

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: P835355

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2STD-50-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835355
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-50-120-EDD-90
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

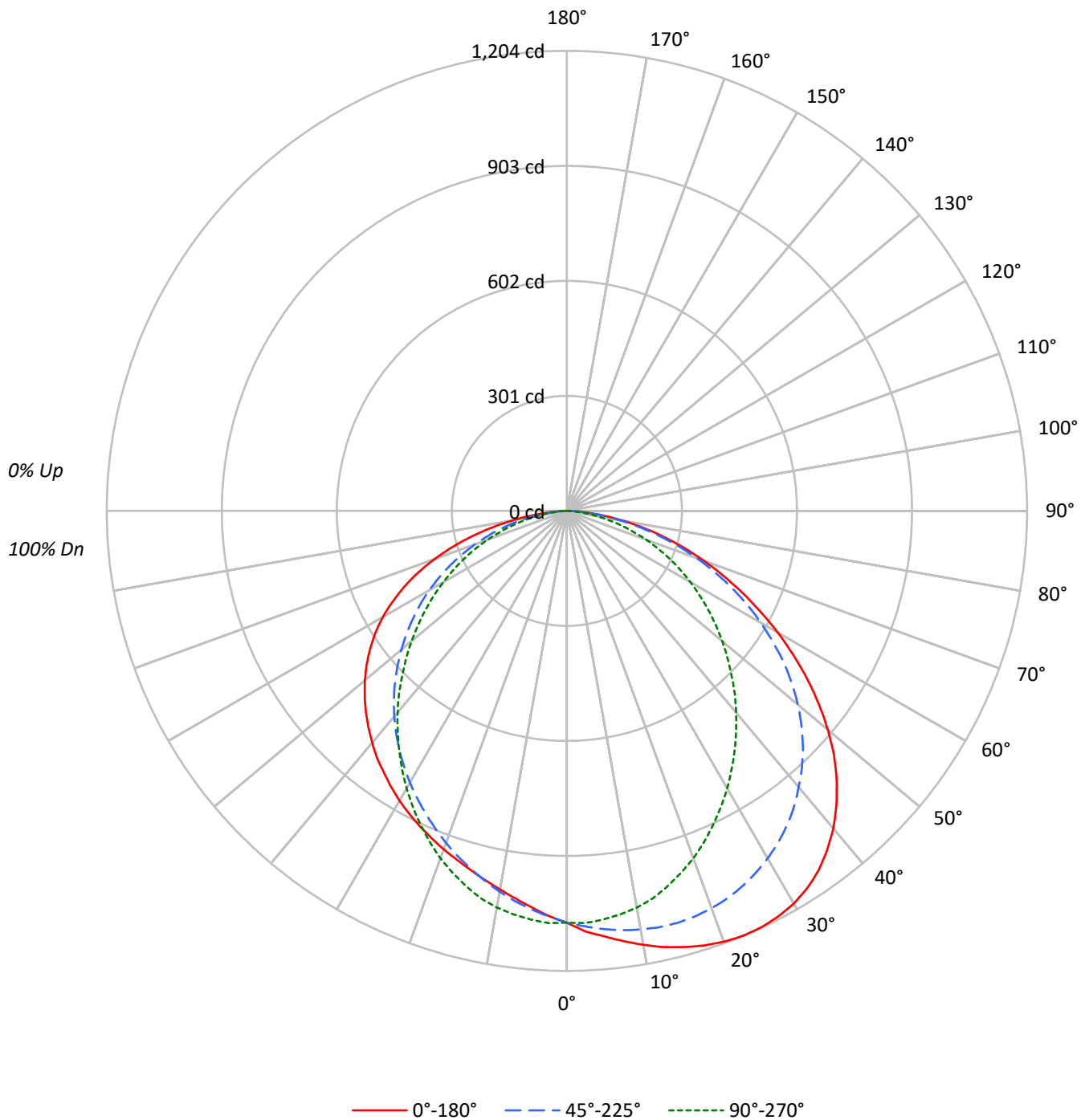
Lumens per Lamp: N/A
Luminaire Lumens: 3169.7 lumens
Efficiency: N/A
Efficacy: 95.2 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2900	2900	2900
5°	3019	2901	2815
10°	3151	2879	2750
15°	3293	2833	2711
20°	3436	2771	2699
25°	3572	2690	2704
30°	3688	2606	2721
35°	3772	2513	2744
40°	3810	2420	2784
45°	3800	2318	2830
50°	3732	2220	2888
55°	3605	2118	2948
60°	3429	2009	2993
65°	3220	1887	2989
70°	2997	1740	2900
75°	2721	1528	2674
80°	2335	1255	2256
85°	1782	858	1550



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	102.2	3.2
10°-20°	295.1	9.3
20°-30°	452.1	14.3
30°-40°	551.8	17.4
40°-50°	577.0	18.2
50°-60°	522.3	16.5
60°-70°	395.5	12.5
70°-80°	220.4	7.0
80°-90°	53.2	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°	849.5	26.8
0°-40°	1401.3	44.2
0°-60°	2500.6	78.9
0°-90°	3169.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3169.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1078	1078	1078	1078	1078	
5°	1118	1099	1074	1048	1042	108
15°	1182	1116	1017	970	973	335
25°	1203	1085	906	874	911	555
35°	1148	1004	765	764	835	717
45°	998	873	609	636	744	768
55°	768	694	452	491	628	686
65°	506	476	296	337	469	502
75°	262	247	147	176	257	278
85°	58	51	28	37	50	69
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°	1077.6	1077.6	1077.6	1077.6	1077.6	1077.6	1077.6	1077.6	1077.6	1077.6	1077.6
2.5°	1101.4	1096.2	1091.9	1093.6	1094.5	1091.2	1088.4	1088.9	1086.0	1091.5	1078.7
5°	1117.6	1112.9	1107.9	1109.8	1107.9	1103.0	1099.0	1097.8	1090.3	1093.3	1080.4
7.5°	1135.7	1130.6	1123.3	1125.4	1121.4	1112.2	1107.0	1103.9	1092.4	1092.6	1078.3
