

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: P835321

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-3LO-35-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835321
Test Lab: INNOVATION CENTER(G2)
Issue Date: 5/16/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: ORLG-24-2-INS-ASY2-LD4-3LO-35-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3500K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

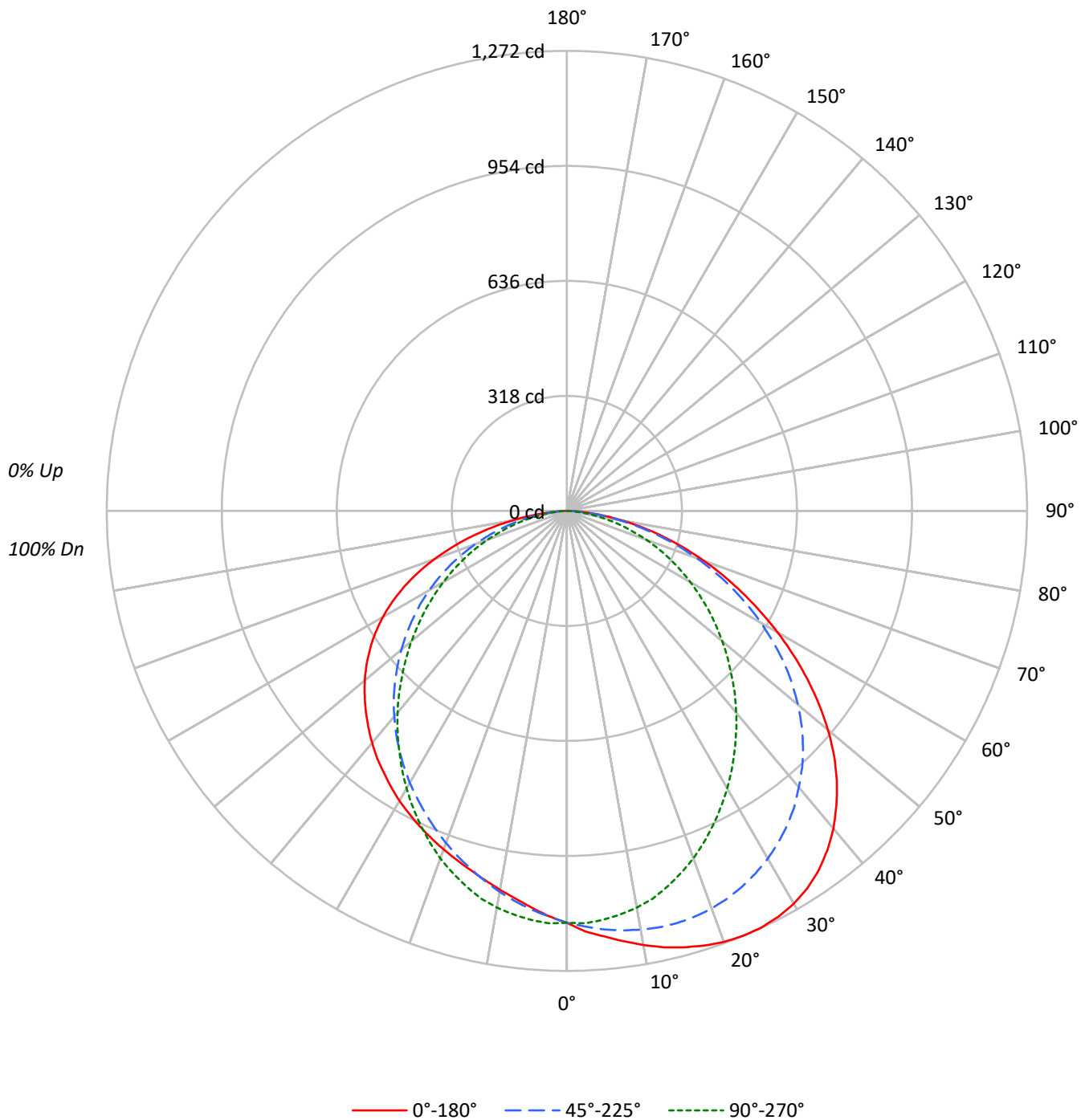
Lumens per Lamp: N/A
Luminaire Lumens: 3349.8 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 35.1
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°	3064	3064	3064
5°	3190	3066	2975
10°	3330	3043	2906
15°	3480	2994	2865
20°	3632	2928	2853
25°	3774	2843	2857
30°	3897	2754	2876
35°	3986	2656	2900
40°	4027	2558	2942
45°	4016	2450	2990
50°	3944	2347	3052
55°	3810	2239	3116
60°	3624	2123	3163
65°	3403	1994	3159
70°	3167	1839	3065
75°	2875	1615	2826
80°	2469	1327	2383
85°	1883	908	1636

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	108.0	3.2
10°-20°	311.9	9.3
20°-30°	477.8	14.3
30°-40°	583.1	17.4
40°-50°	609.8	18.2
50°-60°	551.9	16.5
60°-70°	418.0	12.5
70°-80°	232.9	7.0
80°-90°	56.2	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°	897.7	26.8
0°-40°	1480.9	44.2
0°-60°	2642.6	78.9
0°-90°	3349.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3349.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1139	1139	1139	1139	1139	
5°	1181	1161	1135	1107	1102	114
15°	1249	1180	1075	1025	1028	354
25°	1271	1146	958	924	962	586
35°	1214	1061	808	808	883	758
45°	1055	923	644	672	786	812
55°	812	733	477	519	664	725
65°	534	503	313	356	496	530
75°	276	261	155	185	272	293
85°	61	54	29	39	53	73
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°	1138.8	1138.8	1138.8	1138.8	1138.8	1138.8	1138.8	1138.8	1138.8	1138.8	1138.8
2.5°	1163.9	1158.5	1154.0	1155.7	1156.7	1153.2	1150.2	1150.7	1147.8	1153.5	1140.0
5°	1181.1	1176.1	1170.9	1172.9	1170.9	1165.7	1161.4	1160.2	1152.2	1155.5	1141.8
