

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: P644204

Luminaire Tested: CRQ4DIP-SR4F0-100D150U935-FLLOOB-1DUDD-WW

Issue Date: 2/20/2023



Test Information

Test Method: LM-79-2019
Report Number: P644204
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-SR4F0-100D150U935-FLLOOB-1DUDD-WW
Description: NEO-RAY CIRQUE SUSPENDED LED LUMINAIRE
DOWNLIGHT - CURVED FROSTED LENS - 1000 LUMENS PER FOOT
UPLIGHT - BATWING OPTIC - 1500 LUMENS PER FOOT
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

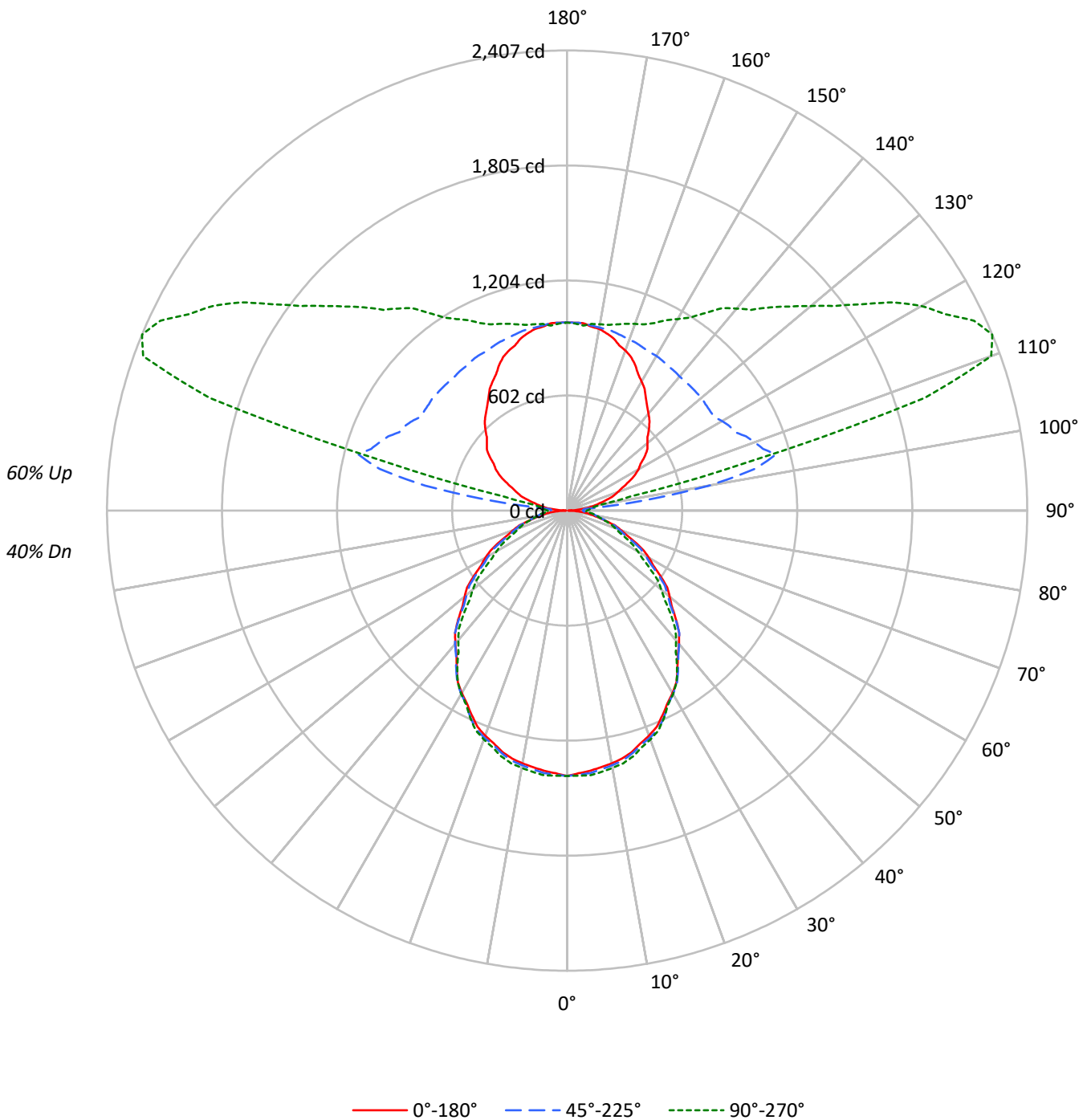
Lumens per Lamp: N/A
Luminaire Lumens: 8864.2 lumens
Efficiency: N/A
Efficacy: 112.9 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.19 / 1.3
Luminous Opening: Rectangular w/ Sides (W: 0.17' x L: 4' x H: 0.33')
CIE Type: Semi-Indirect

