

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: P835270

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-4LO-20-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835270
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-LD4-4LO-20-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 2000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

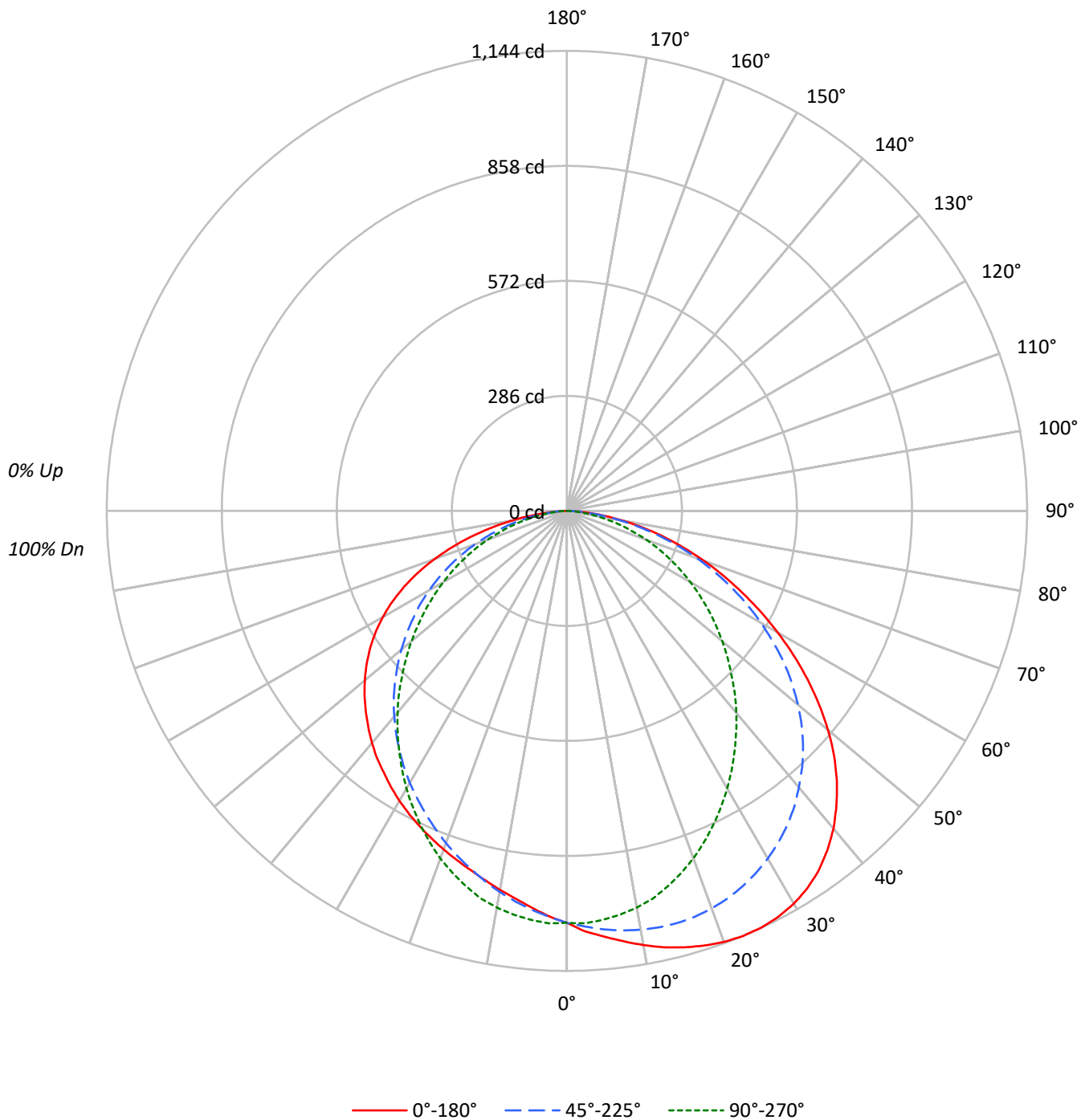
Lumens per Lamp: N/A
Luminaire Lumens: 3013.1 lumens
Efficiency: N/A
Efficacy: 64.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 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	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°	2756	2756	2756
5°	2870	2758	2676
10°	2995	2737	2614
15°	3130	2693	2577
20°	3267	2634	2566
25°	3395	2557	2570
30°	3506	2477	2587
35°	3586	2389	2608
40°	3622	2301	2647
45°	3612	2203	2690
50°	3548	2111	2745
55°	3427	2014	2803
60°	3259	1910	2845
65°	3061	1794	2841
70°	2848	1654	2757
75°	2587	1452	2542
80°	2221	1193	2145
85°	1695	815	1473

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	97.2	3.2
10°-20°	280.6	9.3
20°-30°	429.8	14.3
30°-40°	524.5	17.4
40°-50°	548.5	18.2
50°-60°	496.5	16.5
60°-70°	376.0	12.5
70°-80°	209.5	7.0
80°-90°	50.5	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°	807.5	26.8
0°-40°	1332.0	44.2
0°-60°	2377.0	78.9
0°-90°	3013.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3013.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1024	1024	1024	1024	1024	
5°	1062	1045	1021	996	991	102
15°	1124	1061	967	922	925	319
25°	1143	1031	861	831	866	527
35°	1092	955	727	726	794	682
45°	949	830	579	604	707	730
55°	730	659	429	467	597	652
65°	481	452	282	320	446	477
75°	249	235	140	167	244	264
85°	55	48	26	35	48	66
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°	1024.3	1024.3	1024.3	1024.3	1024.3	1024.3	1024.3	1024.3	1024.3	1024.3	1024.3
2.5°	1046.9	1042.0	1038.0	1039.6	1040.5	1037.3	1034.6	1035.1	1032.4	1037.5	1025.5
5°	1062.4	1057.9	1053.2	1055.0	1053.2	1048.5	1044.7	1043.6	1036.4	1039.3	1027.0
