

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: P834238

Luminaire Tested: **ORLG-12-4-INS-ASY2-LD4-2LO-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834238
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-LD4-2LO-20-120-EDD-90
Description: 1FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

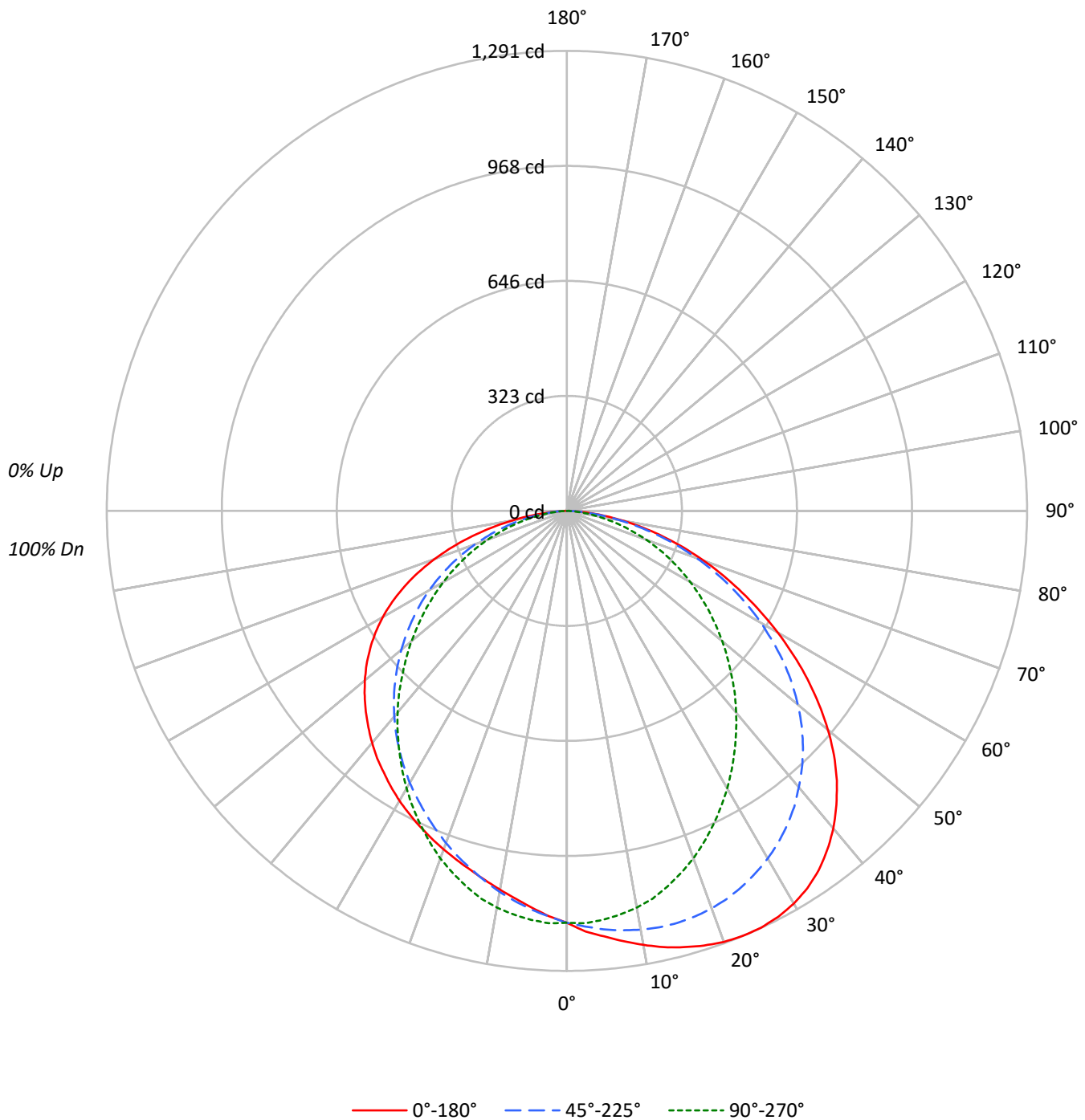
Lumens per Lamp: N/A
Luminaire Lumens: 3399.5 lumens
Efficiency: N/A
Efficacy: 72.6 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 46.8
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°	3110	3110	3110
5°	3238	3112	3019
10°	3380	3088	2949
15°	3531	3039	2907
20°	3686	2972	2895
25°	3831	2885	2900
30°	3955	2795	2918
35°	4046	2695	2943
40°	4086	2596	2986
45°	4075	2486	3035
50°	4003	2382	3098
55°	3866	2272	3162
60°	3677	2155	3210
65°	3454	2024	3206
70°	3214	1866	3110
75°	2917	1639	2868
80°	2506	1347	2419
85°	1911	920	1661

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.6	3.2
10°-20°	316.5	9.3
20°-30°	484.9	14.3
30°-40°	591.8	17.4
40°-50°	618.9	18.2
50°-60°	560.1	16.5
60°-70°	424.2	12.5
70°-80°	236.4	7.0
80°-90°	57.0	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°	911.1	26.8
0°-40°	1502.9	44.2
0°-60°	2681.9	78.9
0°-90°	3399.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3399.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1156	1156	1156	1156	1156	
5°	1199	1179	1152	1124	1118	116
15°	1268	1197	1091	1040	1044	359
25°	1290	1163	972	937	977	595
35°	1232	1077	820	820	896	769
45°	1071	937	653	682	798	824
55°	824	744	484	527	674	735
65°	542	510	318	361	504	538
75°	281	265	158	188	276	298
85°	62	55	30	40	54	74
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°	1155.7	1155.7	1155.7	1155.7	1155.7	1155.7	1155.7	1155.7	1155.7	1155.7	1155.7
2.5°	1181.2	1175.6	1171.1	1172.9	1173.9	1170.3	1167.3	1167.8	1164.8	1170.6	1157.0
5°	1198.6	1193.6	1188.3	1190.3	1188.3	1183.0	1178.7	1177.4	1169.3	1172.6	1158.7
7.5°	1218.1	1212.5	1204.7	1207.0	1202.7	1192.8	1187.3	1184.0	1171.6	1171.9	1156.4