10°	1153.2	1148.7	1138.8	1140.2	1132.9	1120.7	1112.4	1108.2	1091.9	1089.6	1074.7
12.5°	1169.4	1163.3	1152.7	1153.4	1142.8	1126.6	1116.0	1109.8	1088.6	1081.6	1067.0
15°	1181.9	1176.0	1163.3	1163.1	1149.4	1128.2	1116.2	1107.7	1080.9	1069.8	1054.5
17.5°	1192.5	1187.1	1171.3	1170.8	1154.3	1127.5	1113.1	1102.5	1069.6	1055.9	1038.9
20°	1200.0	1194.6	1177.0	1175.3	1155.5	1124.0	1106.8	1093.3	1054.7	1038.5	1019.6
22.5°	1203.6	1198.2	1178.1	1175.8	1152.7	1116.9	1097.6	1081.8	1037.8	1016.6	997.0
25°	1202.9	1197.7	1175.1	1172.7	1147.3	1106.3	1084.6	1066.5	1016.3	991.4	972.0
27.5°	1197.0	1193.0	1169.2	1166.1	1137.4	1091.9	1068.8	1048.8	992.5	964.7	943.8
30°	1186.8	1183.8	1158.6	1155.8	1125.1	1076.1	1050.5	1027.4	966.9	935.5	914.3
32.5°	1170.6	1167.8	1142.3	1139.7	1108.7	1055.9	1029.0	1005.3	938.8	904.2	883.0
35°	1148.2	1146.6	1121.8	1119.0	1087.5	1032.8	1004.3	978.2	909.6	870.5	850.3
37.5°	1118.8	1118.8	1095.0	1091.9	1061.1	1004.5	976.5	948.7	876.7	835.2	815.2
40°	1084.6	1087.7	1063.4	1060.4	1030.5	974.2	943.5	914.3	841.1	798.0	778.4
42.5°	1043.6	1046.5	1026.2	1023.4	995.4	939.1	910.6	878.8	803.9	760.1	739.8
45°	998.4	1002.2	984.1	981.9	955.8	900.7	873.4	841.1	765.0	720.5	700.7
47.5°	948.0	953.0	937.2	936.0	911.7	861.3	832.8	800.1	724.3	679.3	660.7
50°	891.5	898.6	885.6	885.6	863.9	813.8	789.0	756.3	681.9	636.9	618.5
52.5°	831.0	839.9	830.3	830.5	812.8	767.8	742.2	710.1	637.6	593.3	576.3
55°	768.3	777.0	770.9	771.8	757.9	717.0	693.6	661.8	592.4	549.3	533.2
57.5°	702.8	712.3	708.2	710.1	700.5	663.7	639.5	611.7	545.7	503.1	489.4
60°	637.1	646.1	643.9	646.5	640.4	608.6	586.5	557.7	498.9	457.9	445.9
62.5°	570.7	578.9	578.5	581.3	578.0	551.6	531.8	507.3	450.3	412.7	401.6
65°	505.7	512.8	512.3	515.3	514.6	493.4	475.5	453.2	401.8	367.2	357.5
67.5°	442.6	448.5	446.8	450.3	451.3	434.3	418.8	398.8	355.7	322.0	313.7
70°	380.9	384.9	382.7	385.1	387.2	374.5	361.3	343.6	306.4	276.8	269.9
72.5°	320.3	323.2	319.9	322.2	324.1	314.9	304.1	288.8	257.9	232.2	226.6
