

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: P835193

Luminaire Tested: **ORLG-24-2-INS-ASY2-LD4-2STD-30-120-EDD**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P835193
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-30-120-EDD
Description: 2FT x 2FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

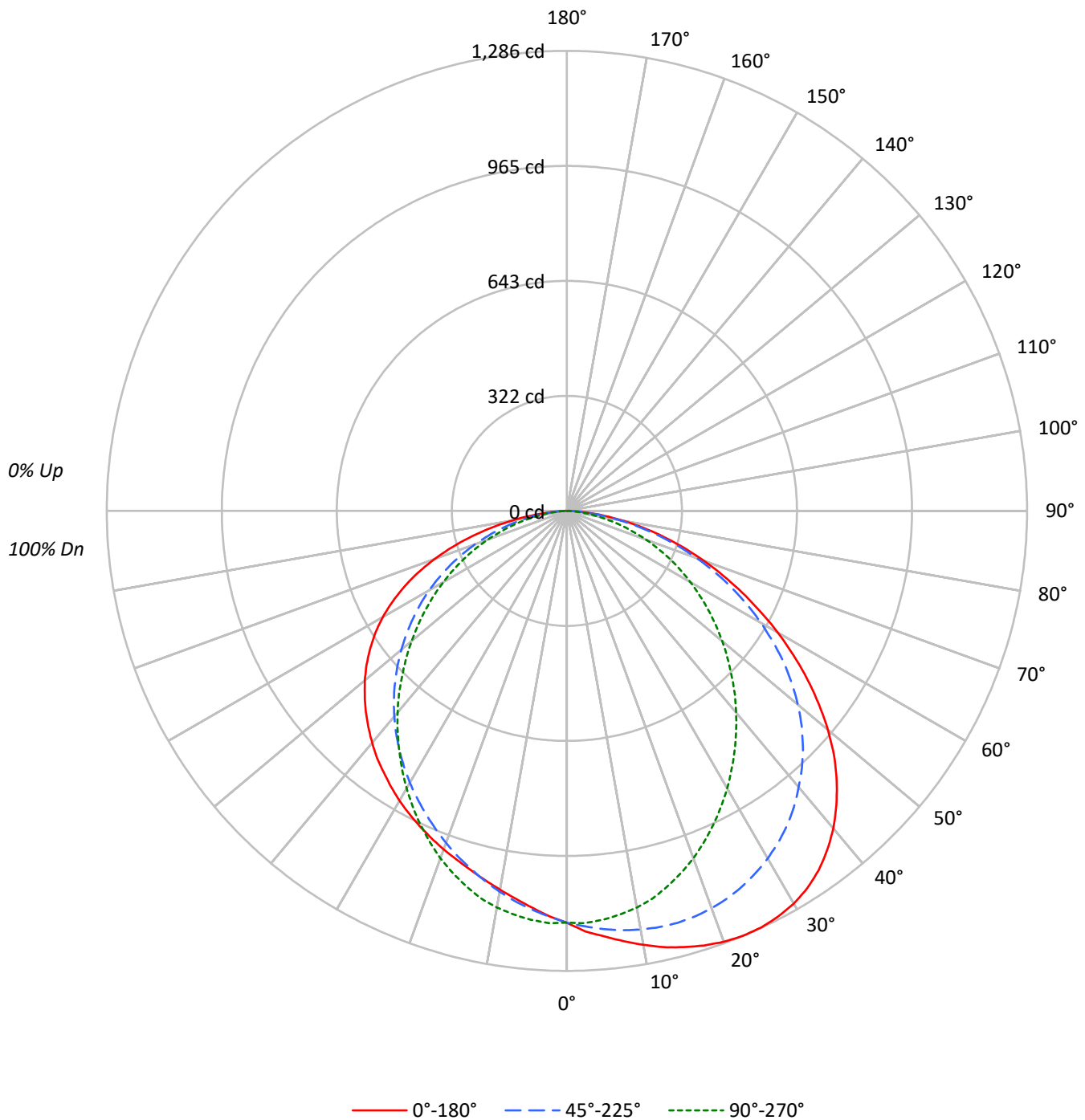
Lumens per Lamp: N/A
Luminaire Lumens: 3385.8 lumens
Efficiency: N/A
Efficacy: 101.7 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

