

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: P835175

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2STD-27-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835175
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-LD4-2STD-27-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2700K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

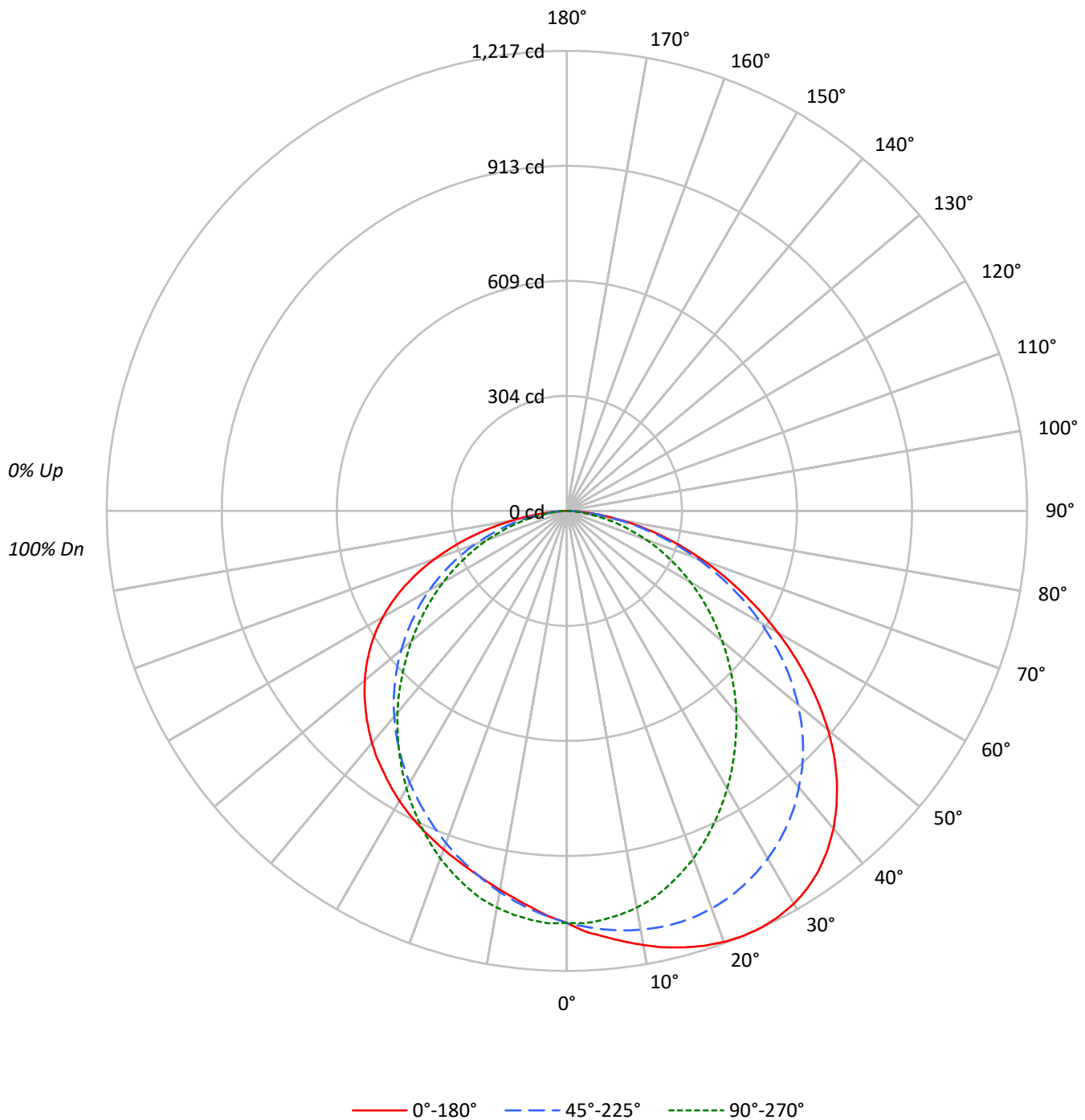
Lumens per Lamp: N/A
Luminaire Lumens: 3205.7 lumens
Efficiency: N/A
Efficacy: 96.3 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2933	2933	2933
5°	3053	2934	2847
10°	3187	2912	2781
15°	3330	2866	2741
20°	3476	2802	2730
25°	3612	2721	2734
30°	3730	2636	2752
35°	3815	2542	2775
40°	3854	2448	2816
45°	3843	2344	2862
50°	3774	2246	2921
55°	3645	2142	2981
60°	3468	2032	3027
65°	3256	1908	3023
70°	3031	1760	2933
75°	2752	1545	2704
80°	2363	1269	2281
85°	1803	868	1565

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.4	3.2
10°-20°	298.5	9.3
20°-30°	457.3	14.3
30°-40°	558.0	17.4
40°-50°	583.6	18.2
50°-60°	528.2	16.5
60°-70°	400.0	12.5
70°-80°	222.9	7.0
80°-90°	53.8	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°	859.1	26.8
0°-40°	1417.2	44.2
0°-60°	2529.0	78.9
0°-90°	3205.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3205.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1090	1090	1090	1090	1090	
5°	1130	1112	1086	1060	1054	109
15°	1195	1129	1029	981	984	339
25°	1216	1097	916	884	921	561
35°	1161	1016	774	773	845	725
45°	1010	883	616	643	752	777
55°	777	702	457	497	636	693
65°	511	481	300	341	475	507
75°	265	250	149	178	260	281
85°	58	52	28	38	51	70
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°	1089.8	1089.8	1089.8	1089.8	1089.8	1089.8	1089.8	1089.8	1089.8	1089.8	1089.8
2.5°	1113.9	1108.6	1104.3	1106.0	1107.0	1103.6	1100.8	1101.2	1098.4	1103.9	1091.0
5°	1130.3	1125.5	1120.5	1122.4	1120.5	1115.5	1111.5	1110.3	1102.7	1105.8	1092.7
7.5°	1148.6	1143.4	1136.0	1138.2	1134.1	1124.8	1119.6	1116.5	1104.8	1105.1	1090.5
