

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: P644189

Luminaire Tested: CRQ4DIP-SR4F0-100D125U930-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644189
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-SR4F0-100D125U930-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1250 LUMENS PER FOOT
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

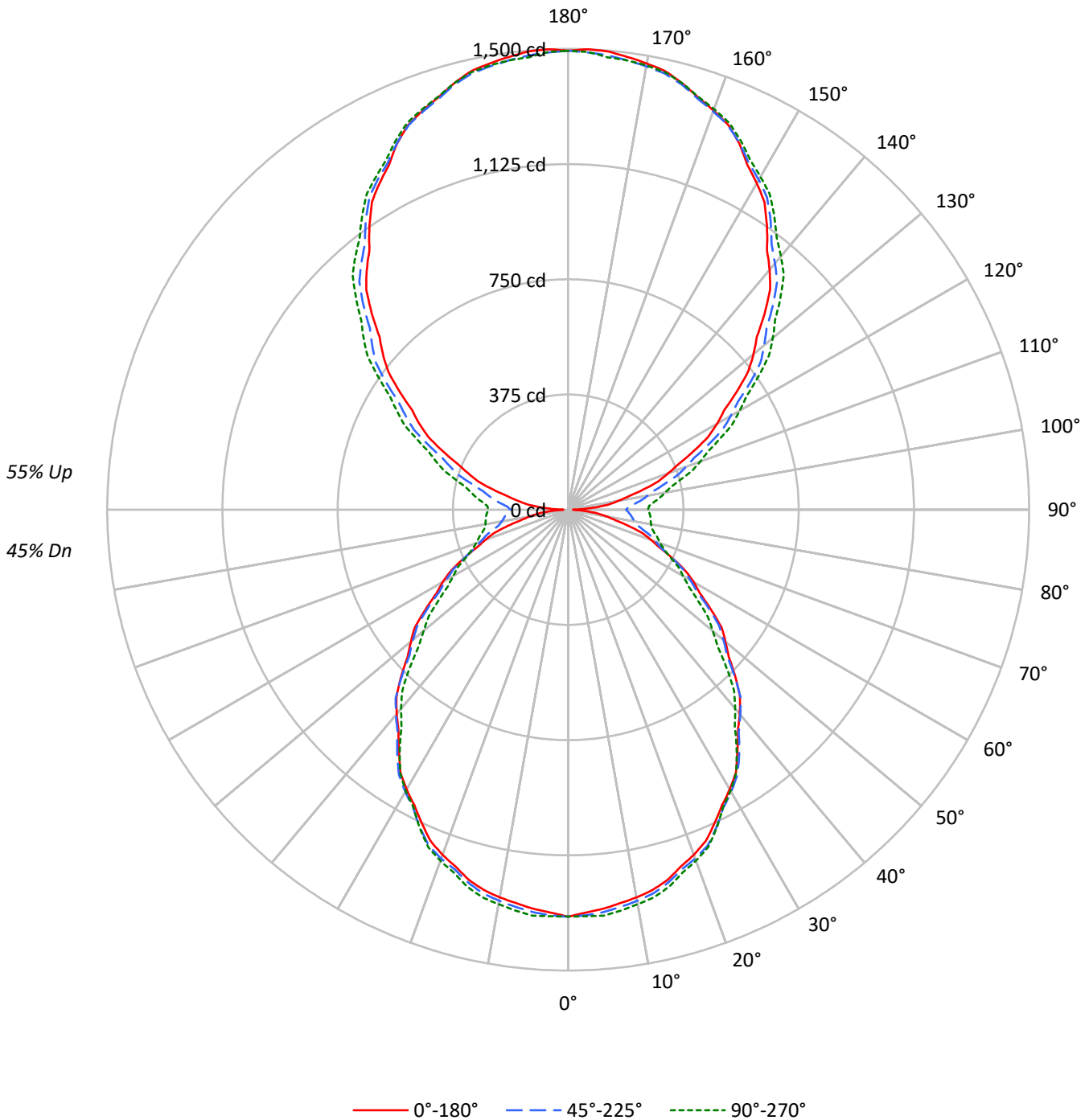
Lumens per Lamp: N/A
Luminaire Lumens: 7825.9 lumens
Efficiency: N/A
Efficacy: 114.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 68.1
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	50	30	10	0	
RCR																						
0	106	106	106	106	97	97	97	97	81	81	81	65	65	65	52	52	52	45				
1	96	91	87	84	88	84	80	77	70	67	65	57	55	53	44	43	42	37				
2	87	80	73	68	80	73	68	63	61	57	53	49	47	44	39	37	35	30				
3	80	70	63	57	73	64	58	53	54	49	45	44	40	37	35	32	30	26				
4	73	62	54	48	66	57	50	45	48	42	38	39	35	32	31	28	26	22				
5	67	55	47	41	61	51	44	38	43	37	33	35	31	28	28	25	23	19				
6	62	49	41	36	56	46	38	33	38	33	29	32	27	24	25	22	20	17				
7	57	45	37	31	52	41	34	29	35	29	25	29	25	21	23	20	18	15				
8	53	41	33	27	48	38	31	26	32	26	22	26	22	19	21	18	16	13				
9	49	37	30	24	45	34	28	23	29	24	20	24	20	17	20	17	14	12				
10	46	34	27	22	42	31	25	21	27	22	18	22	18	16	18	15	13	11				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	21385	21385	21385
5°	20980	18881	18295
10°	20704	16820	15804
15°	20402	15062	13824
20°	19935	13514	12092
25°	19313	12051	10536
30°	18700	10680	9145
35°	17873	9411	7849
40°	17099	8215	6655
45°	16206	7061	5553
50°	15259	6012	4555
55°	14258	5051	3754
60°	13302	4174	3120
65°	12125	3428	2645
70°	10994	2824	2319
75°	9612	2417	2137
80°	8031	2178	2059
85°	5854	2123	2088