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	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°	3097	3097	3097
5°	3225	3099	3007
10°	3366	3076	2938
15°	3517	3027	2895
20°	3671	2960	2883
25°	3815	2874	2888
30°	3939	2784	2907
35°	4029	2685	2931
40°	4070	2585	2974
45°	4059	2476	3023
50°	3987	2372	3085
55°	3850	2263	3149
60°	3663	2146	3197
65°	3440	2015	3193
70°	3201	1858	3098
75°	2906	1632	2856
80°	2495	1340	2410
85°	1902	917	1655

Classified

Scaled Data Report

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	109.2	3.2
10°-20°	315.3	9.3
20°-30°	483.0	14.3
30°-40°	589.4	17.4
40°-50°	616.4	18.2
50°-60°	557.9	16.5
60°-70°	422.5	12.5
70°-80°	235.5	7.0
80°-90°	56.8	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°	907.4	26.8
0°-40°	1496.8	44.2
0°-60°	2671.1	78.9
0°-90°	3385.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3385.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1151	1151	1151	1151	1151	
5°	1194	1174	1147	1119	1113	115
15°	1262	1192	1086	1036	1039	358
25°	1285	1159	968	934	973	593
35°	1226	1073	817	816	892	766
45°	1066	933	651	679	794	821
55°	821	741	482	525	671	732
65°	540	508	316	360	501	536
75°	280	264	157	187	275	296
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°	1151.0	1151.0	1151.0	1151.0	1151.0	1151.0	1151.0	1151.0	1151.0	1151.0	1151.0
2.5°	1176.4	1170.9	1166.4	1168.1	1169.1	1165.6	1162.6	1163.1	1160.1	1165.9	1152.3
5°	1193.8	1188.8	1183.5	1185.5	1183.5	1178.2	1173.9	1172.7	1164.6	1167.9	1154.1
7.5°	1213.2	1207.6	1199.8	1202.1	1197.8	1188.0	1182.5	1179.2	1166.9	1167.1	1151.8
10°	1231.8	1227.0	1216.4	1218.0	1210.2	1197.1	1188.3	1183.7	1166.4	1163.9	1148.0
12.5°	1249.2	1242.6	1231.3	1232.0	1220.7	1203.4	1192.0	1185.5	1162.9	1155.3	1139.7
15°	1262.5	1256.2	1242.6	1242.4	1227.8	1205.1	1192.3	1183.2	1154.6	1142.7	1126.4
17.5°	1273.8	1268.0	1251.2	1250.7	1233.1	1204.4	1189.0	1177.7	1142.5	1127.9	1109.8
20°	1281.9	1276.1	1257.2	1255.4	1234.3	1200.6	1182.2	1167.9	1126.6	1109.3	1089.1
22.5°	1285.6	1279.8	1258.5	1255.9	1231.3	1193.0	1172.4	1155.6	1108.5	1085.9	1065.0
25°	1284.9	1279.3	1255.2	1252.7	1225.5	1181.7	1158.6	1139.2	1085.6	1059.0	1038.3
27.5°	1278.6	1274.3	1248.9	1245.6	1214.9	1166.4	1141.7	1120.3	1060.2	1030.5	1008.1
30°	1267.8	1264.5	1237.6	1234.6	1201.9	1149.5	1122.1	1097.4	1032.8	999.3	976.7
32.5°	1250.4	1247.4	1220.2	1217.5	1184.2	1127.9	1099.2	1073.8	1002.8	965.9	943.2
35°	1226.5	1224.7	1198.3	1195.3	1161.6	1103.2	1072.8	1044.9	971.6	929.9	908.2
37.5°	1195.1	1195.1	1169.7	1166.4	1133.4	1073.0	1043.1	1013.4	936.4	892.1	870.8
40°	1158.6	1161.9	1135.9	1132.7	1100.7	1040.6	1007.9	976.7	898.4	852.4	831.5
42.5°	1114.8	1117.8	1096.2	1093.2	1063.2	1003.1	972.7	938.7	858.7	811.9	790.3
45°	1066.5	1070.5	1051.2	1048.9	1021.0	962.1	932.9	898.4	817.2	769.6	748.5
47.5°	1012.7	1017.9	1001.1	999.8	973.9	920.1	889.6	854.7	773.6	725.6	705.7
50°	952.3	959.8	946.0	946.0	922.8	869.2	842.8	807.9	728.4	680.3	660.7
52.5°	887.6	897.2	886.9	887.1	868.2	820.2	792.8	758.5	681.1	633.8	615.6
55°	820.7	830.0	823.5	824.5	809.6	765.8	740.9	707.0	632.8	586.7	569.6
57.5°	750.8	760.8	756.5	758.5	748.2	709.0	683.1	653.4	582.9	537.4	522.8
60°	680.6	690.1	687.9	690.6	684.1	650.1	626.5	595.8	532.9	489.1	476.3
62.5°	609.6	618.4	617.9	620.9	617.4	589.2	568.1	541.9	481.0	440.8	429.0
65°	540.2	547.7	547.2	550.5	549.7	527.1	508.0	484.1	429.2	392.2	381.9
67.5°	472.7	479.0	477.3	481.0	482.1	463.9	447.3	425.9	379.9	343.9	335.1
70°	406.8	411.1	408.8	411.4	413.6	400.0	385.9	367.1	327.3	295.6	288.3
72.5°	342.2	345.2	341.7	344.2	346.2	336.4	324.8	308.5	275.5	248.1	242.0
75°	279.5	283.8	276.5	279.0	280.5	270.7	263.9	250.6	222.2	201.0	197.0
77.5°	218.9	221.4	217.4	216.4	217.4	210.3	205.0	194.7	173.3	156.0	153.5
80°	161.0	162.5	158.5	157.5	158.3	153.2	149.2	141.6	126.6	113.5	112.5
82.5°	107.9	108.7	105.2	104.2	104.7	103.2	98.4	93.1	86.0	75.0	74.7
85°	61.6	61.6	59.1	58.1	58.6	56.1	54.3	51.6	48.8	41.3	41.8
87.5°	22.6	22.6	21.4	21.1	23.6	20.9	20.1	18.9	19.6	15.6	16.6
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):