10°	1236.8	1232.0	1221.4	1222.9	1215.1	1201.9	1193.1	1188.5	1171.1	1168.6	1152.7
12.5°	1254.2	1247.6	1236.3	1237.0	1225.7	1208.2	1196.9	1190.3	1167.6	1160.0	1144.3
15°	1267.6	1261.3	1247.6	1247.4	1232.7	1210.0	1197.1	1188.0	1159.2	1147.4	1130.9
17.5°	1279.0	1273.2	1256.2	1255.7	1238.0	1209.2	1193.8	1182.5	1147.1	1132.4	1114.3
20°	1287.0	1281.2	1262.3	1260.5	1239.3	1205.5	1187.0	1172.6	1131.2	1113.8	1093.5
22.5°	1290.8	1285.0	1263.6	1261.0	1236.3	1197.9	1177.2	1160.2	1113.0	1090.3	1069.3
25°	1290.1	1284.5	1260.3	1257.7	1230.5	1186.5	1163.3	1143.8	1090.0	1063.2	1042.5
27.5°	1283.8	1279.5	1254.0	1250.7	1219.9	1171.1	1146.3	1124.9	1064.5	1034.7	1012.2
30°	1272.9	1269.6	1242.6	1239.6	1206.7	1154.2	1126.6	1101.9	1037.0	1003.4	980.6
32.5°	1255.5	1252.4	1225.2	1222.4	1189.0	1132.4	1103.7	1078.1	1006.9	969.8	947.0
35°	1231.5	1229.7	1203.2	1200.1	1166.3	1107.7	1077.1	1049.1	975.6	933.6	911.9
37.5°	1199.9	1199.9	1174.4	1171.1	1138.0	1077.4	1047.3	1017.5	940.2	895.8	874.3
40°	1163.3	1166.6	1140.5	1137.2	1105.2	1044.8	1012.0	980.6	902.1	855.8	834.9
42.5°	1119.3	1122.3	1100.6	1097.6	1067.5	1007.2	976.6	942.5	862.2	815.2	793.4
45°	1070.8	1074.9	1055.4	1053.1	1025.1	966.0	936.7	902.1	820.5	772.7	751.5
47.5°	1016.8	1022.1	1005.1	1003.9	977.9	923.8	893.2	858.1	776.8	728.5	708.6
50°	956.1	963.7	949.8	949.8	926.6	872.8	846.2	811.1	731.3	683.1	663.4
52.5°	891.2	900.8	890.4	890.7	871.8	823.5	796.0	761.6	683.8	636.3	618.1
55°	824.0	833.4	826.8	827.8	812.9	768.9	743.9	709.8	635.3	589.1	571.9
57.5°	753.8	763.9	759.6	761.6	751.3	711.9	685.8	656.0	585.3	539.6	524.9
60°	683.3	692.9	690.6	693.4	686.8	652.7	629.0	598.2	535.0	491.1	478.2
62.5°	612.1	620.9	620.4	623.4	619.9	591.6	570.4	544.1	483.0	442.6	430.7
65°	542.4	549.9	549.4	552.7	552.0	529.2	510.0	486.0	431.0	393.8	383.5
67.5°	474.7	481.0	479.2	483.0	484.0	465.8	449.1	427.7	381.4	345.3	336.5
70°	408.5	412.8	410.5	413.0	415.3	401.6	387.5	368.6	328.6	296.8	289.5
72.5°	343.5	346.6	343.0	345.6	347.6	337.7	326.1	309.7	276.6	249.1	243.0