7.5°	1200.3	1194.8	1187.1	1189.3	1185.1	1175.4	1169.9	1166.7	1154.5	1154.7	1139.5
10°	1218.7	1214.0	1203.5	1205.0	1197.3	1184.3	1175.6	1171.1	1154.0	1151.5	1135.8
12.5°	1235.9	1229.4	1218.2	1218.9	1207.7	1190.6	1179.4	1172.9	1150.5	1143.0	1127.6
15°	1249.1	1242.8	1229.4	1229.1	1214.7	1192.3	1179.6	1170.7	1142.3	1130.6	1114.4
17.5°	1260.3	1254.5	1237.9	1237.4	1219.9	1191.6	1176.4	1165.2	1130.3	1115.9	1098.0
20°	1268.2	1262.5	1243.8	1242.1	1221.2	1187.8	1169.7	1155.5	1114.6	1097.5	1077.6
22.5°	1272.0	1266.2	1245.1	1242.6	1218.2	1180.4	1159.9	1143.3	1096.7	1074.3	1053.7
25°	1271.2	1265.7	1241.8	1239.4	1212.5	1169.2	1146.3	1127.1	1074.1	1047.7	1027.3
27.5°	1265.0	1260.8	1235.6	1232.4	1202.0	1154.0	1129.6	1108.4	1048.9	1019.6	997.4
30°	1254.3	1251.1	1224.4	1221.4	1189.1	1137.3	1110.2	1085.8	1021.8	988.7	966.3
32.5°	1237.1	1234.1	1207.2	1204.5	1171.6	1115.9	1087.5	1062.4	992.2	955.6	933.2
35°	1213.5	1211.7	1185.6	1182.6	1149.2	1091.5	1061.4	1033.7	961.3	920.0	898.6
37.5°	1182.4	1182.4	1157.2	1154.0	1121.4	1061.6	1032.0	1002.6	926.5	882.7	861.5
40°	1146.3	1149.5	1123.9	1120.6	1089.0	1029.5	997.2	966.3	888.9	843.3	822.7
42.5°	1102.9	1105.9	1084.5	1081.5	1051.9	992.4	962.3	928.7	849.6	803.3	781.8
45°	1055.2	1059.1	1040.0	1037.7	1010.1	951.9	923.0	888.9	808.5	761.4	740.5
47.5°	1001.9	1007.1	990.4	989.2	963.6	910.3	880.2	845.6	765.4	717.9	698.2
50°	942.1	949.6	935.9	935.9	913.0	860.0	833.9	799.3	720.6	673.1	653.7
52.5°	878.2	887.6	877.4	877.7	859.0	811.5	784.3	750.5	673.8	627.0	609.1
55°	812.0	821.2	814.7	815.7	801.0	757.7	733.1	699.5	626.0	580.5	563.5
57.5°	742.8	752.7	748.5	750.5	740.3	701.4	675.8	646.4	576.7	531.7	517.2
60°	673.3	682.8	680.5	683.3	676.8	643.2	619.8	589.4	527.2	483.9	471.2
62.5°	603.1	611.8	611.3	614.3	610.8	583.0	562.1	536.2	475.9	436.1	424.4
65°	534.4	541.9	541.4	544.6	543.9	521.5	502.6	478.9	424.7	388.1	377.9
67.5°	467.7	473.9	472.2	475.9	476.9	459.0	442.6	421.4	375.9	340.3	331.6
70°	402.5	406.7	404.5	407.0	409.2	395.8	381.8	363.2	323.8	292.5	285.3
