

Scaled data based on original data using
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State
Lighting Products

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: FAIL-SAFE

Report Number: P834506

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1STD-20-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834506
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-4-INS-ASY2-LD4-1STD-20-120-EDD
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

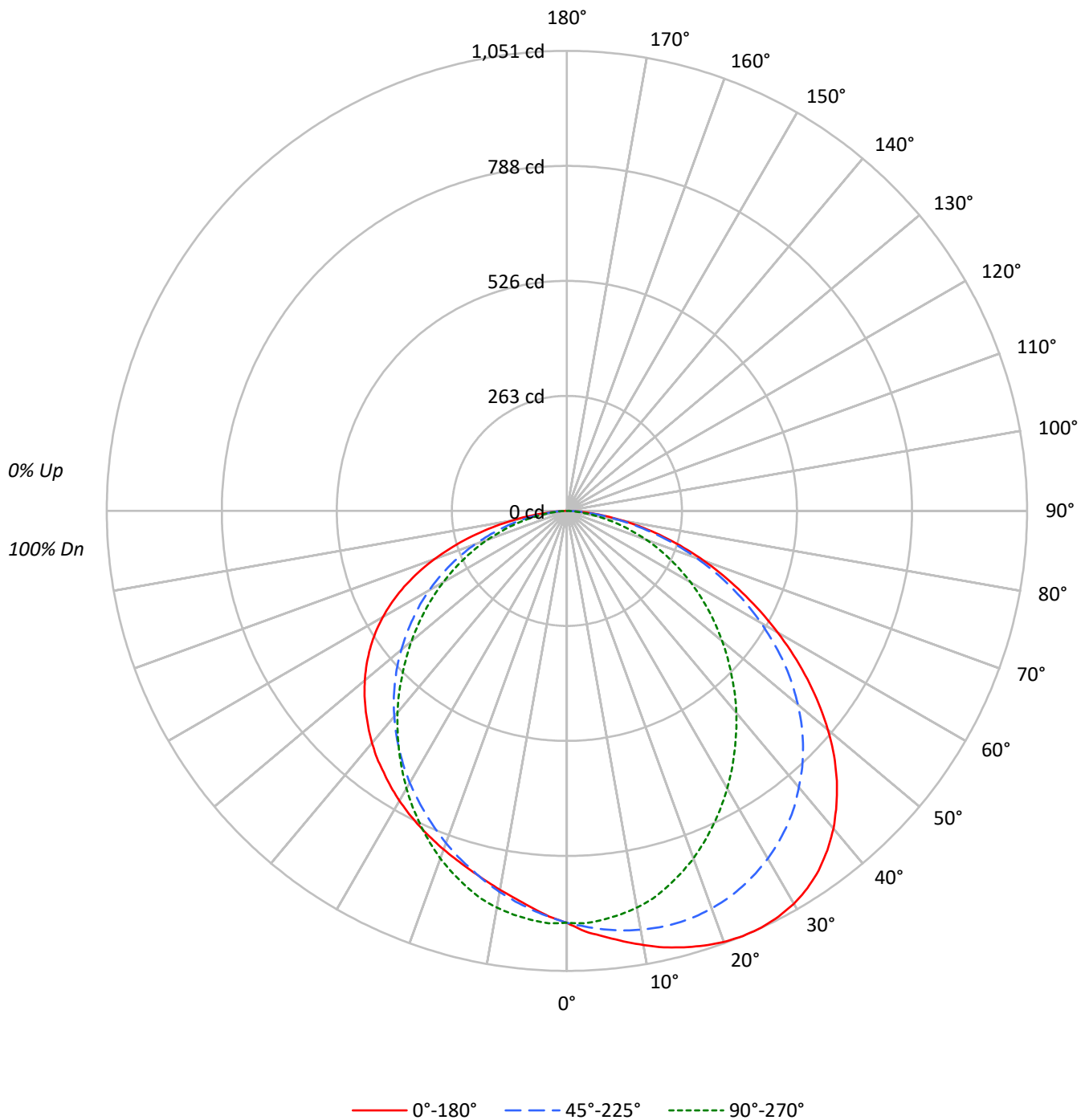
Lumens per Lamp: N/A
Luminaire Lumens: 2768.4 lumens
Efficiency: N/A
Efficacy: 83.1 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 33.3
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: 28.75 FT

