

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: P835319

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

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835319
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-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

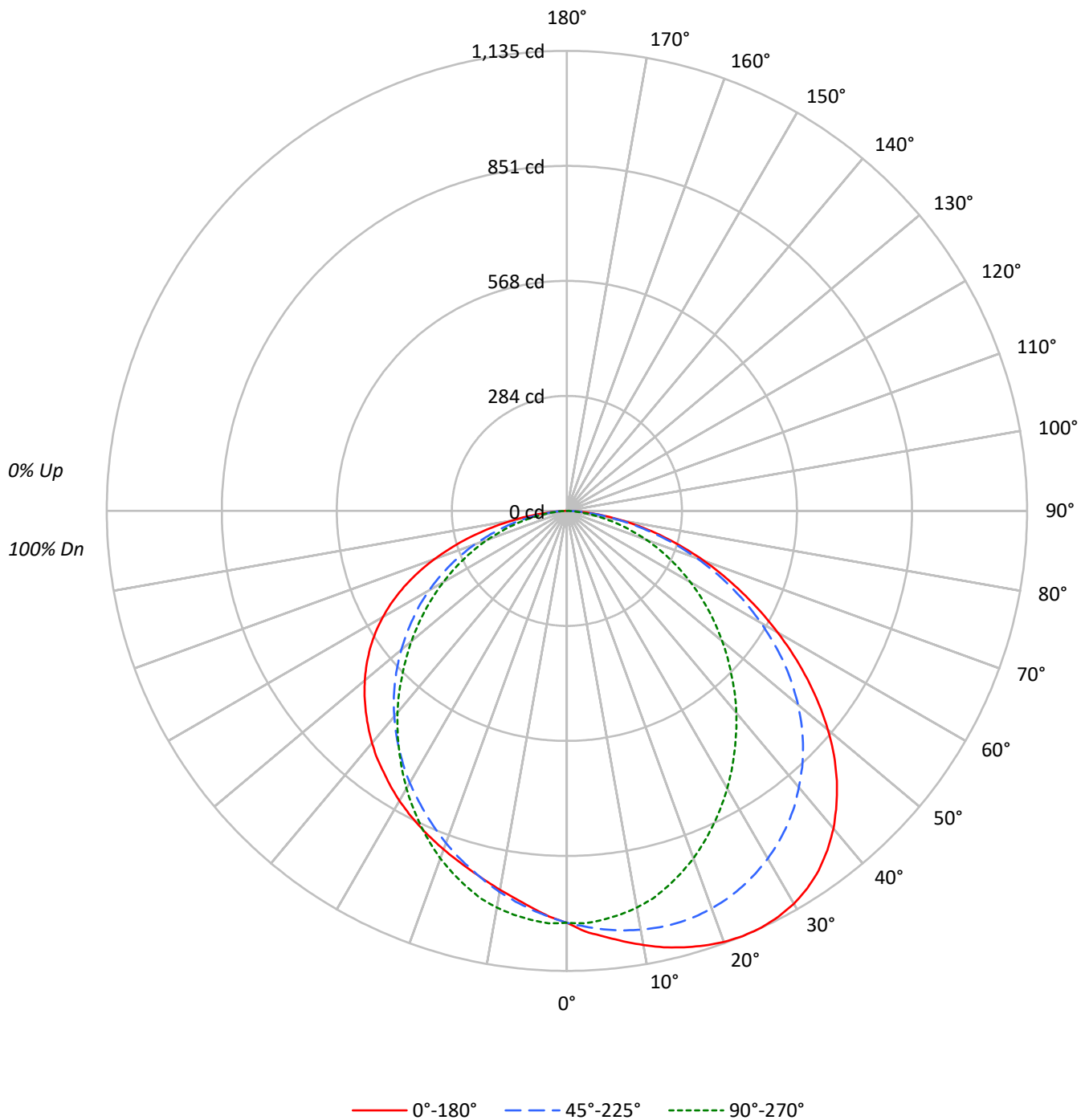
Lumens per Lamp: N/A
Luminaire Lumens: 2989.6 lumens
Efficiency: N/A
Efficacy: 89.8 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	2735	2735	2735
5°	2847	2736	2655
10°	2972	2716	2594
15°	3106	2672	2557
20°	3241	2613	2546
25°	3369	2537	2550
30°	3478	2458	2567
35°	3558	2370	2588
40°	3594	2283	2626
45°	3584	2186	2669
50°	3520	2094	2724
55°	3400	1998	2781
60°	3234	1895	2823
65°	3037	1780	2819
70°	2826	1641	2736
75°	2566	1441	2522
80°	2204	1184	2128
85°	1680	809	1460

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.4	3.2
10°-20°	278.4	9.3
20°-30°	426.5	14.3
30°-40°	520.4	17.4
40°-50°	544.3	18.2
50°-60°	492.6	16.5
60°-70°	373.1	12.5
70°-80°	207.9	7.0
80°-90°	50.2	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°	801.2	26.8
0°-40°	1321.6	44.2
0°-60°	2358.5	78.9
0°-90°	2989.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2989.6	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1016	1016	1016	1016	1016	
5°	1054	1037	1013	988	983	102
15°	1115	1053	959	915	918	316
25°	1134	1023	855	824	859	523
35°	1083	947	722	721	788	676
45°	942	824	574	600	701	725
55°	725	654	426	463	593	647
65°	477	448	280	318	443	473
75°	247	233	139	166	243	262
85°	54	48	26	35	47	65
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°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1038.8	1033.9	1029.9	1031.4	1032.3	1029.2	1026.6	1027.0	1024.3	1029.4	1017.4
5°	1054.1	1049.7	1045.0	1046.8	1045.0	1040.3	1036.6	1035.4	1028.3	1031.2	1019.0
7.5°	1071.2	1066.3	1059.4	1061.4	1057.7	1049.0	1044.1	1041.2	1030.3	1030.6	1017.0
10°	1087.6	1083.4	1074.1	1075.4	1068.5	1057.0	1049.2	1045.2	1029.9	1027.7	1013.7
