

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: P644180

Luminaire Tested: CRQ4DIP-SR4F0-100D100U935-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644180
REPORT IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2203-563-26, G2-2206-689-14)
Test Lab: INNOVATION CENTER
Issue Date: 2/20/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: CRQ4DIP-SR4F0-100D100U935-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1000 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

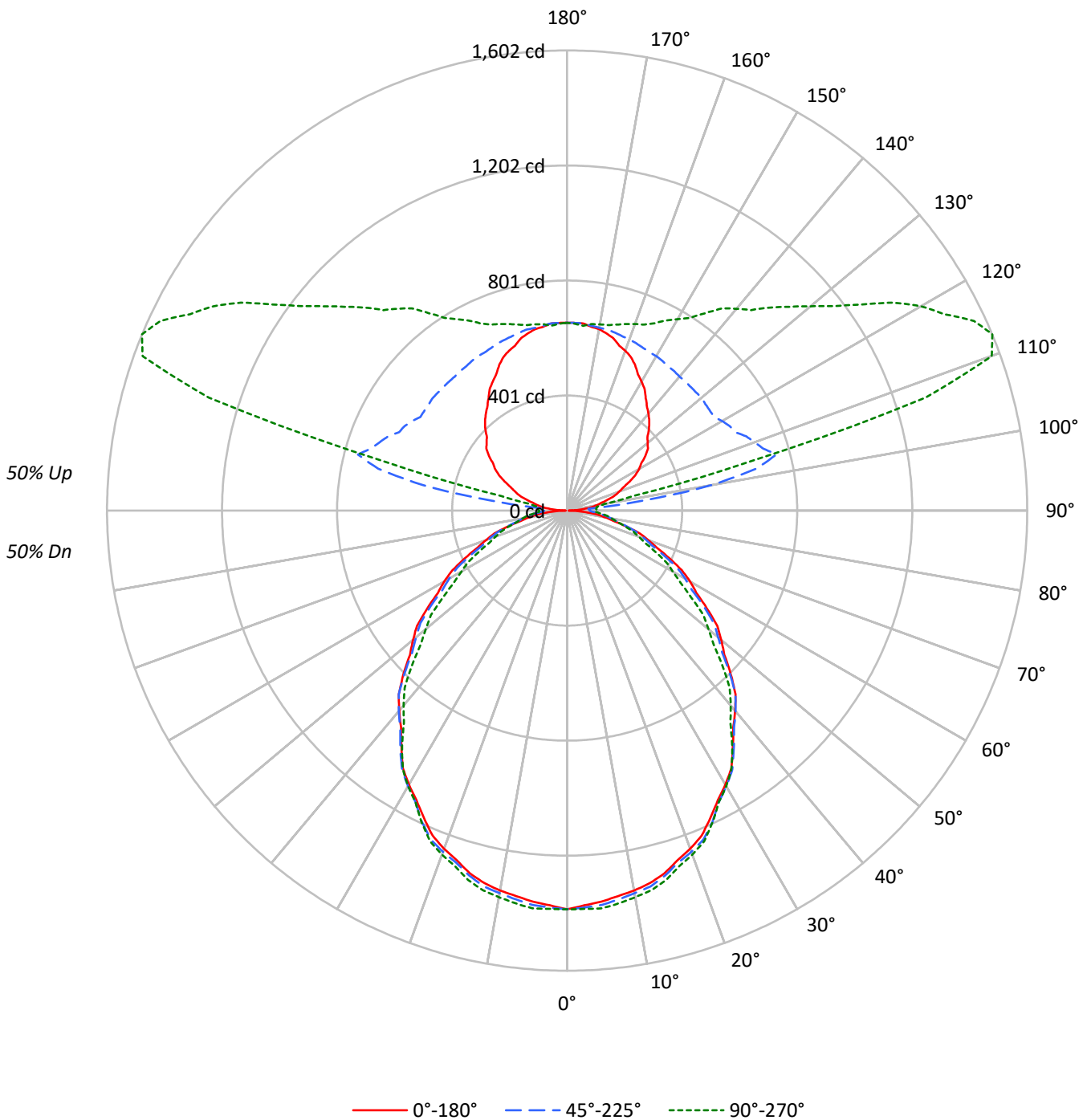
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7092.4 lumens
Efficiency: N/A
Efficacy: 120.4 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 (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	107	107	107	107	99	99	99	99	83	83	83	69	69	69	56	56	56	50				
1	97	93	89	86	90	86	83	79	73	70	68	60	59	57	49	48	47	41				
2	89	81	75	70	82	75	70	65	64	60	56	53	50	48	43	41	39	35				
3	81	72	64	58	74	66	60	55	56	51	47	47	43	40	38	36	34	29				
4	74	63	56	49	68	59	52	46	50	45	40	42	38	35	34	31	29	25				
5	68	57	48	42	63	52	45	40	45	39	35	38	33	30	31	28	25	22				
6	63	51	43	37	58	47	40	35	40	35	31	34	30	26	28	25	22	19				
7	58	46	38	32	53	43	36	31	37	31	27	31	27	23	26	22	20	17				
8	54	42	34	29	50	39	32	27	33	28	24	28	24	21	24	20	18	16				
9	50	38	31	26	46	36	29	24	31	25	21	26	22	19	22	19	16	14				
10	47	35	28	23	43	33	26	22	28	23	19	24	20	17	20	17	15	13				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	22410	22410	22410
5°	21987	19787	19174
10°	21698	17605	16563
15°	21380	15766	14488
20°	20890	14143	12671
25°	20239	12629	11042
30°	19599	11160	9584
35°	18730	9815	8226
40°	17921	8592	6973
45°	16984	7385	5820
50°	15992	6255	4774
55°	14942	5263	3850
60°	13940	4313	3077
65°	12709	3440	2436
70°	11524	2695	1924
75°	10074	2071	1517
80°	8417	1540	1181
85°	6139	1120	898