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Luminous Intensity Polar Plot



Cooper Lighting Solutions Photometric Lab

1121 Highway 74 South

Peachtree City, GA 30269



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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20					20					20					20
RC	80				70					50					30					10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10
RCR																				
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100		
1	109	104	100	96	106	102	98	94	97	94	91	94	91	88	90	88	86	84		
2	99	90	84	78	96	89	82	77	85	80	75	82	77	73	79	75	72	70		
3	90	79	71	65	87	78	70	64	75	68	63	72	66	62	69	65	61	58		
4	82	70	61	55	80	69	61	54	66	59	53	64	58	53	62	56	52	50		
5	76	63	54	47	73	61	53	47	59	52	46	57	51	46	55	50	45	43		
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	37		
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33		
8	60	46	38	32	59	46	38	32	44	37	32	43	36	31	42	36	31	29		
9	56	43	34	29	55	42	34	29	41	34	29	40	33	28	39	33	28	26		
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24		

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	1266	1266	1266
5°	1318	1267	1229
10°	1376	1257	1201
15°	1438	1237	1184
20°	1501	1210	1179
25°	1560	1175	1181
30°	1611	1138	1188
35°	1647	1098	1198
40°	1664	1057	1216
45°	1659	1012	1236
50°	1630	970	1261
55°	1574	925	1287
60°	1498	878	1307
65°	1406	824	1305
70°	1308	760	1266
75°	1188	667	1168
80°	1020	549	985
85°	778	375	676

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.3	3.2
10°-20°	257.8	9.3
20°-30°	394.9	14.3
30°-40°	481.9	17.4
40°-50°	504.0	18.2
50°-60°	456.1	16.5
60°-70°	345.5	12.5
70°-80°	192.5	7.0
80°-90°	46.4	1.7
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	741.9	26.8
0°-40°	1223.9	44.2
0°-60°	2184.0	78.9
0°-90°	2768.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2768.4	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	941	941	941	941	941	
5°	976	960	938	915	910	94
15°	1032	975	888	847	850	293
25°	1051	947	791	763	795	485
35°	1003	877	668	667	730	626
45°	872	763	532	555	649	671
55°	671	606	394	429	549	599
65°	442	415	259	294	410	438
75°	228	216	128	153	225	242
85°	50	44	24	32	44	61
90°	0	0	0	0	0	

