

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: P834507

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834507
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-LD4-1HI-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

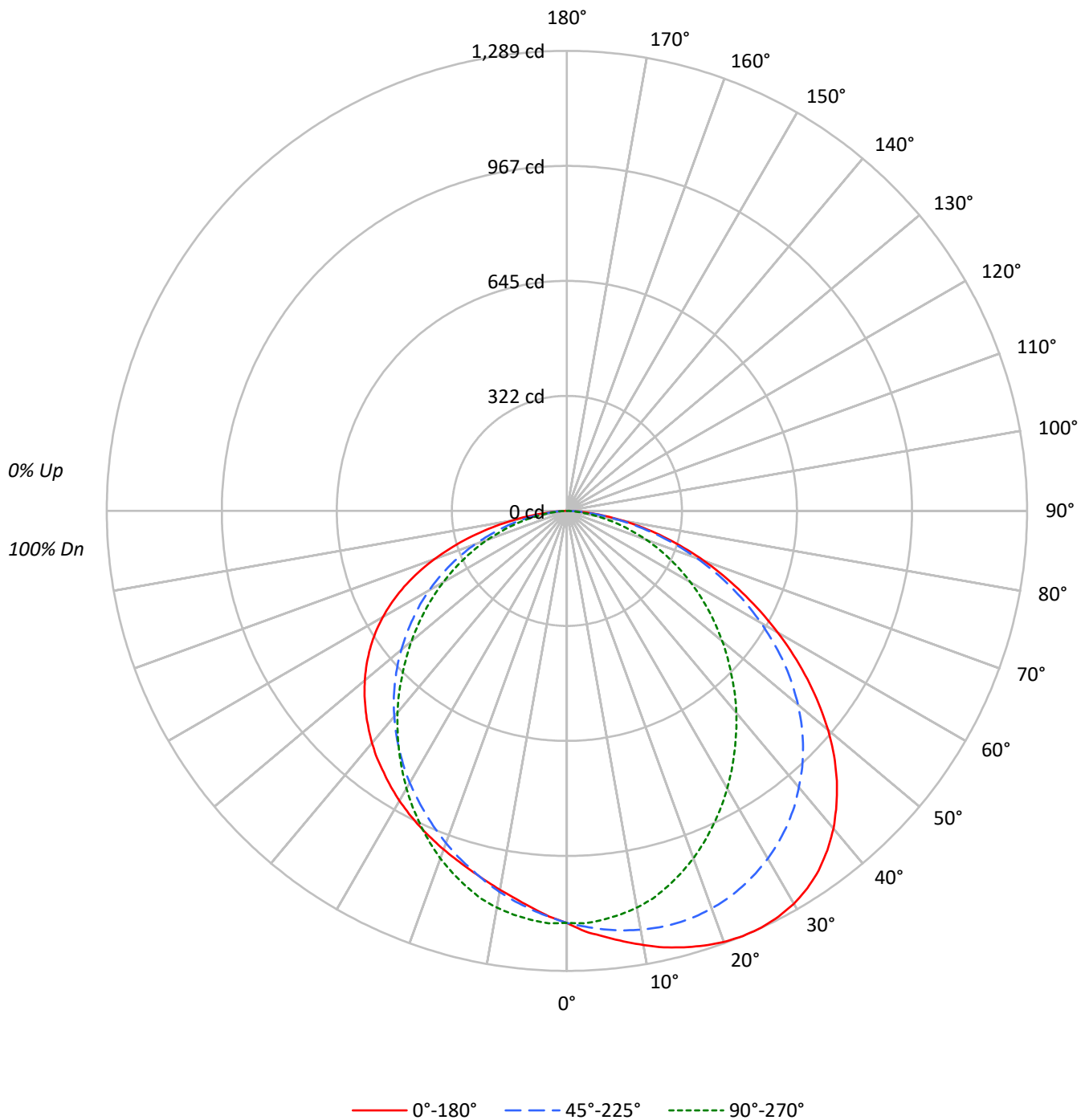
Lumens per Lamp: N/A
Luminaire Lumens: 3395.3 lumens
Efficiency: N/A
Efficacy: 77.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44
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°	1553	1553	1553
5°	1617	1554	1508
10°	1688	1542	1473
15°	1763	1517	1452
20°	1841	1484	1446
25°	1913	1441	1448
30°	1975	1396	1457
35°	2020	1346	1470
40°	2041	1296	1491
45°	2035	1241	1516
50°	1999	1189	1547
55°	1931	1135	1579
60°	1837	1076	1603
65°	1725	1011	1601
70°	1605	932	1553
75°	1457	818	1432
80°	1251	673	1208
85°	954	460	829

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.5	3.2
10°-20°	316.1	9.3
20°-30°	484.3	14.3
30°-40°	591.1	17.4
40°-50°	618.1	18.2
50°-60°	559.4	16.5
60°-70°	423.7	12.5
70°-80°	236.1	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°	909.9	26.8
0°-40°	1501.0	44.2
0°-60°	2678.6	78.9
0°-90°	3395.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3395.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1154	1154	1154	1154	1154	
5°	1197	1177	1150	1122	1116	115
15°	1266	1196	1089	1039	1042	359
25°	1288	1162	971	936	975	594
35°	1230	1076	820	818	895	768
45°	1070	936	652	681	796	823
55°	823	743	484	526	673	734
65°	542	509	317	361	503	537
75°	280	265	157	188	276	297
85°	62	54	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°	1154.3	1154.3	1154.3	1154.3	1154.3	1154.3	1154.3	1154.3	1154.3	1154.3	1154.3
2.5°	1179.8	1174.2	1169.7	1171.4	1172.4	1168.9	1165.9	1166.4	1163.4	1169.2	1155.5
5°	1197.2	1192.1	1186.8	1188.8	1186.8	1181.5	1177.2	1176.0	1167.9	1171.2	1157.3
7.5°	1216.6	1211.0	1203.2	1205.5	1201.2	1191.4	1185.8	1182.5	1170.2	1170.4	1155.0
10°	1235.3	1230.5	1219.9	1221.4	1213.6	1200.4	1191.6	1187.1	1169.7	1167.1	1151.2