75°	280.6	284.9	277.6	280.1	281.7	271.8	265.0	251.6	223.1	201.8	197.8
77.5°	219.8	222.3	218.3	217.2	218.3	211.2	205.9	195.5	174.0	156.6	154.1
80°	161.7	163.2	159.1	158.1	158.9	153.8	149.8	142.2	127.1	113.9	112.9
82.5°	108.4	109.1	105.6	104.6	105.1	103.6	98.8	93.5	86.4	75.3	75.0
85°	61.9	61.9	59.4	58.4	58.9	56.3	54.6	51.8	49.0	41.4	41.9
87.5°	22.7	22.7	21.5	21.2	23.7	21.0	20.2	18.9	19.7	15.7	16.7
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°	1155.7	1155.7	1155.7	1155.7	1155.7	1155.7	1155.7	1155.7	1155.7	1155.7	1155.7
2.5°	1160.7	1158.2	1155.9	1148.1	1151.4	1143.3	1142.8	1139.8	1137.5	1133.2	1138.8
5°	1157.0	1151.9	1145.3	1136.0	1138.8	1129.2	1127.1	1123.6	1120.6	1115.0	1119.3
7.5°	1150.9	1142.6	1132.2	1120.3	1124.1	1112.2	1109.2	1105.4	1102.9	1096.3	1100.1
10°	1142.0	1130.2	1118.1	1103.7	1106.4	1093.5	1089.8	1085.7	1083.4	1077.6	1081.4
12.5°	1128.4	1114.0	1097.6	1081.9	1085.0	1072.8	1067.8	1063.5	1062.7	1057.9	1062.5
15°	1110.7	1090.8	1073.8	1057.2	1060.7	1046.6	1044.3	1040.0	1041.3	1038.0	1043.5
17.5°	1088.2	1065.3	1046.8	1028.9	1032.4	1020.5	1018.8	1016.8	1018.0	1017.5	1023.6
20°	1063.0	1037.7	1016.5	998.8	1000.8	991.5	992.3	991.7	994.3	997.1	1005.4
22.5°	1034.4	1005.9	983.7	965.5	968.5	960.4	964.0	965.0	969.3	975.6	986.2
25°	1002.4	971.8	948.5	931.4	934.2	928.8	934.9	937.4	944.3	954.9	965.7
27.5°	968.8	936.4	911.7	895.2	900.6	895.2	904.3	909.4	919.8	931.4	944.8
30°	933.1	899.5	874.0	859.4	864.4	859.6	874.3	881.1	891.5	907.4	923.3
32.5°	895.8	860.4	835.4	824.0	827.5	826.8	843.2	850.8	864.7	882.9	899.8
35°	857.4	820.5	795.2	785.6	789.9	790.9	810.6	819.5	834.6	856.6	874.8
37.5°	817.7	780.1	755.3	747.5	751.3	755.1	778.0	786.9	804.1	828.1	848.0
40°	776.5	738.9	714.6	708.3	712.1	716.1	741.2	753.3	772.0	798.0	819.7
42.5°	734.8	697.2	673.7	669.2	673.0	680.8	707.3	718.7	738.4	767.2	791.2
45°	692.4	653.2	632.8	629.3	633.3	642.4	668.4	682.0	703.0	734.6	760.4
47.5°	649.5	611.3	591.9	589.6	593.6	603.7	632.5	644.9	667.1	700.7	728.5
50°	606.0	568.9	550.2	549.4	553.2	564.1	591.6	606.3	629.3	666.9	695.4