72.5°	338.5	341.5	338.0	340.5	342.5	332.8	321.4	305.2	272.6	245.4	239.5
75°	276.5	280.8	273.6	276.0	277.5	267.8	261.1	247.9	219.8	198.9	194.9
77.5°	216.6	219.0	215.1	214.1	215.1	208.1	202.9	192.7	171.5	154.3	151.8
80°	159.3	160.8	156.8	155.8	156.6	151.6	147.6	140.1	125.2	112.3	111.3
82.5°	106.8	107.5	104.0	103.1	103.5	102.1	97.3	92.1	85.1	74.2	73.9
85°	61.0	61.0	58.5	57.5	58.0	55.5	53.8	51.0	48.3	40.8	41.3
87.5°	22.4	22.4	21.2	20.9	23.4	20.7	19.9	18.7	19.4	15.4	16.4
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1138.8	1138.8	1138.8	1138.8	1138.8	1138.8	1138.8	1138.8	1138.8	1138.8	1138.8
2.5°	1143.8	1141.3	1139.0	1131.3	1134.6	1126.6	1126.1	1123.1	1120.9	1116.6	1122.1
5°	1140.0	1135.1	1128.6	1119.4	1122.1	1112.7	1110.7	1107.2	1104.2	1098.7	1102.9
7.5°	1134.1	1125.8	1115.6	1103.9	1107.7	1096.0	1093.0	1089.3	1086.8	1080.3	1084.0
10°	1125.3	1113.7	1101.7	1087.5	1090.3	1077.6	1073.8	1069.8	1067.6	1061.9	1065.6
12.5°	1111.9	1097.7	1081.5	1066.1	1069.1	1057.1	1052.2	1047.9	1047.2	1042.5	1046.9
15°	1094.5	1074.8	1058.1	1041.7	1045.2	1031.3	1029.0	1024.8	1026.0	1022.8	1028.3
17.5°	1072.3	1049.7	1031.5	1013.8	1017.3	1005.6	1003.9	1001.9	1003.1	1002.6	1008.6
20°	1047.4	1022.5	1001.6	984.2	986.2	977.0	977.7	977.2	979.7	982.5	990.7
22.5°	1019.3	991.2	969.3	951.4	954.3	946.4	949.9	950.9	955.1	961.3	971.8
25°	987.7	957.6	934.7	917.8	920.5	915.3	921.2	923.7	930.4	940.9	951.6
27.5°	954.6	922.7	898.3	882.2	887.4	882.2	891.1	896.1	906.3	917.8	930.9
30°	919.5	886.4	861.2	846.8	851.8	847.1	861.5	868.2	878.4	894.1	909.8
32.5°	882.7	847.8	823.2	812.0	815.4	814.7	830.9	838.3	852.0	870.0	886.6
35°	844.8	808.5	783.6	774.1	778.4	779.4	798.8	807.5	822.4	844.1	862.0
37.5°	805.7	768.7	744.3	736.5	740.3	744.0	766.7	775.4	792.3	815.9	835.6
40°	765.2	728.1	704.2	698.0	701.7	705.7	730.3	742.3	760.7	786.3	807.7
42.5°	724.1	687.0	663.9	659.4	663.1	670.8	697.0	708.2	727.6	756.0	779.6
45°	682.3	643.7	623.5	620.0	624.0	633.0	658.6	672.1	692.7	723.8	749.2
47.5°	640.0	602.4	583.2	581.0	585.0	594.9	623.3	635.5	657.4	690.5	717.9
