

Signify Classified - Internal
Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: P644173

Luminaire Tested: CRQ4DIP-SR4F0-100D100U835-FLLFLL-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644173
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-SR4F0-100D100U835-FLLFLL-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

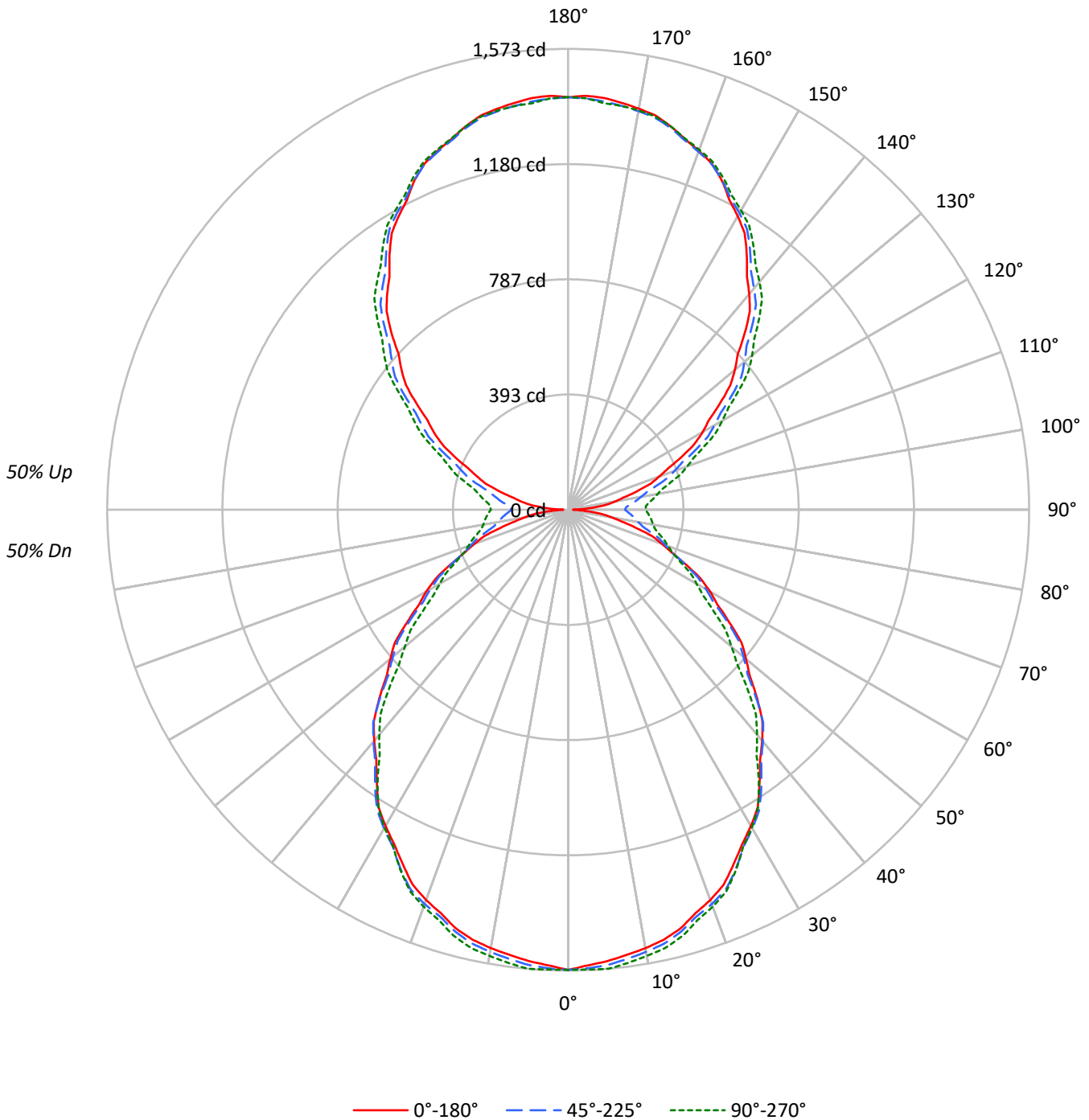
Lumens per Lamp: N/A
Luminaire Lumens: 8207.7 lumens
Efficiency: N/A
Efficacy: 139.3 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: General Diffuse

Input Watts (W): 58.9
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	50	30	10	0	
RCR																						
0	107	107	107	107	99	99	99	99	84	84	84	69	69	69	57	57	57	50				
1	97	93	88	85	89	86	82	79	72	70	67	60	58	57	49	48	46	41				
2	88	81	74	69	81	75	69	64	63	59	56	53	50	47	43	41	39	34				
3	81	71	63	57	74	66	59	54	56	51	47	47	43	40	38	35	33	29				
4	74	63	55	49	68	58	51	46	50	44	40	42	37	34	34	31	29	25				
5	68	56	48	42	62	52	45	39	44	39	34	37	33	30	31	28	25	22				
6	62	50	42	36	57	47	39	34	40	34	30	34	29	26	28	25	22	19				
7	58	45	37	32	53	42	35	30	36	31	26	31	26	23	26	22	20	17				
8	54	41	33	28	49	38	31	27	33	28	24	28	24	21	24	20	18	15				
9	50	38	30	25	46	35	28	24	30	25	21	26	22	18	22	18	16	14				
10	47	35	27	23	43	32	26	21	28	23	19	24	20	17	20	17	14	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	25362	25362	25362
5°	24882	22393	21698
10°	24555	19942	18743
15°	24195	17860	16394
20°	23642	16022	14340
25°	22904	14292	12496
30°	22180	12659	10846
35°	21196	11151	9309
40°	20279	9738	7892
45°	19218	8371	6586
50°	18097	7119	5402
55°	16910	5983	4433
60°	15777	4936	3656
65°	14381	4030	3058
70°	13037	3288	2633
75°	11401	2759	2367
80°	9528	2410	2216
85°	6945	2261	2177

