

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: P834208

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-1LO-35-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834208
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-12-4-INS-ASY2-LD4-1LO-35-120-EDD
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

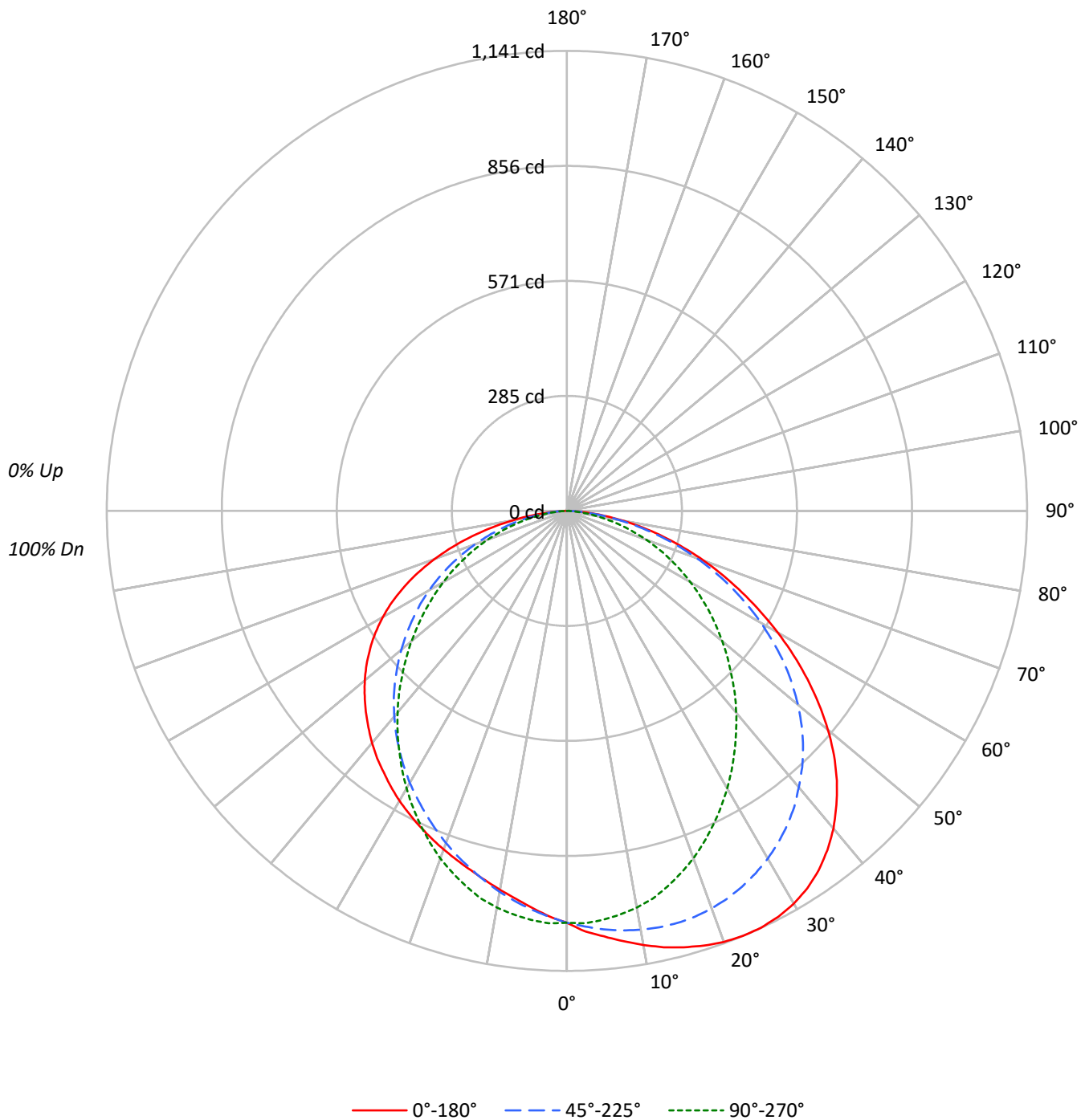
Lumens per Lamp: N/A
Luminaire Lumens: 3004.9 lumens
Efficiency: N/A
Efficacy: 128.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.4
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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2749	2749	2749
5°	2862	2750	2669
10°	2987	2730	2607
15°	3122	2686	2570
20°	3258	2627	2559
25°	3386	2551	2563
30°	3496	2471	2580
35°	3576	2382	2601
40°	3612	2294	2640
45°	3602	2197	2683
50°	3538	2105	2738
55°	3417	2008	2795
60°	3251	1905	2837
65°	3053	1789	2833
70°	2841	1650	2749
75°	2580	1448	2535
80°	2214	1190	2139
85°	1689	812	1470

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.9	3.2
10°-20°	279.8	9.3
20°-30°	428.6	14.3
30°-40°	523.1	17.4
40°-50°	547.0	18.2
50°-60°	495.1	16.5
60°-70°	375.0	12.5
70°-80°	209.0	7.0
80°-90°	50.4	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°	805.3	26.8
0°-40°	1328.4	44.2
0°-60°	2370.6	78.9
0°-90°	3004.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3004.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1022	1022	1022	1022	1022	
5°	1060	1042	1018	993	988	102
15°	1120	1058	964	919	922	318
25°	1140	1028	859	829	863	526
35°	1088	952	725	724	792	680
45°	946	828	577	603	705	728
55°	728	658	428	466	596	650
65°	479	451	281	319	445	476
75°	248	234	139	166	244	263
85°	55	48	26	35	48	66
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°	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5
2.5°	1044.1	1039.2	1035.2	1036.7	1037.6	1034.5	1031.8	1032.3	1029.6	1034.7	1022.7
5°	1059.5	1055.0	1050.4	1052.1	1050.4	1045.7	1041.9	1040.7	1033.6	1036.5	1024.2