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 16984 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	131.0	1.8
10°-20°	371.8	5.2
20°-30°	548.8	7.7
30°-40°	631.0	8.9
40°-50°	612.1	8.6
50°-60°	512.4	7.2
60°-70°	369.2	5.2
70°-80°	225.6	3.2
80°-90°	111.1	1.6
90°-100°	123.8	1.7
100°-110°	588.6	8.3
110°-120°	783.3	11.0
120°-130°	635.3	9.0
130°-140°	509.4	7.2
140°-150°	401.4	5.7
150°-160°	293.5	4.1
160°-170°	182.3	2.6
170°-180°	62.2	0.9
0°-30°	1051.6	14.8
0°-40°	1682.5	23.7
0°-60°	2807.0	39.6
0°-90°	3512.8	49.5
90°-120°	1495.6	21.1
90°-150°	3041.7	42.9
90°-180°	3580.0	50.5
0°-180°	7092.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1388	1388	1388	1388	1388	
5°	1366	1391	1378	1380	1390	130
15°	1308	1327	1316	1322	1331	368
25°	1180	1199	1196	1190	1198	544
35°	1006	1021	1012	1002	1002	630
45°	806	813	800	776	765	621
55°	594	602	580	545	527	533
65°	392	394	374	347	337	390
75°	212	212	216	210	206	226
85°	65	78	108	116	116	68
90°	6	42	79	95	97	9
95°	52	79	74	92	102	53
105°	147	204	754	969	651	155
115°	240	280	646	1337	1563	238
125°	333	373	606	1057	1250	295
135°	403	447	609	871	999	311
145°	477	517	613	758	839	300
155°	559	579	625	688	720	257
165°	621	629	642	658	670	174
175°	654	658	654	650	646	62
180°	654	654	654	654	654	