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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	941.1	941.1	941.1	941.1	941.1	941.1	941.1	941.1	941.1	941.1	941.1
2.5°	961.9	957.4	953.7	955.1	955.9	953.1	950.6	951.0	948.5	953.3	942.2
5°	976.1	972.0	967.7	969.3	967.7	963.4	959.9	958.8	952.2	954.9	943.6
7.5°	991.9	987.4	981.0	982.9	979.4	971.4	966.9	964.2	954.1	954.3	941.8
10°	1007.2	1003.3	994.6	995.9	989.5	978.8	971.6	967.9	953.7	951.6	938.7
12.5°	1021.4	1016.0	1006.8	1007.4	998.1	983.9	974.7	969.3	950.8	944.6	931.9
15°	1032.3	1027.1	1016.0	1015.8	1003.9	985.4	974.9	967.5	944.0	934.4	921.0
17.5°	1041.5	1036.8	1023.0	1022.6	1008.2	984.7	972.2	962.9	934.1	922.2	907.4
20°	1048.1	1043.4	1027.9	1026.5	1009.2	981.7	966.6	954.9	921.2	907.0	890.5
22.5°	1051.2	1046.5	1029.0	1026.9	1006.8	975.5	958.6	944.8	906.4	887.9	870.8
25°	1050.6	1046.1	1026.3	1024.2	1002.0	966.2	947.3	931.5	887.7	865.8	849.0
27.5°	1045.4	1041.9	1021.2	1018.5	993.4	953.7	933.5	916.0	866.9	842.6	824.3
30°	1036.6	1033.9	1011.9	1009.4	982.7	939.9	917.5	897.3	844.5	817.1	798.6
32.5°	1022.4	1019.9	997.7	995.4	968.3	922.2	898.8	878.0	820.0	789.7	771.2
35°	1002.9	1001.4	979.8	977.3	949.8	902.1	877.2	854.3	794.5	760.3	742.6
37.5°	977.1	977.1	956.4	953.7	926.7	877.4	852.9	828.6	765.7	729.5	712.0
40°	947.3	950.0	928.8	926.1	900.0	850.8	824.1	798.6	734.6	697.0	679.9
42.5°	911.5	914.0	896.3	893.8	869.3	820.2	795.3	767.5	702.1	663.8	646.1
45°	872.0	875.3	859.5	857.6	834.8	786.6	762.8	734.6	668.2	629.3	612.0
47.5°	828.0	832.3	818.5	817.5	796.3	752.3	727.4	698.8	632.6	593.3	577.0
50°	778.6	784.8	773.5	773.5	754.6	710.7	689.1	660.5	595.5	556.2	540.2
52.5°	725.8	733.6	725.1	725.3	709.9	670.6	648.2	620.2	556.9	518.2	503.4
55°	671.0	678.6	673.3	674.1	662.0	626.2	605.8	578.1	517.4	479.7	465.7
57.5°	613.8	622.1	618.6	620.2	611.8	579.7	558.5	534.2	476.6	439.4	427.5
60°	556.5	564.3	562.4	564.7	559.3	531.6	512.2	487.1	435.7	399.9	389.4
62.5°	498.4	505.6	505.2	507.7	504.8	481.8	464.5	443.1	393.3	360.4	350.7
65°	441.7	447.8	447.4	450.1	449.5	431.0	415.3	395.8	350.9	320.7	312.3
67.5°	386.5	391.7	390.2	393.3	394.1	379.3	365.8	348.3	310.6	281.2	274.0
70°	332.6	336.1	334.3	336.3	338.2	327.1	315.6	300.1	267.6	241.7	235.7
72.5°	279.8	282.2	279.4	281.4	283.1	275.0	265.6	252.2	225.3	202.8	197.9
75°	228.5	232.0	226.1	228.1	229.4	221.3	215.8	204.9	181.6	164.4	161.1
77.5°	179.0	181.0	177.7	176.9	177.7	172.0	167.7	159.2	141.7	127.5	125.5
80°	131.7	132.9	129.6	128.8	129.4	125.3	122.0	115.8	103.5	92.8	92.0
82.5°	88.3	88.9	86.0	85.2	85.6	84.3	80.4	76.1	70.4	61.3	61.1
85°	50.4	50.4	48.3	47.5	47.9	45.9	44.4	42.2	39.9	33.7	34.1
87.5°	18.5	18.5	17.5	17.3	19.3	17.1	16.5	15.4	16.0	12.8	13.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	941.1	941.1	941.1	941.1	941.1	941.1	941.1	941.1	941.1	941.1	941.1
2.5°	945.3	943.2	941.3	935.0	937.6	931.1	930.6	928.2	926.3	922.8	927.4
5°	942.2	938.1	932.7	925.1	927.4	919.5	917.9	915.0	912.5	908.0	911.5
7.5°	937.2	930.4	922.0	912.3	915.4	905.8	903.3	900.2	898.1	892.8	895.9
10°	930.0	920.4	910.5	898.8	901.0	890.5	887.4	884.2	882.3	877.6	880.7
12.5°	918.9	907.2	893.8	881.1	883.5	873.7	869.6	866.1	865.4	861.5	865.2
15°	904.5	888.3	874.5	860.9	863.8	852.3	850.4	846.9	848.0	845.3	849.8
17.5°	886.2	867.5	852.5	837.9	840.8	831.1	829.6	828.0	829.0	828.6	833.6
20°	865.6	845.1	827.8	813.4	815.0	807.4	808.0	807.6	809.7	812.0	818.7
22.5°	842.4	819.2	801.0	786.2	788.7	782.1	785.0	785.8	789.3	794.5	803.1
25°	816.3	791.4	772.5	758.5	760.7	756.4	761.3	763.4	769.0	777.6	786.4
27.5°	788.9	762.6	742.4	729.0	733.4	729.0	736.5	740.6	749.0	758.5	769.4
30°	759.9	732.5	711.8	699.8	704.0	700.0	712.0	717.5	726.0	738.9	751.9
32.5°	729.5	700.7	680.3	671.0	673.9	673.3	686.7	692.8	704.2	719.0	732.8
35°	698.2	668.2	647.6	639.8	643.3	644.1	660.1	667.3	679.7	697.6	712.4
37.5°	665.9	635.2	615.1	608.7	611.8	614.9	633.6	640.8	654.8	674.3	690.6
40°	632.4	601.7	582.0	576.8	579.9	583.2	603.6	613.4	628.7	649.8	667.5
42.5°	598.4	567.8	548.6	544.9	548.0	554.4	576.0	585.3	601.3	624.8	644.3
45°	563.9	532.0	515.3	512.4	515.7	523.1	544.3	555.4	572.5	598.2	619.2
47.5°	528.9	497.8	482.0	480.1	483.4	491.7	515.1	525.2	543.3	570.6	593.3
50°	493.5	463.3	448.0	447.4	450.5	459.4	481.8	493.7	512.4	543.1	566.3
52.5°	457.7	428.7	414.9	414.9	417.8	426.9	449.5	461.8	481.2	513.5	539.2
55°	421.9	394.4	381.2	382.2	386.3	394.1	416.2	429.1	448.7	482.2	509.3
57.5°	386.1	360.0	348.1	349.5	353.4	361.2	382.8	397.4	415.1	449.9	477.7
60°	350.7	326.1	315.6	317.2	320.7	328.5	350.9	363.5	381.2	416.6	444.3
62.5°	314.9	292.5	282.7	284.7	287.8	295.6	316.8	328.9	346.4	381.2	409.2
65°	279.6	258.8	250.4	252.4	255.3	262.5	282.4	294.2	310.8	344.8	371.5
67.5°	244.6	225.7	218.7	220.7	223.0	229.8	246.2	259.0	274.6	306.9	332.2
70°	210.0	193.2	187.0	189.1	191.1	197.3	211.7	223.4	237.8	267.4	290.9
72.5°	175.9	159.4	156.3	158.2	159.8	165.2	179.0	188.2	200.8	227.1	247.3
75°	142.6	128.4	126.3	128.2	129.6	133.7	145.2	153.3	163.7	186.6	203.0
77.5°	110.5	98.5	97.7	99.2	100.6	103.5	112.5	121.0	129.2	146.1	160.7
80°	80.4	70.8	70.8	72.2	71.8	75.3	81.7	88.5	94.4	106.6	117.3
82.5°	53.1	45.5	46.5	47.5	48.1	49.6	53.5	58.6	62.3	69.7	76.7
85°	29.4	24.3	25.3	26.1	25.7	27.4	29.4	32.5	34.4	37.9	41.6
87.5°	10.9	9.1	9.3	9.9	10.3	11.1	11.1	13.0	13.2	13.6	14.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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CANDELA DISTRIBUTION (continued):