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16206 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	125.1	1.6
10°-20°	355.0	4.5
20°-30°	524.2	6.7
30°-40°	603.3	7.7
40°-50°	585.6	7.5
50°-60°	494.3	6.3
60°-70°	373.4	4.8
70°-80°	265.8	3.4
80°-90°	201.6	2.6
90°-100°	219.2	2.8
100°-110°	340.2	4.3
110°-120°	497.7	6.4
120°-130°	642.9	8.2
130°-140°	726.8	9.3
140°-150°	718.0	9.2
150°-160°	607.3	7.8
160°-170°	404.4	5.2
170°-180°	141.4	1.8
0°-30°	1004.3	12.8
0°-40°	1607.6	20.5
0°-60°	2687.4	34.3
0°-90°	3528.1	45.1
90°-120°	1057.1	13.5
90°-150°	3144.7	40.2
90°-180°	4298.0	54.9
0°-180°	7825.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1324	1324	1324	1324	1324	
5°	1304	1328	1315	1317	1326	124
15°	1248	1269	1257	1261	1270	351
25°	1126	1148	1141	1136	1143	519
35°	960	979	970	956	956	601
45°	769	781	765	740	730	593
55°	567	580	557	525	514	508
65°	374	385	373	368	366	372
75°	202	214	252	281	290	216
85°	62	112	204	255	269	65
90°	17	90	188	242	260	15
95°	90	121	215	268	279	90
105°	252	262	325	371	379	268
115°	449	467	505	535	543	446
125°	669	691	723	749	755	599
135°	904	924	942	966	977	697
145°	1127	1141	1148	1156	1169	704
155°	1316	1324	1318	1320	1327	604
165°	1437	1443	1432	1427	1437	405
175°	1497	1503	1484	1478	1478	142
180°	1494	1494	1494	1494	1494	



