

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: P834651

Luminaire Tested: **ORLG-24-4-INS-ASY2-LD4-1HI-30-120-EDD-90**

Issue Date: 5/16/2024



Test Information

Test Method: LM-79-08
Report Number: P834651
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-30-120-EDD-90
Description: 2FT x 4FT ORL LED LUMINAIRE WITH asymmetric/symmetric lens v2
Light Source: 3000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

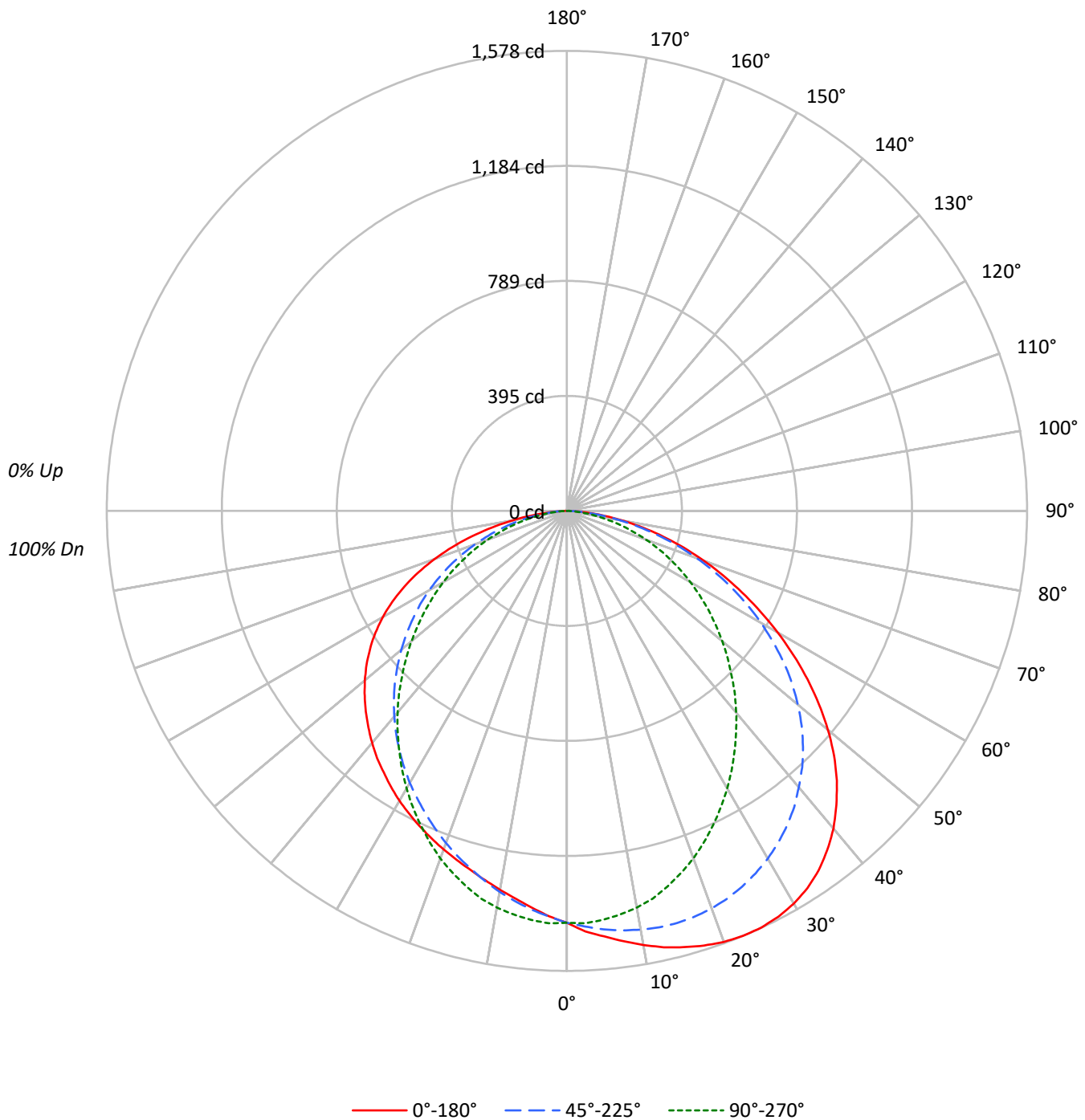
Lumens per Lamp: N/A
Luminaire Lumens: 4155.5 lumens
Efficiency: N/A
Efficacy: 94.4 lumens/watt
Spacing Criteria (0/90/45): 1.41 / 1.17 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