12.5°	1252.7	1246.1	1234.8	1235.5	1224.2	1206.7	1195.4	1188.8	1166.1	1158.6	1142.9
15°	1266.0	1259.7	1246.1	1245.9	1231.2	1208.5	1195.6	1186.6	1157.8	1145.9	1129.5
17.5°	1277.4	1271.6	1254.7	1254.2	1236.5	1207.8	1192.4	1181.0	1145.7	1131.1	1112.9
20°	1285.5	1279.7	1260.7	1259.0	1237.8	1204.0	1185.6	1171.2	1129.8	1112.4	1092.2
22.5°	1289.2	1283.4	1262.0	1259.5	1234.8	1196.4	1175.7	1158.8	1111.6	1088.9	1068.0
25°	1288.5	1282.9	1258.7	1256.2	1228.9	1185.0	1161.8	1142.4	1088.7	1061.9	1041.2
27.5°	1282.2	1277.9	1252.4	1249.1	1218.4	1169.7	1144.9	1123.5	1063.2	1033.4	1011.0
30°	1271.3	1268.1	1241.1	1238.0	1205.2	1152.8	1125.3	1100.5	1035.7	1002.1	979.4
32.5°	1253.9	1250.9	1223.7	1220.9	1187.6	1131.1	1102.3	1076.8	1005.7	968.6	945.9
35°	1230.0	1228.2	1201.7	1198.7	1164.9	1106.3	1075.8	1047.8	974.4	932.5	910.8
37.5°	1198.4	1198.4	1172.9	1169.7	1136.6	1076.1	1046.0	1016.3	939.1	894.7	873.2
40°	1161.8	1165.1	1139.1	1135.9	1103.8	1043.5	1010.7	979.4	901.0	854.8	833.8
42.5°	1117.9	1121.0	1099.3	1096.2	1066.2	1005.9	975.4	941.3	861.1	814.2	792.5
45°	1069.5	1073.5	1054.1	1051.8	1023.8	964.8	935.5	901.0	819.5	771.8	750.6
47.5°	1015.5	1020.8	1003.9	1002.6	976.7	922.7	892.1	857.1	775.8	727.6	707.7
50°	955.0	962.5	948.6	948.6	925.4	871.7	845.2	810.1	730.4	682.2	662.5
52.5°	890.1	899.7	889.4	889.6	870.7	822.5	795.0	760.7	683.0	635.5	617.4
55°	823.0	832.3	825.8	826.8	811.9	768.0	743.0	709.0	634.5	588.4	571.2
57.5°	752.9	763.0	758.7	760.7	750.3	711.0	685.0	655.2	584.6	538.9	524.3
60°	682.5	692.1	689.8	692.6	686.0	651.9	628.2	597.4	534.4	490.5	477.6
62.5°	611.3	620.2	619.6	622.7	619.1	590.9	569.7	543.5	482.4	442.0	430.2
65°	541.7	549.3	548.8	552.0	551.3	528.6	509.4	485.4	430.4	393.3	383.0
67.5°	474.1	480.4	478.6	482.4	483.4	465.2	448.6	427.1	381.0	344.9	336.1
70°	408.0	412.3	410.0	412.5	414.8	401.2	387.0	368.1	328.2	296.5	289.1
72.5°	343.1	346.2	342.6	345.1	347.2	337.3	325.7	309.3	276.3	248.8	242.7
75°	280.3	284.6	277.3	279.8	281.3	271.5	264.7	251.3	222.8	201.6	197.6