10°	1166.3	1161.7	1151.7	1153.2	1145.8	1133.4	1125.1	1120.8	1104.3	1102.0	1086.9
12.5°	1182.7	1176.5	1165.8	1166.5	1155.8	1139.4	1128.6	1122.4	1101.0	1093.9	1079.1
15°	1195.3	1189.4	1176.5	1176.3	1162.5	1141.0	1128.9	1120.3	1093.1	1081.9	1066.5
17.5°	1206.1	1200.6	1184.6	1184.1	1167.5	1140.3	1125.8	1115.1	1081.7	1067.9	1050.7
20°	1213.7	1208.2	1190.3	1188.7	1168.7	1136.7	1119.3	1105.8	1066.7	1050.3	1031.2
22.5°	1217.2	1211.8	1191.5	1189.1	1165.8	1129.6	1110.1	1094.1	1049.6	1028.1	1008.3
25°	1216.5	1211.3	1188.4	1186.0	1160.3	1118.9	1097.0	1078.6	1027.9	1002.6	983.1
27.5°	1210.6	1206.5	1182.5	1179.4	1150.3	1104.3	1081.0	1060.7	1003.8	975.7	954.5
30°	1200.3	1197.2	1171.8	1168.9	1137.9	1088.4	1062.4	1039.1	977.8	946.2	924.7
32.5°	1183.9	1181.0	1155.3	1152.7	1121.3	1067.9	1040.7	1016.7	949.5	914.5	893.0
35°	1161.3	1159.6	1134.6	1131.7	1099.8	1044.5	1015.7	989.3	920.0	880.4	859.9
37.5°	1131.5	1131.5	1107.4	1104.3	1073.1	1016.0	987.6	959.5	886.6	844.7	824.4
40°	1097.0	1100.1	1075.5	1072.4	1042.2	985.2	954.3	924.7	850.6	807.1	787.3
42.5°	1055.5	1058.4	1037.9	1035.0	1006.7	949.7	920.9	888.8	813.0	768.7	748.2
45°	1009.8	1013.6	995.2	993.1	966.7	910.9	883.3	850.6	773.7	728.7	708.7
47.5°	958.8	963.8	947.8	946.6	922.1	871.1	842.3	809.2	732.5	687.0	668.2
50°	901.6	908.8	895.7	895.7	873.8	823.0	798.0	764.9	689.6	644.1	625.5
52.5°	840.4	849.5	839.7	839.9	822.1	776.6	750.6	718.2	644.8	600.0	582.9
55°	777.0	785.9	779.7	780.6	766.6	725.1	701.5	669.4	599.1	555.5	539.3
57.5°	710.8	720.3	716.3	718.2	708.4	671.3	646.7	618.6	551.9	508.8	495.0
60°	644.4	653.4	651.3	653.9	647.7	615.5	593.1	564.1	504.5	463.1	450.9
62.5°	577.2	585.5	585.0	587.9	584.6	557.9	537.9	513.1	455.5	417.3	406.1
65°	511.4	518.6	518.1	521.2	520.5	499.0	480.9	458.3	406.4	371.4	361.6
67.5°	447.6	453.6	451.9	455.5	456.4	439.3	423.5	403.3	359.7	325.6	317.3
70°	385.2	389.2	387.1	389.5	391.6	378.8	365.4	347.5	309.9	279.9	273.0
72.5°	324.0	326.8	323.5	325.9	327.8	318.5	307.5	292.0	260.8	234.9	229.2