7.5°	1076.7	1071.8	1064.9	1066.9	1063.1	1054.4	1049.5	1046.6	1035.6	1035.8	1022.2
10°	1093.2	1089.0	1079.6	1080.9	1074.0	1062.4	1054.6	1050.6	1035.2	1032.9	1018.9
12.5°	1108.6	1102.8	1092.8	1093.4	1083.4	1068.0	1057.9	1052.1	1032.0	1025.3	1011.5
15°	1120.5	1114.9	1102.8	1102.6	1089.6	1069.6	1058.2	1050.1	1024.7	1014.2	999.7
17.5°	1130.5	1125.4	1110.4	1110.0	1094.3	1068.9	1055.3	1045.2	1014.0	1001.0	984.9
20°	1137.7	1132.5	1115.8	1114.2	1095.5	1065.5	1049.2	1036.5	999.9	984.5	966.6
22.5°	1141.0	1135.9	1116.9	1114.7	1092.8	1058.8	1040.5	1025.6	983.8	963.7	945.2
25°	1140.3	1135.4	1114.0	1111.8	1087.6	1048.8	1028.2	1011.1	963.5	939.8	921.5
27.5°	1134.8	1131.0	1108.4	1105.5	1078.3	1035.2	1013.3	994.3	940.9	914.6	894.7
30°	1125.2	1122.3	1098.4	1095.7	1066.7	1020.2	995.9	974.0	916.6	886.9	866.8
32.5°	1109.7	1107.1	1083.0	1080.5	1051.0	1001.0	975.5	953.0	890.0	857.2	837.1
35°	1088.5	1087.0	1063.5	1060.8	1030.9	979.1	952.1	927.3	862.3	825.3	806.1
37.5°	1060.6	1060.6	1038.1	1035.2	1005.9	952.3	925.8	899.4	831.1	791.8	772.8
40°	1028.2	1031.1	1008.1	1005.2	976.9	923.5	894.5	866.8	797.4	756.5	738.0
42.5°	989.4	992.1	972.9	970.2	943.6	890.3	863.2	833.1	762.1	720.6	701.4
45°	946.5	950.1	932.9	930.9	906.1	853.9	828.0	797.4	725.2	683.0	664.3
47.5°	898.7	903.4	888.5	887.4	864.4	816.6	789.5	758.5	686.6	644.0	626.3
50°	845.1	851.8	839.6	839.6	819.0	771.5	748.0	717.0	646.4	603.8	586.4
52.5°	787.8	796.2	787.1	787.3	770.6	727.9	703.6	673.2	604.4	562.5	546.4
55°	728.4	736.6	730.8	731.7	718.5	679.7	657.6	627.4	561.6	520.7	505.5
57.5°	666.3	675.2	671.4	673.2	664.1	629.2	606.2	579.9	517.4	476.9	464.0
60°	604.0	612.5	610.5	612.9	607.1	577.0	556.0	528.7	472.9	434.1	422.7
62.5°	541.0	548.8	548.4	551.1	548.0	522.9	504.2	481.0	426.9	391.2	380.7
65°	479.4	486.1	485.7	488.6	487.9	467.8	450.8	429.6	380.9	348.1	339.0
67.5°	419.6	425.1	423.6	426.9	427.8	411.7	397.0	378.0	337.2	305.2	297.4
70°	361.1	364.9	362.8	365.1	367.1	355.0	342.5	325.8	290.5	262.4	255.9
72.5°	303.7	306.4	303.2	305.5	307.2	298.5	288.3	273.8	244.5	220.2	214.8