52.5°	562.1	526.4	509.5	509.5	513.1	524.2	552.0	567.1	590.9	630.5	662.1
55°	518.1	484.3	468.1	469.3	474.4	484.0	511.0	526.9	550.9	592.1	625.5
57.5°	474.1	442.1	427.4	429.2	434.0	443.6	470.1	488.0	509.8	552.5	586.6
60°	430.7	400.4	387.5	389.5	393.8	403.4	431.0	446.4	468.1	511.5	545.6
62.5°	386.7	359.2	347.1	349.6	353.4	363.0	389.0	403.9	425.4	468.1	502.4
65°	343.3	317.8	307.4	310.0	313.5	322.3	346.8	361.2	381.7	423.4	456.2
67.5°	300.4	277.1	268.5	271.1	273.8	282.2	302.4	318.0	337.2	376.9	408.0
70°	257.9	237.2	229.6	232.1	234.7	242.3	259.9	274.3	292.0	328.4	357.2
72.5°	216.0	195.8	192.0	194.3	196.3	202.8	219.8	231.1	246.5	278.9	303.6
75°	175.1	157.6	155.1	157.4	159.1	164.2	178.3	188.2	201.1	229.1	249.3
77.5°	135.7	121.0	120.0	121.8	123.5	127.1	138.2	148.5	158.6	179.4	197.3
80°	98.8	86.9	86.9	88.7	88.2	92.5	100.3	108.6	115.9	130.9	144.0
82.5°	65.2	55.8	57.1	58.4	59.1	60.9	65.7	72.0	76.5	85.6	94.2
85°	36.1	29.8	31.1	32.1	31.6	33.6	36.1	39.9	42.2	46.5	51.0
87.5°	13.4	11.1	11.4	12.1	12.6	13.6	13.6	15.9	16.2	16.7	17.7
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):

	160°	170°	180°
0°	1155.7	1155.7	1155.7
2.5°	1128.2	1134.2	1138.8
5°	1108.7	1113.8	1117.8
7.5°	1089.8	1094.3	1097.8
10°	1071.8	1076.9	1079.4
12.5°	1053.4	1059.2	1061.2
15°	1035.2	1041.0	1043.5
17.5°	1016.5	1024.1	1026.9
20°	999.1	1008.7	1010.9
22.5°	981.4	991.2	994.0
25°	962.2	973.8	976.6
27.5°	941.7	955.6	958.4
30°	921.3	936.4	939.2
32.5°	899.3	915.7	918.2
35°	876.3	892.7	895.8
37.5°	850.8	868.7	874.8
40°	824.3	843.7	850.0
42.5°	796.5	817.7	824.3
45°	766.7	789.9	797.5
47.5°	736.6	762.9	769.4
50°	704.0	732.1	739.9
52.5°	669.9	700.5	708.3
55°	634.6	665.4	674.0
57.5°	596.2	628.0	637.1
60°	556.0	587.8	596.4
62.5°	514.8	543.6	552.0
65°	468.8	495.9	503.5
67.5°	420.1	444.8	451.2
70°	368.3	389.8	395.3
72.5°	314.2	329.2	336.5
75°	258.4	270.3	275.8
77.5°	202.3	210.7	215.2
80°	147.5	152.3	156.1
82.5°	96.5	98.5	101.3
85°	52.0	52.0	53.8
87.5°	17.7	16.9	17.7
90°	0.0	0.0	0.0

(END OF REPORT)