75°	261.7	265.7	258.9	261.2	262.6	253.4	247.1	234.6	208.0	188.2	184.4
77.5°	204.9	207.3	203.5	202.6	203.5	196.9	192.0	182.3	162.3	146.0	143.7
80°	150.7	152.2	148.4	147.4	148.2	143.4	139.7	132.6	118.5	106.2	105.3
82.5°	101.0	101.8	98.5	97.5	98.0	96.6	92.1	87.1	80.6	70.2	70.0
85°	57.7	57.7	55.4	54.4	54.9	52.5	50.9	48.3	45.7	38.6	39.1
87.5°	21.2	21.2	20.0	19.8	22.1	19.5	18.8	17.7	18.4	14.6	15.5
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°	1077.6	1077.6	1077.6	1077.6	1077.6	1077.6	1077.6	1077.6	1077.6	1077.6	1077.6
2.5°	1082.3	1079.9	1077.8	1070.5	1073.6	1066.0	1065.6	1062.7	1060.6	1056.6	1061.8
5°	1078.7	1074.0	1067.9	1059.2	1061.8	1052.8	1050.9	1047.7	1044.8	1039.6	1043.6
7.5°	1073.1	1065.3	1055.7	1044.6	1048.1	1037.1	1034.2	1030.7	1028.3	1022.2	1025.7
10°	1064.8	1053.8	1042.5	1029.0	1031.6	1019.6	1016.1	1012.3	1010.2	1004.8	1008.3
12.5°	1052.1	1038.7	1023.4	1008.8	1011.6	1000.3	995.6	991.6	990.9	986.4	990.7
15°	1035.6	1017.0	1001.3	985.7	989.0	975.8	973.7	969.7	970.9	967.8	973.0
17.5°	1014.7	993.2	976.0	959.3	962.6	951.6	949.9	948.0	949.2	948.7	954.4
20°	991.1	967.6	947.8	931.3	933.2	924.5	925.2	924.7	927.1	929.6	937.4
22.5°	964.5	937.9	917.2	900.2	903.0	895.5	898.8	899.7	903.7	909.6	919.5
25°	934.6	906.1	884.4	868.4	871.0	866.1	871.7	874.1	880.4	890.3	900.4
27.5°	903.3	873.1	850.0	834.7	839.7	834.7	843.2	847.9	857.6	868.4	880.9
30°	870.1	838.7	814.9	801.3	806.0	801.5	815.2	821.5	831.2	846.0	860.9
32.5°	835.2	802.2	778.9	768.3	771.6	770.9	786.2	793.3	806.2	823.2	839.0
35°	799.4	765.0	741.5	732.5	736.5	737.5	755.8	764.1	778.2	798.7	815.7
37.5°	762.4	727.3	704.2	696.9	700.5	704.0	725.4	733.7	749.7	772.1	790.7
40°	724.0	688.9	666.3	660.4	664.0	667.7	691.1	702.4	719.8	744.0	764.3
42.5°	685.2	650.1	628.2	623.9	627.5	634.8	659.5	670.1	688.5	715.3	737.7
45°	645.6	609.1	590.0	586.7	590.5	599.0	623.2	635.9	655.5	684.9	709.0
47.5°	605.6	570.0	551.9	549.7	553.5	562.9	589.8	601.3	622.0	653.4	679.3
50°	565.0	530.4	513.0	512.3	515.8	525.9	551.6	565.3	586.7	621.8	648.4