TEST NUMBER: P644180

CATALOG NUMBER: CRQ4DIP-SR4F0-100D100U935-FLLOOB-1DUDD-WW

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1388.0	1388.0	1388.0	1388.0	1388.0
2.5°	1375.5	1395.4	1383.3	1386.5	1388.0
5°	1366.5	1391.4	1378.2	1380.4	1390.0
7.5°	1353.9	1376.9	1365.3	1367.9	1379.0
10°	1342.9	1365.9	1352.7	1356.9	1366.5
12.5°	1328.8	1350.3	1340.2	1344.3	1353.9
15°	1307.6	1326.8	1315.5	1321.6	1331.2
17.5°	1276.3	1297.0	1284.9	1288.3	1297.8
20°	1252.7	1271.9	1264.5	1264.7	1274.3
22.5°	1224.5	1245.2	1239.4	1235.0	1246.1
25°	1180.2	1199.4	1195.9	1190.2	1197.9
27.5°	1136.3	1150.5	1143.7	1138.0	1143.7
30°	1101.8	1119.0	1107.7	1101.9	1107.7
32.5°	1064.1	1081.4	1070.0	1062.6	1065.3
35°	1005.7	1021.1	1011.6	1001.8	1001.8
37.5°	950.4	960.4	954.0	937.4	933.2
40°	909.7	921.2	911.6	891.9	886.1
42.5°	867.3	878.8	867.7	846.3	837.5
45°	805.8	813.4	799.9	776.1	764.6
47.5°	742.2	750.3	731.6	705.5	691.7
50°	699.9	709.5	686.2	658.4	643.0
52.5°	659.1	665.6	643.8	611.4	597.6
55°	594.0	601.7	580.3	544.6	527.4
57.5°	533.2	540.5	515.2	481.2	467.8
60°	494.0	499.8	474.4	438.8	425.4
62.5°	450.1	455.9	432.1	401.2	387.8
65°	392.1	394.0	374.5	346.8	337.2
67.5°	337.6	337.6	321.1	300.6	292.9
70°	300.0	300.0	288.2	272.3	264.7
72.5°	265.4	263.9	256.8	245.7	239.6
75°	211.7	211.7	215.7	209.7	205.8
77.5°	164.7	161.6	178.4	177.6	175.7
80°	133.3	133.3	154.9	158.8	156.8
82.5°	105.1	108.1	136.1	141.5	139.6
85°	64.7	78.1	107.8	115.7	115.7
87.5°	29.4	53.6	86.3	97.4	97.7
90°	5.9	42.5	78.8	94.7	96.6
92.5°	22.0	43.3	76.1	95.4	102.1
95°	52.5	78.7	74.1	92.1	102.1
97.5°	81.9	128.7	271.6	112.6	105.2
100°	101.7	156.6	508.8	176.3	131.8
102.5°	119.8	178.0	673.6	404.1	235.9
105°	147.1	204.0	754.2	968.6	650.8
107.5°	174.4	214.7	716.1	1395.0	1309.2
110°	192.5	231.2	694.8	1462.1	1572.6



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	212.3	250.9	675.1	1417.9	1602.3
115°	239.9	280.5	645.5	1337.4	1562.6
117.5°	268.0	310.1	637.7	1248.8	1480.4
120°	289.5	329.9	623.0	1181.7	1422.9
122.5°	305.9	348.0	606.5	1125.3	1347.3
125°	332.7	373.1	606.5	1057.2	1250.2
127.5°	354.2	397.7	607.3	978.2	1168.8
130°	365.8	414.1	610.6	925.3	1106.3
132.5°	379.1	427.4	609.0	901.6	1050.3
135°	403.0	447.3	608.7	870.7	999.3
137.5°	423.6	471.0	608.7	836.5	946.7
140°	440.0	484.3	608.7	816.6	917.1
142.5°	456.5	497.5	611.9	793.4	887.5
145°	477.1	517.3	612.8	758.5	839.0
147.5°	501.7	537.1	617.7	733.4	795.4
150°	518.2	550.4	621.0	716.8	769.0
152.5°	534.6	563.6	621.0	703.4	746.0
155°	559.3	579.4	625.1	687.5	719.7
157.5°	579.0	598.3	630.0	677.5	700.8
160°	592.2	608.3	633.3	670.8	690.9
162.5°	602.1	618.2	636.6	667.4	681.0
165°	621.0	629.0	641.6	658.3	670.3
167.5°	631.7	638.9	645.7	654.1	661.3
170°	641.6	645.6	645.7	654.0	658.0
172.5°	644.8	652.1	649.0	650.7	654.7
175°	653.9	657.9	653.9	649.7	645.7
177.5°	653.9	657.1	653.9	653.8	650.6
180°	653.9	653.9	653.9	653.9	653.9

(END OF REPORT)