75°	264.7	268.7	261.8	264.2	265.6	256.3	249.9	237.3	210.3	190.3	186.5
77.5°	207.2	209.6	205.8	204.9	205.8	199.1	194.1	184.4	164.1	147.7	145.3
80°	152.5	153.9	150.1	149.1	149.8	145.1	141.3	134.1	119.8	107.4	106.5
82.5°	102.2	102.9	99.6	98.6	99.1	97.7	93.1	88.1	81.5	71.0	70.7
85°	58.4	58.4	56.0	55.0	55.5	53.1	51.5	48.8	46.2	39.1	39.5
87.5°	21.4	21.4	20.2	20.0	22.4	19.8	19.1	17.9	18.6	14.8	15.7
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°	1089.8	1089.8	1089.8	1089.8	1089.8	1089.8	1089.8	1089.8	1089.8	1089.8	1089.8
2.5°	1094.6	1092.2	1090.0	1082.7	1085.8	1078.1	1077.7	1074.8	1072.7	1068.6	1073.8
5°	1091.0	1086.2	1080.0	1071.2	1073.8	1064.8	1062.9	1059.6	1056.7	1051.5	1055.5
7.5°	1085.3	1077.4	1067.7	1056.5	1060.0	1048.8	1046.0	1042.4	1040.0	1033.8	1037.4
10°	1076.9	1065.7	1054.3	1040.7	1043.4	1031.2	1027.6	1023.8	1021.7	1016.2	1019.8
12.5°	1064.1	1050.5	1035.0	1020.3	1023.1	1011.7	1006.9	1002.9	1002.1	997.6	1001.9
15°	1047.4	1028.6	1012.6	996.9	1000.2	986.9	984.8	980.7	981.9	978.8	984.0
17.5°	1026.2	1004.5	987.1	970.2	973.6	962.4	960.7	958.8	960.0	959.5	965.2
20°	1002.4	978.6	958.6	941.9	943.8	935.0	935.7	935.2	937.6	940.2	948.1
22.5°	975.5	948.5	927.6	910.4	913.3	905.7	909.0	910.0	914.0	920.0	930.0
25°	945.2	916.4	894.5	878.3	880.9	875.9	881.6	884.0	890.4	900.4	910.7
27.5°	913.5	883.0	859.7	844.2	849.2	844.2	852.8	857.6	867.3	878.3	890.9
30°	879.9	848.3	824.2	810.4	815.2	810.6	824.4	830.9	840.6	855.6	870.7
32.5°	844.7	811.3	787.8	777.0	780.4	779.7	795.1	802.3	815.4	832.5	848.5
35°	808.5	773.7	749.9	740.8	744.9	745.8	764.4	772.8	787.0	807.8	824.9
37.5°	771.1	735.6	712.2	704.9	708.4	712.0	733.7	742.0	758.2	780.9	799.7
40°	732.3	696.8	673.9	667.9	671.5	675.3	698.9	710.3	728.0	752.5	773.0
42.5°	693.0	657.5	635.3	631.0	634.6	642.0	667.0	677.7	696.3	723.4	746.1
45°	652.9	616.0	596.7	593.4	597.2	605.8	630.3	643.2	662.9	692.7	717.0
47.5°	612.4	576.5	558.1	556.0	559.8	569.3	596.5	608.1	629.1	660.8	687.0
50°	571.5	536.4	518.8	518.1	521.7	531.9	557.9	571.7	593.4	628.9	655.8