12.5°	1103.0	1097.2	1087.2	1087.9	1077.9	1062.5	1052.5	1046.8	1026.8	1020.1	1006.3
15°	1114.8	1109.2	1097.2	1097.0	1084.1	1064.1	1052.8	1044.8	1019.4	1009.0	994.6
17.5°	1124.7	1119.6	1104.8	1104.3	1088.8	1063.4	1049.9	1039.9	1008.8	995.9	979.9
20°	1131.9	1126.7	1110.1	1108.5	1089.9	1060.1	1043.9	1031.2	994.8	979.5	961.7
22.5°	1135.2	1130.1	1111.2	1109.0	1087.2	1053.4	1035.2	1020.3	978.8	958.8	940.4
25°	1134.5	1129.6	1108.3	1106.1	1082.1	1043.4	1023.0	1005.9	958.6	935.0	916.8
27.5°	1129.0	1125.2	1102.8	1099.9	1072.8	1029.9	1008.1	989.2	936.1	909.9	890.2
30°	1119.4	1116.5	1092.8	1090.1	1061.2	1015.0	990.8	969.0	911.9	882.4	862.4
32.5°	1104.1	1101.4	1077.4	1075.0	1045.7	995.9	970.6	948.1	885.5	852.8	832.8
35°	1083.0	1081.4	1058.1	1055.4	1025.7	974.1	947.2	922.6	857.9	821.1	802.0
37.5°	1055.2	1055.2	1032.8	1029.9	1000.8	947.5	921.0	894.8	826.8	787.7	768.9
40°	1023.0	1025.9	1003.0	1000.1	971.9	918.8	889.9	862.4	793.3	752.6	734.2
42.5°	984.3	987.0	967.9	965.2	938.8	885.7	858.8	828.8	758.2	716.9	697.8
45°	941.7	945.2	928.1	926.1	901.5	849.5	823.7	793.3	721.5	679.6	660.9
47.5°	894.2	898.8	883.9	882.8	859.9	812.4	785.5	754.6	683.1	640.7	623.1
50°	840.8	847.5	835.3	835.3	814.8	767.5	744.2	713.3	643.1	600.7	583.4
52.5°	783.7	792.2	783.1	783.3	766.6	724.2	700.0	669.8	601.4	559.6	543.6
55°	724.7	732.9	727.1	728.0	714.9	676.2	654.2	624.2	558.7	518.1	502.9
57.5°	662.9	671.8	668.0	669.8	660.7	626.0	603.1	576.9	514.7	474.5	461.6
60°	600.9	609.4	607.4	609.8	604.0	574.0	553.2	526.1	470.5	431.9	420.5
62.5°	538.3	546.0	545.6	548.3	545.2	520.3	501.6	478.5	424.8	389.2	378.8
65°	477.0	483.6	483.2	486.1	485.4	465.4	448.5	427.4	379.0	346.3	337.2
67.5°	417.4	423.0	421.4	424.8	425.6	409.6	395.0	376.1	335.4	303.7	295.9
70°	359.2	363.0	361.0	363.2	365.2	353.2	340.8	324.1	289.0	261.0	254.6
72.5°	302.1	304.8	301.7	303.9	305.7	297.0	286.8	272.4	243.3	219.0	213.7