TEST NUMBER: P644189

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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1324.5	1324.5	1324.5	1324.5	1324.5
2.5°	1312.5	1331.5	1321.2	1323.0	1324.5
5°	1303.9	1327.7	1315.1	1317.2	1326.3
7.5°	1291.9	1315.1	1304.3	1305.2	1315.9
10°	1281.4	1303.4	1292.4	1294.7	1303.9
12.5°	1268.0	1290.9	1279.1	1282.8	1291.9
15°	1247.8	1269.2	1256.8	1261.1	1270.2
17.5°	1217.8	1239.1	1227.6	1229.3	1238.4
20°	1195.4	1215.2	1208.2	1206.8	1216.0
22.5°	1168.4	1189.7	1184.2	1178.4	1189.0
25°	1126.2	1147.6	1141.1	1135.7	1143.0
27.5°	1084.3	1103.4	1093.3	1085.9	1091.4
30°	1051.3	1070.9	1060.1	1051.5	1056.9
32.5°	1015.4	1036.2	1024.2	1014.0	1016.5
35°	959.7	979.0	970.0	955.9	955.9
37.5°	906.9	922.6	911.9	894.5	890.5
40°	868.0	885.2	871.5	851.0	845.6
42.5°	827.6	844.8	830.8	807.6	799.2
45°	768.9	780.8	764.8	740.5	729.6
47.5°	708.2	721.8	700.4	673.2	660.0
50°	667.8	681.6	659.5	628.2	613.6
52.5°	628.9	641.0	617.8	584.7	572.7
55°	566.8	580.3	556.9	524.6	514.3
57.5°	508.8	522.0	496.7	473.5	464.1
60°	471.4	483.1	459.1	439.5	431.3
62.5°	429.5	442.4	421.2	409.9	404.3
65°	374.1	385.3	373.2	367.6	366.2
67.5°	322.1	331.4	328.3	334.9	337.2
70°	286.2	295.5	301.9	315.6	319.1
72.5°	253.3	262.4	280.9	300.3	305.3
75°	202.0	214.4	251.8	281.2	290.0
77.5°	157.1	171.0	230.2	267.7	278.6
80°	127.2	148.9	219.1	261.2	273.3
82.5°	100.3	129.9	211.3	258.7	270.8
85°	61.7	111.7	204.4	255.0	268.9
87.5°	30.3	98.2	196.3	249.2	265.0
90°	16.7	89.7	187.9	242.3	259.6
92.5°	44.3	97.6	196.2	249.3	263.1
95°	90.1	120.8	215.3	268.3	279.4
97.5°	135.0	153.8	241.2	290.4	301.3
100°	166.7	180.3	261.9	309.5	319.4
102.5°	200.8	210.6	286.3	331.5	342.3
105°	251.8	262.5	324.9	370.6	378.9
107.5°	308.5	320.3	372.8	415.6	424.0
110°	346.4	362.0	408.1	446.9	456.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	388.2	403.9	444.9	480.7	490.3
115°	449.2	466.6	504.8	535.1	542.9
117.5°	512.9	531.9	566.6	594.7	602.2
120°	559.6	577.6	610.8	637.6	643.8
122.5°	601.4	621.8	655.2	682.0	688.2
125°	668.7	691.4	723.4	748.6	754.8
127.5°	737.8	760.2	789.6	815.2	823.3
130°	787.1	807.2	832.8	859.6	869.0
132.5°	832.3	852.4	875.7	902.8	913.3
135°	903.8	924.0	941.9	965.9	976.8
137.5°	972.7	992.2	1006.0	1025.0	1038.6
140°	1019.6	1036.6	1046.5	1064.3	1076.7
142.5°	1062.7	1079.8	1087.1	1102.3	1114.7
145°	1127.4	1141.4	1148.0	1156.2	1168.6
147.5°	1188.0	1201.6	1204.5	1211.6	1219.4
150°	1227.3	1239.7	1240.0	1243.3	1251.1
152.5°	1264.1	1275.3	1271.7	1273.8	1282.8
155°	1316.1	1323.9	1317.7	1319.5	1327.2
157.5°	1357.3	1365.1	1355.4	1358.4	1364.6
160°	1382.7	1390.5	1379.5	1381.3	1387.5
162.5°	1406.8	1412.1	1402.4	1400.4	1409.0
165°	1436.6	1442.8	1431.9	1427.3	1436.6
167.5°	1462.0	1468.2	1453.7	1448.9	1458.2
170°	1474.7	1480.9	1465.2	1459.0	1468.3
172.5°	1486.1	1492.3	1475.3	1467.9	1474.7
175°	1496.9	1503.1	1484.2	1477.9	1477.9
177.5°	1500.1	1503.8	1489.9	1483.7	1491.2
180°	1493.7	1493.7	1493.7	1493.7	1493.7

(END OF REPORT)