3
132.5°	783.8	802.7	824.6	850.2	860.1
135°	851.2	870.2	887.0	909.7	919.9
137.5°	916.0	934.4	947.4	965.3	978.1
140°	960.2	976.3	985.6	1002.3	1014.0
142.5°	1000.8	1016.9	1023.8	1038.1	1049.8
145°	1061.7	1074.9	1081.1	1088.9	1100.6
147.5°	1118.8	1131.6	1134.3	1141.0	1148.3
150°	1155.8	1167.5	1167.8	1170.9	1178.2
152.5°	1190.5	1201.0	1197.6	1199.6	1208.1
155°	1239.4	1246.7	1240.9	1242.6	1249.9
157.5°	1278.3	1285.6	1276.5	1279.3	1285.1
160°	1302.2	1309.5	1299.2	1300.8	1306.6
162.5°	1324.9	1329.8	1320.7	1318.8	1326.9
165°	1352.9	1358.8	1348.5	1344.2	1352.9
167.5°	1376.8	1382.7	1369.1	1364.5	1373.2
170°	1388.8	1394.6	1379.8	1374.0	1382.8
172.5°	1399.5	1405.4	1389.4	1382.3	1388.8
175°	1409.7	1415.5	1397.7	1391.8	1391.8
177.5°	1412.7	1416.2	1403.1	1397.3	1404.3
180°	1406.7	1406.7	1406.7	1406.7	1406.7

(END OF REPORT)