75°	246.8	250.6	244.1	246.4	247.7	239.0	233.0	221.3	196.2	177.5	173.9
77.5°	193.3	195.5	191.9	191.0	191.9	185.7	181.1	171.9	153.1	137.7	135.5
80°	142.2	143.5	140.0	139.1	139.7	135.3	131.7	125.1	111.7	100.2	99.3
82.5°	95.3	96.0	92.9	92.0	92.4	91.1	86.9	82.2	76.0	66.2	66.0
85°	54.4	54.4	52.2	51.3	51.8	49.5	48.0	45.5	43.1	36.4	36.9
87.5°	20.0	20.0	18.9	18.7	20.9	18.4	17.8	16.7	17.3	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°	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3	1016.3
2.5°	1020.8	1018.6	1016.6	1009.7	1012.6	1005.5	1005.0	1002.3	1000.3	996.6	1001.5
5°	1017.4	1013.0	1007.2	999.0	1001.5	993.0	991.2	988.1	985.5	980.6	984.3
7.5°	1012.1	1004.8	995.7	985.2	988.6	978.1	975.5	972.1	969.9	964.1	967.5
10°	1004.3	993.9	983.2	970.6	973.0	961.7	958.4	954.8	952.8	947.7	951.0
12.5°	992.3	979.7	965.2	951.5	954.1	943.5	939.0	935.3	934.6	930.4	934.4
15°	976.8	959.2	944.4	929.7	932.8	920.4	918.4	914.6	915.7	912.8	917.7
17.5°	957.0	936.8	920.6	904.8	907.9	897.5	895.9	894.2	895.3	894.8	900.2
20°	934.8	912.6	893.9	878.4	880.2	871.9	872.6	872.2	874.4	876.8	884.2
22.5°	909.7	884.6	865.1	849.1	851.7	844.6	847.7	848.6	852.4	857.9	867.3
25°	881.5	854.6	834.2	819.1	821.5	816.8	822.2	824.4	830.4	839.7	849.3
27.5°	851.9	823.5	801.7	787.3	792.0	787.3	795.3	799.7	808.8	819.1	830.8
30°	820.6	791.1	768.6	755.8	760.2	756.0	768.9	774.9	784.0	798.0	812.0
32.5°	787.7	756.6	734.7	724.7	727.8	727.1	741.5	748.2	760.4	776.4	791.3
35°	754.0	721.5	699.3	690.9	694.7	695.6	712.9	720.7	734.0	753.3	769.3
37.5°	719.1	686.0	664.2	657.3	660.7	664.0	684.2	692.0	707.1	728.2	745.8
40°	682.9	649.8	628.5	622.9	626.2	629.8	651.8	662.5	678.9	701.8	720.9
42.5°	646.2	613.1	592.5	588.5	591.8	598.7	622.0	632.0	649.3	674.7	695.8
45°	608.9	574.5	556.5	553.4	556.9	564.9	587.8	599.8	618.2	646.0	668.7
47.5°	571.1	537.6	520.5	518.5	522.1	530.9	556.3	567.1	586.7	616.2	640.7
50°	532.9	500.3	483.8	483.2	486.5	496.1	520.3	533.2	553.4	586.5	611.6