	80°	90°	100°	110°	112.5°	120°	130°	135°	140°	150°	157.5°
0°	1151.0	1151.0	1151.0	1151.0	1151.0	1151.0	1151.0	1151.0	1151.0	1151.0	1151.0
2.5°	1156.1	1153.5	1151.3	1143.5	1146.8	1138.7	1138.2	1135.2	1132.9	1128.6	1134.2
5°	1152.3	1147.3	1140.7	1131.4	1134.2	1124.6	1122.6	1119.1	1116.1	1110.5	1114.8
7.5°	1146.3	1138.0	1127.6	1115.8	1119.6	1107.8	1104.7	1101.0	1098.5	1091.9	1095.7
10°	1137.4	1125.6	1113.5	1099.2	1102.0	1089.1	1085.4	1081.3	1079.1	1073.3	1077.1
12.5°	1123.9	1109.5	1093.2	1077.6	1080.6	1068.5	1063.5	1059.2	1058.4	1053.7	1058.2
15°	1106.2	1086.4	1069.5	1052.9	1056.4	1042.3	1040.1	1035.8	1037.1	1033.8	1039.3
17.5°	1083.9	1061.0	1042.6	1024.7	1028.3	1016.4	1014.7	1012.7	1013.9	1013.4	1019.5
20°	1058.7	1033.5	1012.4	994.8	996.8	987.5	988.3	987.7	990.3	993.0	1001.3
22.5°	1030.3	1001.8	979.7	961.6	964.6	956.6	960.1	961.1	965.4	971.6	982.2
25°	998.3	967.9	944.7	927.6	930.4	925.1	931.1	933.7	940.5	951.0	961.8
27.5°	964.9	932.7	908.0	891.6	896.9	891.6	900.7	905.7	916.0	927.6	941.0
30°	929.4	895.9	870.5	855.9	860.9	856.2	870.8	877.6	887.9	903.7	919.6
32.5°	892.1	856.9	832.0	820.7	824.2	823.5	839.8	847.4	861.2	879.3	896.2
35°	853.9	817.2	792.0	782.5	786.7	787.7	807.4	816.2	831.3	853.1	871.3
37.5°	814.4	776.9	752.3	744.5	748.2	752.0	774.9	783.7	800.8	824.7	844.6
40°	773.4	735.9	711.8	705.5	709.2	713.3	738.2	750.2	768.9	794.8	816.4
42.5°	731.9	694.4	671.0	666.5	670.2	678.0	704.5	715.8	735.4	764.1	788.0
45°	689.6	650.6	630.2	626.7	630.7	639.8	665.7	679.3	700.2	731.6	757.3
47.5°	646.8	608.9	589.5	587.2	591.2	601.3	630.0	642.3	664.5	697.9	725.6
50°	603.6	566.6	548.0	547.2	551.0	561.8	589.2	603.8	626.7	664.2	692.6
52.5°	559.8	524.3	507.5	507.5	511.0	522.1	549.7	564.8	588.5	628.0	659.4
55°	516.0	482.3	466.2	467.5	472.5	482.1	509.0	524.8	548.7	589.7	622.9