Input Watts (W): 78.5
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	105	105	105	105	95	95	95	95	78	78	78	61	61	61	47	47	47	40
1	95	91	87	84	87	83	80	77	68	65	63	54	52	51	41	40	39	33
2	87	79	73	68	79	72	67	63	59	56	52	47	45	42	36	34	33	28
3	79	70	63	57	72	64	58	53	52	48	44	42	39	36	32	30	28	24
4	72	62	54	48	66	57	50	45	47	42	38	37	34	31	29	26	24	20
5	66	55	47	41	60	50	43	38	42	36	32	33	30	27	26	23	21	18
6	61	49	41	36	56	45	38	33	38	32	28	30	26	23	23	21	19	16
7	57	45	37	31	51	41	34	29	34	29	25	28	24	21	21	19	17	14
8	52	40	33	28	48	37	30	26	31	26	22	25	21	18	20	17	15	12
9	49	37	29	25	44	34	27	23	28	23	20	23	19	17	18	15	13	11
10	46	34	27	22	41	31	25	21	26	21	18	21	18	15	17	14	12	10

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	1.5
10°-20°	371.8	4.2
20°-30°	548.8	6.2
30°-40°	631.0	7.1
40°-50°	612.1	6.9
50°-60°	512.4	5.8
60°-70°	369.2	4.2
70°-80°	225.6	2.5
80°-90°	111.8	1.3
90°-100°	164.3	1.9
100°-110°	877.5	9.9
110°-120°	1175.4	13.3
120°-130°	954.5	10.8
130°-140°	766.1	8.6
140°-150°	603.8	6.8
150°-160°	441.5	5.0
160°-170°	274.2	3.1
170°-180°	93.5	1.1
0°-30°	1051.6	11.9
0°-40°	1682.5	19.0
0°-60°	2807.0	31.7
0°-90°	3513.5	39.6
90°-120°	2217.2	25.0
90°-150°	4541.5	51.2
90°-180°	5351.0	60.4
0°-180°	8864.2	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	44	83	101	103	9
95°	69	110	91	111	125	72
105°	211	303	1130	1448	968	223
115°	354	419	969	2010	2348	351
125°	496	559	911	1590	1881	441
135°	606	673	916	1310	1503	467
145°	718	778	922	1141	1262	451
155°	841	872	940	1034	1083	386
165°	934	946	965	990	1008	262
175°	984	990	984	977	971	93
180°	984	984	984	984	984	

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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	54.0	87.2	98.6	99.0
90°	5.9	44.5	82.9	100.9	102.9
92.5°	27.0	50.3	85.2	108.3	116.6
95°	69.1	109.5	90.7	110.9	124.9
97.5°	111.4	187.8	393.5	148.5	136.3
100°	141.1	230.5	753.5	248.3	179.5
102.5°	169.2	263.4	1004.6	594.1	340.0
105°	211.4	302.7	1129.5	1448.1	968.0
107.5°	253.6	319.9	1074.5	2092.8	1962.8
110°	281.7	344.7	1043.2	2195.3	2360.5



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	311.4	374.4	1013.5	2130.4	2406.9
115°	354.0	418.9	969.0	2009.7	2348.5
117.5°	397.4	463.4	957.4	1877.7	2226.1
120°	430.5	493.2	936.1	1777.5	2140.4
122.5°	455.2	521.2	911.3	1692.7	2026.6
125°	496.5	559.2	911.3	1590.2	1880.6
127.5°	530.1	596.3	912.6	1471.4	1758.1
130°	548.3	620.9	917.5	1391.9	1664.1
132.5°	569.9	642.5	915.9	1356.1	1579.9
135°	606.2	672.8	915.5	1309.7	1503.2
137.5°	637.2	708.5	915.5	1258.3	1424.0
140°	661.9	728.5	915.5	1228.3	1379.5
142.5°	686.7	748.4	920.5	1193.4	1335.0
145°	717.6	778.1	921.7	1141.0	1262.0
147.5°	754.7	807.9	929.2	1103.2	1196.4
150°	779.5	827.8	934.1	1078.2	1156.8
152.5°	804.2	847.7	934.1	1058.0	1122.2
155°	841.3	871.6	940.3	1034.2	1082.6
157.5°	871.0	900.0	947.7	1019.0	1054.1
160°	890.8	915.0	952.7	1009.0	1039.3
162.5°	905.7	929.8	957.6	1003.9	1024.4
165°	934.1	946.2	965.0	990.2	1008.3
167.5°	950.2	961.1	971.2	983.8	994.7
170°	965.0	971.1	971.2	983.7	989.8
172.5°	970.0	980.9	976.2	978.8	984.8
175°	983.6	989.6	983.6	977.3	971.2
177.5°	983.6	988.4	983.6	983.5	978.6
180°	983.6	983.6	983.6	983.6	983.6

(END OF REPORT)