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

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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°	1901	1901	1901
5°	1979	1902	1845
10°	2065	1887	1803
15°	2158	1857	1777
20°	2253	1816	1769
25°	2341	1764	1772
30°	2417	1708	1784
35°	2473	1647	1798
40°	2498	1586	1825
45°	2491	1519	1855
50°	2446	1456	1893
55°	2363	1388	1932
60°	2248	1317	1962
65°	2111	1237	1959
70°	1964	1140	1901
75°	1784	1002	1753
80°	1531	823	1478
85°	1169	562	1016

Classified

Scaled Data Report

Cooper Lighting Solutions Photometric Lab

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	134.0	3.2
10°-20°	386.9	9.3
20°-30°	592.8	14.3
30°-40°	723.4	17.4
40°-50°	756.5	18.2
50°-60°	684.7	16.5
60°-70°	518.5	12.5
70°-80°	289.0	7.0
80°-90°	69.7	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°	1113.7	26.8
0°-40°	1837.1	44.2
0°-60°	3278.2	78.9
0°-90°	4155.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4155.5	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1413	1413	1413	1413	1413	
5°	1465	1441	1408	1374	1366	141
15°	1550	1463	1333	1271	1276	439
25°	1577	1422	1188	1146	1194	727
35°	1505	1317	1003	1002	1095	940
45°	1309	1145	798	834	975	1007
55°	1007	909	592	644	824	899
65°	663	623	388	442	615	658
75°	343	324	193	230	337	364
85°	76	67	36	49	66	91
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°	1412.7	1412.7	1412.7	1412.7	1412.7	1412.7	1412.7	1412.7	1412.7	1412.7	1412.7
2.5°	1443.9	1437.1	1431.5	1433.7	1434.9	1430.6	1426.9	1427.5	1423.8	1430.9	1414.2
5°	1465.2	1459.0	1452.5	1455.0	1452.5	1446.0	1440.8	1439.2	1429.4	1433.4	1416.4
7.5°	1489.0	1482.2	1472.6	1475.4	1470.1	1458.1	1451.3	1447.3	1432.1	1432.4	1413.6
10°	1511.8	1505.9	1493.0	1494.8	1485.3	1469.2	1458.4	1452.8	1431.5	1428.4	1409.0
12.5°	1533.1	1525.1	1511.2	1512.1	1498.2	1476.9	1463.0	1455.0	1427.2	1417.9	1398.8
15°	1549.5	1541.8	1525.1	1524.8	1506.9	1479.1	1463.3	1452.2	1417.0	1402.5	1382.4
17.5°	1563.4	1556.3	1535.6	1535.0	1513.4	1478.1	1459.3	1445.4	1402.2	1384.3	1362.0
20°	1573.3	1566.2	1543.0	1540.8	1514.9	1473.5	1451.0	1433.4	1382.7	1361.4	1336.7
22.5°	1577.9	1570.8	1544.5	1541.5	1511.2	1464.3	1438.9	1418.2	1360.5	1332.7	1307.1
25°	1577.0	1570.2	1540.5	1537.4	1504.1	1450.4	1422.0	1398.2	1332.4	1299.7	1274.4
27.5°	1569.2	1564.0	1532.8	1528.8	1491.1	1431.5	1401.3	1375.0	1301.2	1264.8	1237.3
30°	1556.0	1551.9	1518.9	1515.2	1475.1	1410.8	1377.2	1346.9	1267.6	1226.5	1198.7
32.5°	1534.7	1531.0	1497.6	1494.2	1453.4	1384.3	1349.1	1317.9	1230.8	1185.4	1157.6