77.5°	219.5	222.0	218.0	217.0	218.0	210.9	205.6	195.3	173.8	156.4	153.9
80°	161.5	163.0	158.9	157.9	158.7	153.7	149.6	142.0	126.9	113.8	112.8
82.5°	108.2	109.0	105.5	104.5	105.0	103.4	98.6	93.4	86.3	75.2	74.9
85°	61.8	61.8	59.3	58.3	58.8	56.3	54.5	51.7	48.9	41.4	41.9
87.5°	22.7	22.7	21.4	21.2	23.7	20.9	20.2	18.9	19.7	15.6	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°	1154.3	1154.3	1154.3	1154.3	1154.3	1154.3	1154.3	1154.3	1154.3	1154.3	1154.3
2.5°	1159.3	1156.8	1154.5	1146.7	1150.0	1141.9	1141.4	1138.4	1136.1	1131.8	1137.4
5°	1155.5	1150.5	1143.9	1134.6	1137.4	1127.8	1125.8	1122.2	1119.2	1113.6	1117.9
7.5°	1149.5	1141.1	1130.8	1118.9	1122.7	1110.9	1107.8	1104.1	1101.5	1095.0	1098.8
10°	1140.6	1128.8	1116.7	1102.3	1105.1	1092.2	1088.4	1084.4	1082.1	1076.3	1080.1
12.5°	1127.0	1112.6	1096.2	1080.6	1083.6	1071.5	1066.5	1062.2	1061.4	1056.6	1061.2
15°	1109.4	1089.4	1072.5	1055.9	1059.4	1045.3	1043.0	1038.7	1040.0	1036.7	1042.2
17.5°	1086.9	1063.9	1045.5	1027.6	1031.1	1019.3	1017.5	1015.5	1016.8	1016.3	1022.3
20°	1061.7	1036.4	1015.3	997.6	999.6	990.3	991.0	990.5	993.0	995.8	1004.2
22.5°	1033.2	1004.7	982.5	964.3	967.3	959.2	962.8	963.8	968.1	974.4	985.0
25°	1001.1	970.6	947.4	930.2	933.0	927.7	933.8	936.3	943.1	953.7	964.5
27.5°	967.6	935.3	910.5	894.1	899.4	894.1	903.2	908.3	918.6	930.2	943.6
30°	932.0	898.4	873.0	858.3	863.4	858.6	873.2	880.0	890.4	906.3	922.2
32.5°	894.7	859.3	834.4	823.0	826.5	825.8	842.2	849.7	863.6	881.8	898.7
35°	856.3	819.5	794.2	784.7	788.9	789.9	809.6	818.5	833.6	855.5	873.7
37.5°	816.7	779.1	754.4	746.6	750.3	754.1	777.1	785.9	803.1	827.0	847.0
40°	775.6	738.0	713.8	707.4	711.2	715.3	740.2	752.4	771.0	797.0	818.7
42.5°	733.9	696.3	672.9	668.3	672.1	679.9	706.4	717.8	737.5	766.2	790.2
45°	691.6	652.4	632.0	628.5	632.5	641.6	667.6	681.2	702.1	733.7	759.4
47.5°	648.7	610.6	591.1	588.9	592.9	603.0	631.8	644.1	666.3	699.9	727.6
50°	605.3	568.2	549.5	548.8	552.5	563.4	590.9	605.5	628.5	666.1	694.6