52.5°	494.3	463.0	448.1	448.1	451.2	461.0	485.4	498.7	519.6	554.5	582.3
55°	455.6	425.9	411.6	412.8	417.2	425.6	449.4	463.4	484.5	520.7	550.0
57.5°	417.0	388.8	375.9	377.4	381.7	390.1	413.4	429.2	448.3	485.8	515.8
60°	378.8	352.1	340.8	342.6	346.3	354.8	379.0	392.5	411.6	449.9	479.8
62.5°	340.1	315.9	305.2	307.5	310.8	319.2	342.1	355.2	374.1	411.6	441.9
65°	301.9	279.5	270.4	272.6	275.7	283.5	305.0	317.7	335.7	372.3	401.2
67.5°	264.1	243.7	236.1	238.4	240.8	248.1	265.9	279.7	296.6	331.4	358.8
70°	226.8	208.6	201.9	204.2	206.4	213.0	228.6	241.3	256.8	288.8	314.1
72.5°	189.9	172.2	168.8	170.8	172.6	178.4	193.3	203.3	216.8	245.3	267.0
75°	154.0	138.6	136.4	138.4	140.0	144.4	156.8	165.5	176.8	201.5	219.3
77.5°	119.3	106.4	105.5	107.1	108.6	111.7	121.5	130.6	139.5	157.7	173.5
80°	86.9	76.4	76.4	78.0	77.5	81.3	88.2	95.5	102.0	115.1	126.6
82.5°	57.3	49.1	50.2	51.3	52.0	53.5	57.8	63.3	67.3	75.3	82.9
85°	31.8	26.2	27.3	28.2	27.8	29.5	31.8	35.1	37.1	40.9	44.9
87.5°	11.8	9.8	10.0	10.7	11.1	12.0	12.0	14.0	14.2	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°	1016.3	1016.3	1016.3
2.5°	992.1	997.5	1001.5
5°	975.0	979.5	983.0
7.5°	958.4	962.4	965.5
10°	942.6	947.0	949.2
12.5°	926.4	931.5	933.3
15°	910.4	915.5	917.7
17.5°	893.9	900.6	903.0
20°	878.6	887.0	889.0
22.5°	863.1	871.7	874.2
25°	846.2	856.4	858.8
27.5°	828.2	840.4	842.8
30°	810.2	823.5	826.0
32.5°	790.9	805.3	807.5
35°	770.6	785.1	787.7
37.5°	748.2	764.0	769.3
40°	724.9	742.0	747.5
42.5°	700.4	719.1	724.9
45°	674.2	694.7	701.3
47.5°	647.8	670.9	676.7
50°	619.1	643.8	650.7
52.5°	589.1	616.0	622.9
55°	558.0	585.1	592.7
57.5°	524.3	552.3	560.3
60°	489.0	516.9	524.5
62.5°	452.7	478.1	485.4
65°	412.3	436.1	442.7
67.5°	369.4	391.2	396.8
70°	323.9	342.8	347.7
72.5°	276.4	289.5	295.9
75°	227.3	237.7	242.6
77.5°	177.9	185.3	189.3
80°	129.7	134.0	137.3
82.5°	84.9	86.6	89.1
85°	45.8	45.8	47.3
87.5°	15.6	14.9	15.6
90°	0.0	0.0	0.0

(END OF REPORT)