7.5°	1079.6	1074.7	1067.8	1069.8	1066.0	1057.2	1052.3	1049.4	1038.4	1038.7	1025.0
10°	1096.2	1092.0	1082.5	1083.9	1077.0	1065.3	1057.5	1053.4	1038.0	1035.8	1021.6
12.5°	1111.7	1105.8	1095.8	1096.4	1086.4	1070.9	1060.8	1055.0	1034.9	1028.1	1014.3
15°	1123.5	1117.9	1105.8	1105.6	1092.6	1072.5	1061.1	1053.0	1027.5	1016.9	1002.4
17.5°	1133.6	1128.4	1113.4	1113.0	1097.3	1071.8	1058.1	1048.1	1016.7	1003.7	987.6
20°	1140.8	1135.6	1118.8	1117.3	1098.4	1068.4	1052.1	1039.3	1002.6	987.2	969.3
22.5°	1144.1	1139.0	1119.9	1117.7	1095.8	1061.7	1043.4	1028.4	986.5	966.3	947.8
25°	1143.4	1138.5	1117.0	1114.8	1090.6	1051.7	1031.1	1013.8	966.1	942.4	924.0
27.5°	1137.9	1134.0	1111.4	1108.5	1081.2	1038.0	1016.1	997.0	943.5	917.1	897.2
30°	1128.2	1125.3	1101.4	1098.7	1069.6	1023.0	998.6	976.6	919.1	889.3	869.2
32.5°	1112.8	1110.1	1085.9	1083.4	1053.9	1003.7	978.2	955.6	892.5	859.5	839.4
35°	1091.5	1089.9	1066.4	1063.7	1033.7	981.8	954.7	929.9	864.7	827.5	808.3
37.5°	1063.5	1063.5	1040.9	1038.0	1008.7	954.9	928.3	901.9	833.4	793.9	774.9
40°	1031.1	1034.0	1010.9	1008.0	979.6	926.0	896.9	869.2	799.5	758.6	740.0
42.5°	992.1	994.8	975.5	972.8	946.2	892.7	865.6	835.4	764.2	722.5	703.3
45°	949.1	952.7	935.4	933.4	908.6	856.2	830.2	799.5	727.2	684.9	666.1
47.5°	901.2	905.9	890.9	889.8	866.7	818.8	791.7	760.6	688.5	645.7	628.0
50°	847.5	854.2	841.9	841.9	821.3	773.6	750.1	718.9	648.2	605.4	588.0
52.5°	789.9	798.4	789.2	789.5	772.7	729.9	705.5	675.1	606.1	564.0	547.9
55°	730.4	738.6	732.8	733.7	720.5	681.5	659.4	629.2	563.1	522.1	506.9
57.5°	668.1	677.1	673.3	675.1	665.9	630.9	607.9	581.5	518.8	478.2	465.3
60°	605.6	614.2	612.1	614.6	608.8	578.6	557.5	530.2	474.2	435.3	423.8
62.5°	542.5	550.3	549.9	552.6	549.4	524.4	505.6	482.3	428.1	392.3	381.7
65°	480.7	487.4	487.0	489.9	489.2	469.1	452.1	430.8	382.0	349.1	339.9
67.5°	420.7	426.3	424.7	428.1	429.0	412.9	398.1	379.1	338.1	306.1	298.2
70°	362.0	365.9	363.8	366.1	368.1	356.0	343.5	326.7	291.3	263.1	256.6