	160°	170°	180°
0°	941.1	941.1	941.1
2.5°	918.7	923.7	927.4
5°	902.9	907.0	910.3
7.5°	887.4	891.2	894.0
10°	872.8	877.0	879.0
12.5°	857.8	862.6	864.2
15°	843.0	847.7	849.8
17.5°	827.8	834.0	836.2
20°	813.6	821.4	823.3
22.5°	799.2	807.2	809.5
25°	783.6	793.0	795.3
27.5°	766.9	778.2	780.5
30°	750.2	762.6	764.8
32.5°	732.3	745.7	747.8
35°	713.6	727.0	729.5
37.5°	692.8	707.4	712.4
40°	671.2	687.1	692.2
42.5°	648.6	665.9	671.2
45°	624.3	643.3	649.4
47.5°	599.9	621.3	626.6
50°	573.3	596.2	602.5
52.5°	545.6	570.4	576.8
55°	516.8	541.8	548.8
57.5°	485.5	511.4	518.8
60°	452.8	478.7	485.7
62.5°	419.2	442.7	449.5
65°	381.8	403.8	410.0
67.5°	342.1	362.3	367.4
70°	299.9	317.4	321.9
72.5°	255.9	268.0	274.0
75°	210.4	220.1	224.6
77.5°	164.8	171.6	175.3
80°	120.1	124.0	127.1
82.5°	78.6	80.2	82.5
85°	42.4	42.4	43.8
87.5°	14.4	13.8	14.4
90°	0.0	0.0	0.0

(END OF REPORT)