52.5°	524.1	490.9	475.1	475.1	478.4	488.7	514.6	528.8	550.9	587.9	617.3
55°	483.1	451.5	436.4	437.6	442.3	451.3	476.5	491.3	513.7	552.1	583.2
57.5°	442.1	412.2	398.5	400.2	404.6	413.6	438.3	455.0	475.3	515.1	546.9
60°	401.6	373.3	361.3	363.2	367.2	376.1	401.8	416.2	436.4	477.0	508.8
62.5°	360.6	334.9	323.6	326.0	329.5	338.5	362.7	376.6	396.6	436.4	468.5
65°	320.1	296.3	286.6	289.0	292.3	300.5	323.4	336.8	355.9	394.8	425.4
67.5°	280.0	258.4	250.4	252.7	255.3	263.1	281.9	296.5	314.4	351.4	380.4
70°	240.5	221.2	214.1	216.5	218.8	225.9	242.4	255.8	272.3	306.2	333.0
72.5°	201.4	182.5	179.0	181.1	183.0	189.1	204.9	215.5	229.9	260.0	283.1
75°	163.2	147.0	144.6	146.7	148.4	153.1	166.3	175.5	187.5	213.6	232.5
77.5°	126.5	112.8	111.9	113.5	115.2	118.5	128.8	138.5	147.9	167.2	184.0
80°	92.1	81.0	81.0	82.7	82.2	86.2	93.5	101.3	108.1	122.0	134.3
82.5°	60.8	52.1	53.2	54.4	55.1	56.8	61.2	67.1	71.4	79.8	87.9
85°	33.7	27.8	29.0	29.9	29.4	31.3	33.7	37.2	39.3	43.3	47.6
87.5°	12.5	10.4	10.6	11.3	11.8	12.7	12.7	14.8	15.1	15.5	16.5
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°	1077.6	1077.6	1077.6
2.5°	1051.9	1057.5	1061.8
5°	1033.8	1038.5	1042.2
7.5°	1016.1	1020.3	1023.6
10°	999.4	1004.1	1006.4
12.5°	982.2	987.6	989.5
15°	965.2	970.6	973.0
17.5°	947.8	954.9	957.4
20°	931.5	940.5	942.6
22.5°	915.0	924.2	926.8
25°	897.1	908.0	910.6
27.5°	878.1	891.0	893.6
30°	859.0	873.1	875.7
32.5°	838.5	853.8	856.2
35°	817.1	832.4	835.2
37.5°	793.3	810.0	815.7
40°	768.5	786.7	792.6
42.5°	742.6	762.4	768.5
45°	714.8	736.5	743.6
47.5°	686.8	711.3	717.4
50°	656.4	682.6	689.9
52.5°	624.6	653.1	660.4
55°	591.7	620.4	628.4
57.5°	555.9	585.5	594.0
60°	518.4	548.1	556.1
62.5°	480.0	506.9	514.6
65°	437.1	462.4	469.4
67.5°	391.7	414.8	420.7
70°	343.4	363.4	368.6
72.5°	293.0	306.9	313.7
75°	241.0	252.0	257.2
77.5°	188.7	196.4	200.7
80°	137.6	142.0	145.6
82.5°	90.0	91.9	94.4
85°	48.5	48.5	50.2
87.5°	16.5	15.8	16.5
90°	0.0	0.0	0.0

(END OF REPORT)