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 19218 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	148.3	1.8
10°-20°	420.9	5.1
20°-30°	621.6	7.6
30°-40°	715.2	8.7
40°-50°	694.1	8.5
50°-60°	584.9	7.1
60°-70°	437.7	5.3
70°-80°	302.9	3.7
80°-90°	215.5	2.6
90°-100°	216.7	2.6
100°-110°	324.3	4.0
110°-120°	470.4	5.7
120°-130°	606.5	7.4
130°-140°	685.1	8.3
140°-150°	676.8	8.2
150°-160°	572.5	7.0
160°-170°	381.1	4.6
170°-180°	133.3	1.6
0°-30°	1190.8	14.5
0°-40°	1906.0	23.2
0°-60°	3185.0	38.8
0°-90°	4141.1	50.5
90°-120°	1011.4	12.3
90°-150°	2979.8	36.3
90°-180°	4067.0	49.6
0°-180°	8207.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1571	1571	1571	1571	1571	
5°	1546	1575	1560	1562	1573	147
15°	1480	1504	1490	1496	1506	416
25°	1336	1360	1353	1347	1356	615
35°	1138	1160	1149	1134	1134	713
45°	912	925	907	878	865	703
55°	672	687	660	621	607	603
65°	444	455	439	427	423	441
75°	240	251	287	314	321	256
85°	73	124	218	267	280	78
90°	17	94	194	248	264	16
95°	89	118	212	266	277	89
105°	242	249	308	354	362	258
115°	427	441	477	505	513	424
125°	632	653	682	706	712	566
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°	1570.8	1570.8	1570.8	1570.8	1570.8
2.5°	1556.6	1579.1	1566.6	1569.0	1570.8
5°	1546.4	1574.6	1559.7	1562.1	1573.0
7.5°	1532.2	1559.4	1546.5	1548.0	1560.6
10°	1519.7	1545.8	1532.3	1535.5	1546.4
12.5°	1503.8	1530.4	1516.9	1521.3	1532.2
15°	1479.8	1504.4	1490.2	1495.6	1506.4
17.5°	1444.3	1469.2	1455.6	1457.9	1468.7
20°	1417.7	1440.8	1432.5	1431.2	1442.1
22.5°	1385.7	1410.6	1404.1	1397.6	1410.1
25°	1335.6	1360.2	1353.3	1346.9	1355.6
27.5°	1285.9	1307.2	1296.1	1287.8	1294.3
30°	1246.9	1269.3	1256.5	1247.0	1253.5
32.5°	1204.3	1227.9	1213.9	1202.5	1205.6
35°	1138.1	1159.9	1149.3	1133.7	1133.7
37.5°	1075.6	1092.7	1081.1	1060.8	1056.1
40°	1029.4	1048.3	1033.1	1009.3	1002.8
42.5°	981.5	1000.4	984.6	957.8	947.8
45°	911.8	924.9	906.7	878.3	865.3
47.5°	840.0	854.6	830.1	798.3	782.7
50°	792.0	807.3	781.0	745.1	727.7
52.5°	745.9	758.8	731.9	693.1	678.6
55°	672.2	686.8	659.7	620.9	607.3
57.5°	603.5	617.5	587.8	558.1	546.1
60°	559.1	571.4	542.9	516.2	505.4
62.5°	509.4	522.9	497.3	479.6	471.1
65°	443.7	454.7	438.7	427.0	423.4
67.5°	382.0	390.8	384.0	385.5	385.9
70°	339.4	348.2	351.5	360.7	362.3
72.5°	300.4	308.6	324.4	340.2	343.5
75°	239.6	251.3	287.4	313.8	321.1
77.5°	186.4	198.7	258.4	293.6	303.4
80°	150.9	171.3	242.5	283.1	294.1
82.5°	118.9	147.5	230.8	276.7	287.7
85°	73.2	123.5	217.7	267.2	280.4
87.5°	35.4	104.8	204.7	256.9	271.9
90°	17.1	93.5	193.5	247.5	264.3
92.5°	44.5	98.9	198.4	251.2	265.0
95°	89.4	118.0	212.5	265.6	276.6
97.5°	132.7	147.6	234.3	283.3	294.1
100°	162.6	172.3	252.3	299.5	309.7
102.5°	194.3	200.5	273.9	318.7	329.5
105°	241.9	249.3	308.5	353.5	362.2
107.5°	294.8	303.3	352.7	394.3	402.7
110°	330.1	342.7	385.6	423.1	432.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	369.6	382.1	420.2	454.2	463.7
115°	426.6	441.3	476.7	505.3	512.6
117.5°	486.1	502.8	534.9	560.9	567.9
120°	529.7	545.9	576.2	601.0	606.8
122.5°	569.2	587.1	618.0	642.8	648.7
125°	632.1	652.6	682.3	705.6	711.5
127.5°	696.7	717.5	744.8	768.4	776.0
130°	742.8	761.8	785.4	810.3	819.1
132.5°	784.7	803.7	825.5	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)