75°	248.1	251.9	245.4	247.6	249.0	240.3	234.2	222.4	197.2	178.4	174.8
77.5°	194.3	196.5	192.9	192.0	192.9	186.7	182.0	172.8	153.8	138.4	136.2
80°	142.9	144.2	140.7	139.8	140.4	136.0	132.4	125.7	112.3	100.7	99.8
82.5°	95.8	96.5	93.3	92.4	92.9	91.5	87.3	82.6	76.4	66.5	66.3
85°	54.7	54.7	52.5	51.6	52.0	49.8	48.2	45.8	43.3	36.6	37.1
87.5°	20.1	20.1	19.0	18.8	21.0	18.5	17.9	16.7	17.4	13.8	14.7
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°	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5	1021.5
2.5°	1026.0	1023.8	1021.8	1014.8	1017.8	1010.6	1010.2	1007.5	1005.5	1001.7	1006.6
5°	1022.7	1018.2	1012.4	1004.1	1006.6	998.1	996.3	993.2	990.5	985.6	989.4
7.5°	1017.3	1009.9	1000.8	990.3	993.6	983.1	980.5	977.1	974.9	969.1	972.4
10°	1009.5	999.0	988.3	975.5	978.0	966.6	963.3	959.7	957.7	952.6	955.9
12.5°	997.4	984.7	970.2	956.3	959.0	948.3	943.8	940.0	939.4	935.1	939.2
15°	981.8	964.2	949.2	934.5	937.6	925.1	923.1	919.3	920.4	917.5	922.4
17.5°	961.9	941.6	925.3	909.5	912.6	902.1	900.5	898.7	899.9	899.4	904.8
20°	939.6	917.3	898.5	882.9	884.7	876.4	877.1	876.6	878.9	881.3	888.7
22.5°	914.4	889.1	869.5	853.4	856.1	848.9	852.1	853.0	856.8	862.3	871.7
25°	886.0	859.0	838.4	823.3	825.7	821.0	826.4	828.6	834.7	844.0	853.6
27.5°	856.3	827.7	805.8	791.3	796.0	791.3	799.4	803.8	813.0	823.3	835.1
30°	824.8	795.1	772.6	759.6	764.1	759.9	772.8	778.8	788.0	802.1	816.1
32.5°	791.8	760.5	738.4	728.4	731.5	730.8	745.3	752.0	764.3	780.4	795.4
35°	757.8	725.2	702.9	694.4	698.2	699.1	716.5	724.3	737.7	757.2	773.2
37.5°	722.8	689.5	667.6	660.7	664.1	667.4	687.7	695.5	710.7	731.9	749.6
40°	686.4	653.1	631.7	626.1	629.5	633.0	655.1	665.8	682.4	705.4	724.6
42.5°	649.5	616.3	595.5	591.5	594.8	601.8	625.2	635.3	652.7	678.1	699.3
45°	612.0	577.4	559.3	556.2	559.8	567.8	590.8	602.9	621.4	649.3	672.1
47.5°	574.1	540.4	523.2	521.2	524.7	533.7	559.1	570.1	589.7	619.4	644.0
50°	535.7	502.8	486.3	485.7	489.0	498.6	522.9	535.9	556.2	589.5	614.7