52.5°	561.4	525.8	508.9	508.9	512.4	523.5	551.3	566.4	590.1	629.7	661.3
55°	517.5	483.7	467.5	468.8	473.8	483.4	510.4	526.3	550.3	591.4	624.7
57.5°	473.6	441.5	426.9	428.7	433.5	443.0	469.5	487.4	509.1	551.8	585.8
60°	430.2	399.9	387.0	389.0	393.3	402.9	430.4	445.8	467.5	510.9	545.0
62.5°	386.3	358.8	346.7	349.2	353.0	362.6	388.5	403.4	424.9	467.5	501.8
65°	342.9	317.4	307.0	309.6	313.1	321.9	346.4	360.8	381.2	422.9	455.7
67.5°	300.0	276.8	268.2	270.7	273.5	281.8	302.0	317.6	336.8	376.4	407.5
70°	257.6	236.9	229.3	231.9	234.4	242.0	259.6	274.0	291.7	328.0	356.8
72.5°	215.7	195.5	191.7	194.0	196.0	202.6	219.5	230.9	246.2	278.5	303.3
75°	174.8	157.4	154.9	157.2	158.9	164.0	178.1	188.0	200.8	228.8	249.0
77.5°	135.5	120.9	119.8	121.6	123.4	126.9	138.0	148.4	158.4	179.1	197.0
80°	98.6	86.8	86.8	88.6	88.1	92.3	100.2	108.5	115.8	130.7	143.8
82.5°	65.1	55.8	57.0	58.3	59.0	60.8	65.6	71.9	76.4	85.5	94.1
85°	36.1	29.8	31.0	32.0	31.5	33.6	36.1	39.9	42.1	46.4	51.0
87.5°	13.4	11.1	11.4	12.1	12.6	13.6	13.6	15.9	16.1	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°	1154.3	1154.3	1154.3
2.5°	1126.8	1132.8	1137.4
5°	1107.3	1112.4	1116.4
7.5°	1088.4	1093.0	1096.5
10°	1070.5	1075.6	1078.1
12.5°	1052.1	1057.9	1059.9
15°	1033.9	1039.7	1042.2
17.5°	1015.3	1022.8	1025.6
20°	997.8	1007.4	1009.7
22.5°	980.2	990.0	992.8
25°	961.0	972.6	975.4
27.5°	940.6	954.4	957.2
30°	920.1	935.3	938.0
32.5°	898.2	914.6	917.1
35°	875.2	891.6	894.7
37.5°	849.7	867.7	873.7
40°	823.3	842.7	849.0
42.5°	795.5	816.7	823.3
45°	765.7	788.9	796.5
47.5°	735.7	761.9	768.5
50°	703.2	731.2	739.0
52.5°	669.1	699.6	707.4
55°	633.8	664.6	673.1
57.5°	595.4	627.2	636.3
60°	555.3	587.1	595.7
62.5°	514.2	542.9	551.3
65°	468.3	495.3	502.8
67.5°	419.6	444.3	450.6
70°	367.9	389.3	394.8
72.5°	313.9	328.7	336.1
75°	258.1	270.0	275.5
77.5°	202.1	210.4	215.0
80°	147.3	152.1	155.9
82.5°	96.4	98.4	101.2
85°	52.0	52.0	53.7
87.5°	17.7	16.9	17.7
90°	0.0	0.0	0.0

(END OF REPORT)