50°	597.1	560.6	542.1	541.4	545.1	555.8	583.0	597.4	620.0	657.1	685.3
52.5°	553.8	518.7	502.1	502.1	505.5	516.5	543.9	558.8	582.2	621.3	652.4
55°	510.5	477.2	461.2	462.5	467.5	476.9	503.6	519.2	542.9	583.5	616.3
57.5°	467.2	435.6	421.2	422.9	427.6	437.1	463.2	480.9	502.3	544.4	578.0
60°	424.4	394.5	381.8	383.8	388.1	397.5	424.7	439.8	461.2	504.1	537.7
62.5°	381.1	354.0	342.0	344.5	348.2	357.7	383.3	398.0	419.2	461.2	495.1
65°	338.3	313.1	302.9	305.4	308.9	317.6	341.8	355.9	376.1	417.2	449.5
67.5°	296.0	273.1	264.6	267.1	269.8	278.0	298.0	313.4	332.3	371.4	402.0
70°	254.1	233.7	226.3	228.8	231.2	238.7	256.1	270.3	287.7	323.6	352.0
72.5°	212.8	192.9	189.2	191.4	193.4	199.9	216.6	227.8	242.9	274.8	299.2
75°	172.5	155.3	152.8	155.1	156.8	161.8	175.7	185.4	198.1	225.8	245.7
77.5°	133.7	119.2	118.2	120.0	121.7	125.2	136.2	146.4	156.3	176.7	194.4
80°	97.3	85.6	85.6	87.4	86.9	91.1	98.8	107.0	114.3	128.9	141.9
82.5°	64.2	55.0	56.3	57.5	58.2	60.0	64.7	70.9	75.4	84.4	92.8
85°	35.6	29.4	30.6	31.6	31.1	33.1	35.6	39.3	41.6	45.8	50.3
87.5°	13.2	11.0	11.2	11.9	12.4	13.4	13.4	15.7	15.9	16.4	17.4
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°	1138.8	1138.8	1138.8
2.5°	1111.7	1117.6	1122.1
5°	1092.5	1097.5	1101.5
7.5°	1073.8	1078.3	1081.8
10°	1056.2	1061.1	1063.6
12.5°	1038.0	1043.7	1045.7
15°	1020.1	1025.8	1028.3
17.5°	1001.6	1009.1	1011.8
20°	984.5	993.9	996.2
22.5°	967.0	976.7	979.5
25°	948.1	959.6	962.3
27.5°	928.0	941.6	944.4
30°	907.8	922.7	925.5
32.5°	886.1	902.3	904.8
35°	863.5	879.7	882.7
37.5°	838.3	856.0	862.0
40°	812.2	831.4	837.6
42.5°	784.8	805.7	812.2
45°	755.5	778.4	785.8
47.5°	725.8	751.7	758.2
50°	693.7	721.4	729.1
52.5°	660.1	690.2	698.0
55°	625.3	655.6	664.1
57.5°	587.4	618.8	627.8
60°	547.9	579.2	587.7
62.5°	507.3	535.7	543.9
65°	462.0	488.6	496.1
67.5°	413.9	438.3	444.6
70°	362.9	384.1	389.6
72.5°	309.7	324.3	331.6
75°	254.6	266.3	271.8
77.5°	199.4	207.6	212.1
80°	145.4	150.1	153.8
82.5°	95.1	97.1	99.8
85°	51.3	51.3	53.0
87.5°	17.4	16.7	17.4
90°	0.0	0.0	0.0

(END OF REPORT)