52.5°	496.8	465.3	450.4	450.4	453.5	463.3	487.9	501.3	522.3	557.3	585.2
55°	458.0	428.0	413.8	414.9	419.3	427.8	451.7	465.8	487.0	523.4	552.9
57.5°	419.1	390.8	377.8	379.4	383.6	392.1	415.5	431.4	450.6	488.3	518.5
60°	380.7	353.9	342.5	344.3	348.1	356.6	380.9	394.6	413.8	452.2	482.3
62.5°	341.9	317.5	306.8	309.0	312.4	320.9	343.9	357.0	376.0	413.8	444.1
65°	303.4	280.9	271.7	274.0	277.1	284.9	306.6	319.3	337.4	374.2	403.3
67.5°	265.5	244.9	237.4	239.6	242.0	249.4	267.3	281.1	298.1	333.1	360.6
70°	228.0	209.7	203.0	205.2	207.4	214.1	229.8	242.5	258.1	290.3	315.7
72.5°	190.9	173.0	169.7	171.7	173.5	179.3	194.3	204.3	217.9	246.5	268.4
75°	154.7	139.3	137.1	139.1	140.7	145.1	157.6	166.4	177.7	202.5	220.4
77.5°	119.9	107.0	106.1	107.6	109.2	112.3	122.1	131.3	140.2	158.5	174.4
80°	87.3	76.8	76.8	78.4	77.9	81.7	88.6	96.0	102.5	115.7	127.3
82.5°	57.6	49.3	50.5	51.6	52.2	53.8	58.1	63.6	67.7	75.7	83.3
85°	31.9	26.3	27.5	28.4	27.9	29.7	31.9	35.3	37.3	41.1	45.1
87.5°	11.8	9.8	10.0	10.7	11.2	12.1	12.1	14.1	14.3	14.7	15.6
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):

	160°	170°	180°
0°	1021.5	1021.5	1021.5
2.5°	997.2	1002.6	1006.6
5°	980.0	984.5	988.1
7.5°	963.3	967.3	970.4
10°	947.4	951.9	954.1
12.5°	931.1	936.3	938.0
15°	915.0	920.2	922.4
17.5°	898.5	905.2	907.7
20°	883.1	891.6	893.6
22.5°	867.5	876.2	878.6
25°	850.5	860.8	863.2
27.5°	832.4	844.7	847.2
30°	814.3	827.7	830.2
32.5°	794.9	809.4	811.7
35°	774.6	789.1	791.8
37.5°	752.0	767.9	773.2
40°	728.6	745.8	751.4
42.5°	704.0	722.8	728.6
45°	677.7	698.2	704.9
47.5°	651.1	674.3	680.1
50°	622.3	647.1	654.0
52.5°	592.2	619.2	626.1
55°	560.9	588.1	595.7
57.5°	527.0	555.1	563.1
60°	491.5	519.6	527.2
62.5°	455.1	480.5	487.9
65°	414.4	438.3	445.0
67.5°	371.3	393.2	398.8
70°	325.6	344.5	349.4
72.5°	277.8	290.9	297.4
75°	228.4	238.9	243.8
77.5°	178.9	186.2	190.2
80°	130.4	134.6	138.0
82.5°	85.3	87.1	89.5
85°	46.0	46.0	47.6
87.5°	15.6	15.0	15.6
90°	0.0	0.0	0.0

(END OF REPORT)