72.5°	304.5	307.2	304.1	306.3	308.1	299.4	289.1	274.5	245.2	220.8	215.4
75°	248.8	252.6	246.1	248.3	249.6	240.9	234.9	223.0	197.7	178.9	175.3
77.5°	194.8	197.0	193.4	192.6	193.4	187.2	182.5	173.3	154.3	138.8	136.6
80°	143.3	144.6	141.1	140.2	140.8	136.4	132.8	126.1	112.6	101.0	100.1
82.5°	96.1	96.7	93.6	92.7	93.1	91.8	87.5	82.8	76.6	66.7	66.5
85°	54.9	54.9	52.6	51.7	52.2	49.9	48.4	45.9	43.4	36.7	37.2
87.5°	20.2	20.2	19.0	18.8	21.0	18.6	17.9	16.8	17.5	13.9	14.8
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°	1024.3	1024.3	1024.3	1024.3	1024.3	1024.3	1024.3	1024.3	1024.3	1024.3	1024.3
2.5°	1028.8	1026.6	1024.6	1017.6	1020.5	1013.4	1012.9	1010.2	1008.2	1004.4	1009.3
5°	1025.5	1021.0	1015.2	1006.9	1009.3	1000.8	999.0	995.9	993.2	988.3	992.1
7.5°	1020.1	1012.7	1003.5	993.0	996.3	985.8	983.1	979.8	977.5	971.7	975.1
10°	1012.2	1001.7	991.0	978.2	980.7	969.3	965.9	962.3	960.3	955.2	958.5
12.5°	1000.2	987.4	972.8	959.0	961.6	950.9	946.4	942.6	941.9	937.7	941.7
15°	984.5	966.8	951.8	937.0	940.1	927.6	925.6	921.8	922.9	920.0	924.9
17.5°	964.6	944.2	927.8	911.9	915.1	904.5	903.0	901.2	902.3	901.9	907.2
20°	942.2	919.8	901.0	885.3	887.1	878.8	879.5	879.0	881.3	883.7	891.1
22.5°	916.9	891.6	871.9	855.7	858.4	851.3	854.4	855.3	859.1	864.7	874.1
25°	888.4	861.3	840.7	825.5	828.0	823.3	828.6	830.9	836.9	846.3	856.0
27.5°	858.7	830.0	808.0	793.5	798.2	793.5	801.6	806.0	815.2	825.5	837.4
30°	827.1	797.3	774.7	761.7	766.2	761.9	774.9	781.0	790.1	804.2	818.3
32.5°	793.9	762.6	740.4	730.4	733.5	732.8	747.4	754.1	766.4	782.5	797.5
35°	759.9	727.2	704.8	696.3	700.1	701.0	718.5	726.3	739.8	759.2	775.4
37.5°	724.8	691.4	669.5	662.5	665.9	669.2	689.6	697.4	712.7	733.9	751.6
40°	688.3	654.9	633.4	627.8	631.2	634.8	656.9	667.7	684.2	707.3	726.6
42.5°	651.3	618.0	597.1	593.1	596.5	603.4	626.9	637.0	654.5	680.0	701.2
45°	613.7	579.0	560.9	557.7	561.3	569.4	592.4	604.5	623.1	651.1	673.9
47.5°	575.6	541.8	524.6	522.6	526.2	535.1	560.6	571.6	591.3	621.1	645.7