57.5°	472.2	440.3	425.7	427.5	432.2	441.8	468.2	486.1	507.7	550.2	584.2
60°	429.0	398.8	385.9	388.0	392.2	401.8	429.2	444.6	466.2	509.5	543.4
62.5°	385.2	357.8	345.7	348.2	352.0	361.5	387.5	402.3	423.7	466.2	500.4
65°	341.9	316.5	306.2	308.7	312.2	321.0	345.4	359.8	380.2	421.7	454.4
67.5°	299.1	276.0	267.4	270.0	272.7	281.0	301.2	316.8	335.9	375.4	406.3
70°	256.9	236.2	228.7	231.2	233.7	241.3	258.9	273.2	290.8	327.1	355.8
72.5°	215.1	195.0	191.2	193.5	195.5	202.0	218.9	230.2	245.6	277.8	302.4
75°	174.4	157.0	154.5	156.7	158.5	163.5	177.6	187.4	200.3	228.2	248.3
77.5°	135.1	120.5	119.5	121.3	123.0	126.6	137.6	147.9	158.0	178.6	196.5
80°	98.4	86.5	86.5	88.3	87.8	92.1	99.9	108.2	115.5	130.3	143.4
82.5°	64.9	55.6	56.9	58.1	58.9	60.6	65.4	71.7	76.2	85.3	93.8
85°	36.0	29.7	30.9	32.0	31.4	33.5	36.0	39.8	42.0	46.3	50.8
87.5°	13.3	11.1	11.3	12.1	12.6	13.6	13.6	15.9	16.1	16.6	17.6
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°	1151.0	1151.0	1151.0
2.5°	1123.6	1129.6	1134.2
5°	1104.2	1109.3	1113.3
7.5°	1085.4	1089.9	1093.4
10°	1067.5	1072.5	1075.1
12.5°	1049.1	1054.9	1056.9
15°	1031.0	1036.8	1039.3
17.5°	1012.4	1020.0	1022.7
20°	995.0	1004.6	1006.9
22.5°	977.4	987.2	990.0
25°	958.3	969.9	972.7
27.5°	937.9	951.8	954.5
30°	917.6	932.7	935.4
32.5°	895.7	912.0	914.5
35°	872.8	889.1	892.1
37.5°	847.4	865.2	871.3
40°	820.9	840.3	846.6
42.5°	793.3	814.4	820.9
45°	763.6	786.7	794.3
47.5°	733.6	759.8	766.3
50°	701.2	729.1	736.9
52.5°	667.2	697.7	705.5
55°	632.0	662.7	671.2
57.5°	593.8	625.5	634.5
60°	553.8	585.5	594.0
62.5°	512.7	541.4	549.7
65°	467.0	493.9	501.4
67.5°	418.4	443.1	449.3
70°	366.8	388.2	393.7
72.5°	313.0	327.8	335.1
75°	257.4	269.2	274.7
77.5°	201.5	209.8	214.4
80°	146.9	151.7	155.5
82.5°	96.1	98.1	100.9
85°	51.8	51.8	53.6
87.5°	17.6	16.9	17.6
90°	0.0	0.0	0.0

(END OF REPORT)