52.5°	530.0	496.4	480.5	480.5	483.8	494.3	520.5	534.8	557.2	594.6	624.3
55°	488.6	456.6	441.4	442.6	447.4	456.4	481.9	496.9	519.5	558.4	589.8
57.5°	447.1	416.9	403.1	404.7	409.2	418.3	443.3	460.2	480.7	521.0	553.1
60°	406.1	377.6	365.4	367.3	371.4	380.4	406.4	420.9	441.4	482.4	514.5
62.5°	364.7	338.7	327.3	329.7	333.3	342.3	366.8	380.9	401.1	441.4	473.8
65°	323.7	299.7	289.9	292.3	295.6	304.0	327.1	340.6	359.9	399.2	430.2
67.5°	283.2	261.3	253.2	255.6	258.2	266.1	285.1	299.9	318.0	355.4	384.7
70°	243.2	223.7	216.5	218.9	221.3	228.4	245.1	258.7	275.4	309.7	336.8
72.5°	203.7	184.6	181.0	183.2	185.1	191.3	207.2	218.0	232.5	263.0	286.3
75°	165.1	148.6	146.3	148.4	150.1	154.8	168.2	177.5	189.6	216.1	235.1
77.5°	127.9	114.1	113.1	114.8	116.5	119.8	130.3	140.1	149.6	169.1	186.0
80°	93.1	81.9	81.9	83.6	83.1	87.2	94.6	102.4	109.3	123.4	135.8
82.5°	61.5	52.6	53.8	55.0	55.7	57.4	61.9	67.9	72.2	80.8	88.9
85°	34.1	28.1	29.3	30.3	29.8	31.7	34.1	37.6	39.8	43.8	48.1
87.5°	12.6	10.5	10.7	11.4	11.9	12.9	12.9	15.0	15.2	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):

	160°	170°	180°
0°	1089.8	1089.8	1089.8
2.5°	1063.8	1069.6	1073.8
5°	1045.5	1050.3	1054.1
7.5°	1027.6	1031.9	1035.3
10°	1010.7	1015.5	1017.9
12.5°	993.3	998.8	1000.7
15°	976.2	981.7	984.0
17.5°	958.6	965.7	968.3
20°	942.1	951.2	953.3
22.5°	925.4	934.7	937.4
25°	907.3	918.3	920.9
27.5°	888.0	901.1	903.8
30°	868.7	883.0	885.7
32.5°	848.0	863.5	865.9
35°	826.3	841.8	844.7
37.5°	802.3	819.2	824.9
40°	777.3	795.6	801.6
42.5°	751.1	771.1	777.3
45°	723.0	744.9	752.0
47.5°	694.6	719.4	725.6
50°	663.9	690.3	697.7
52.5°	631.7	660.6	667.9
55°	598.4	627.4	635.5
57.5°	562.2	592.2	600.8
60°	524.3	554.3	562.4
62.5°	485.5	512.6	520.5
65°	442.1	467.6	474.8
67.5°	396.1	419.5	425.4
70°	347.3	367.6	372.8
72.5°	296.3	310.4	317.3
75°	243.7	254.9	260.1
77.5°	190.8	198.7	203.0
80°	139.1	143.6	147.2
82.5°	91.0	92.9	95.5
85°	49.1	49.1	50.7
87.5°	16.7	16.0	16.7
90°	0.0	0.0	0.0

(END OF REPORT)