50°	537.1	504.2	487.7	487.0	490.3	500.0	524.4	537.4	557.7	591.1	616.4
52.5°	498.2	466.6	451.6	451.6	454.7	464.6	489.2	502.7	523.7	558.9	586.8
55°	459.2	429.2	414.9	416.0	420.5	429.0	452.9	467.1	488.3	524.8	554.4
57.5°	420.3	391.8	378.8	380.4	384.7	393.2	416.7	432.6	451.8	489.7	519.9
60°	381.7	354.9	343.5	345.3	349.1	357.6	382.0	395.6	414.9	453.4	483.6
62.5°	342.8	318.4	307.6	309.9	313.2	321.7	344.8	358.0	377.0	414.9	445.3
65°	304.3	281.7	272.5	274.7	277.9	285.7	307.4	320.2	338.3	375.3	404.4
67.5°	266.2	245.6	238.0	240.2	242.7	250.1	268.0	281.9	298.9	334.1	361.6
70°	228.6	210.2	203.5	205.8	208.0	214.7	230.4	243.2	258.8	291.1	316.6
72.5°	191.4	173.5	170.2	172.2	174.0	179.8	194.8	204.9	218.5	247.2	269.1
75°	155.2	139.7	137.5	139.5	141.1	145.5	158.1	166.8	178.2	203.1	221.0
77.5°	120.2	107.2	106.4	107.9	109.5	112.6	122.5	131.7	140.6	159.0	174.9
80°	87.5	77.0	77.0	78.6	78.1	81.9	88.9	96.3	102.8	116.0	127.6
82.5°	57.8	49.5	50.6	51.7	52.4	54.0	58.2	63.8	67.8	75.9	83.5
85°	32.0	26.4	27.5	28.4	28.0	29.8	32.0	35.4	37.4	41.2	45.2
87.5°	11.9	9.9	10.1	10.7	11.2	12.1	12.1	14.1	14.3	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):

	160°	170°	180°
0°	1024.3	1024.3	1024.3
2.5°	999.9	1005.3	1009.3
5°	982.7	987.2	990.8
7.5°	965.9	969.9	973.1
10°	950.0	954.5	956.7
12.5°	933.7	938.8	940.6
15°	917.5	922.7	924.9
17.5°	901.0	907.7	910.1
20°	885.5	894.0	896.0
22.5°	869.8	878.6	881.0
25°	852.8	863.1	865.6
27.5°	834.7	847.0	849.5
30°	816.6	830.0	832.5
32.5°	797.1	811.6	813.9
35°	776.7	791.3	793.9
37.5°	754.1	770.0	775.4
40°	730.6	747.8	753.4
42.5°	706.0	724.8	730.6
45°	679.5	700.1	706.8
47.5°	652.9	676.2	682.0
50°	624.0	648.9	655.8
52.5°	593.8	620.9	627.8
55°	562.4	589.7	597.4
57.5°	528.4	556.6	564.7
60°	492.8	521.0	528.6
62.5°	456.3	481.8	489.2
65°	415.6	439.5	446.2
67.5°	372.3	394.3	399.9
70°	326.4	345.5	350.4
72.5°	278.5	291.7	298.2
75°	229.0	239.6	244.5
77.5°	179.3	186.7	190.8
80°	130.8	135.0	138.4
82.5°	85.5	87.3	89.8
85°	46.1	46.1	47.7
87.5°	15.7	15.0	15.7
90°	0.0	0.0	0.0

(END OF REPORT)