35°	1505.3	1503.2	1470.7	1467.0	1425.7	1354.0	1316.7	1282.4	1192.5	1141.3	1114.7
37.5°	1466.7	1466.7	1435.5	1431.5	1391.1	1317.0	1280.2	1243.8	1149.3	1094.9	1068.7
40°	1422.0	1426.0	1394.2	1390.1	1350.9	1277.1	1237.0	1198.7	1102.7	1046.2	1020.5
42.5°	1368.2	1371.9	1345.4	1341.7	1304.9	1231.1	1193.8	1152.1	1053.9	996.4	969.9
45°	1308.9	1313.9	1290.1	1287.3	1253.0	1180.8	1145.0	1102.7	1002.9	944.6	918.6
47.5°	1242.9	1249.3	1228.7	1227.1	1195.3	1129.2	1091.9	1048.9	949.5	890.5	866.1
50°	1168.7	1178.0	1161.0	1161.0	1132.6	1066.8	1034.4	991.5	893.9	835.0	810.9
52.5°	1089.4	1101.1	1088.5	1088.8	1065.6	1006.6	973.0	931.0	835.9	777.8	755.6
55°	1007.3	1018.7	1010.7	1011.9	993.7	939.9	909.4	867.7	776.6	720.1	699.1
57.5°	921.4	933.8	928.5	931.0	918.3	870.2	838.3	801.9	715.5	659.6	641.7
60°	835.3	847.0	844.2	847.6	839.6	797.9	768.9	731.2	654.0	600.3	584.5
62.5°	748.2	759.0	758.4	762.1	757.8	723.2	697.2	665.1	590.4	541.0	526.5
65°	663.0	672.2	671.6	675.6	674.7	646.9	623.4	594.1	526.8	481.4	468.7
67.5°	580.2	587.9	585.8	590.4	591.6	569.4	549.0	522.8	466.3	422.1	411.3
70°	499.3	504.6	501.8	504.9	507.6	491.0	473.7	450.5	401.7	362.8	353.9
72.5°	419.9	423.7	419.3	422.4	424.9	412.8	398.6	378.6	338.1	304.5	297.1
75°	343.1	348.3	339.4	342.4	344.3	332.3	323.9	307.5	272.7	246.7	241.8
77.5°	268.6	271.7	266.8	265.6	266.8	258.1	251.7	239.0	212.8	191.4	188.4
80°	197.6	199.5	194.5	193.3	194.2	188.0	183.1	173.8	155.3	139.3	138.0
82.5°	132.5	133.4	129.1	127.8	128.5	126.6	120.7	114.3	105.6	92.0	91.7
85°	75.7	75.7	72.6	71.3	71.9	68.9	66.7	63.3	59.9	50.6	51.3
87.5°	27.8	27.8	26.2	25.9	29.0	25.6	24.7	23.2	24.1	19.1	20.4
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°	1412.7	1412.7	1412.7	1412.7	1412.7	1412.7	1412.7	1412.7	1412.7	1412.7	1412.7
2.5°	1418.9	1415.8	1413.0	1403.4	1407.4	1397.6	1396.9	1393.2	1390.5	1385.2	1392.0
5°	1414.2	1408.1	1400.0	1388.6	1392.0	1380.3	1377.8	1373.5	1369.8	1363.0	1368.2
7.5°	1406.8	1396.6	1384.0	1369.5	1374.1	1359.6	1355.9	1351.2	1348.2	1340.1	1344.8
10°	1396.0	1381.5	1366.7	1349.1	1352.5	1336.7	1332.1	1327.2	1324.4	1317.3	1321.9
12.5°	1379.3	1361.7	1341.7	1322.5	1326.2	1311.4	1305.2	1300.0	1299.1	1293.2	1298.7
15°	1357.7	1333.3	1312.6	1292.3	1296.6	1279.3	1276.5	1271.3	1272.8	1268.8	1275.6
17.5°	1330.2	1302.1	1279.6	1257.7	1262.0	1247.5	1245.3	1242.9	1244.4	1243.8	1251.2
20°	1299.4	1268.5	1242.5	1220.9	1223.4	1212.0	1212.9	1212.3	1215.4	1218.8	1229.0
22.5°	1264.5	1229.6	1202.4	1180.2	1183.9	1174.0	1178.3	1179.6	1184.8	1192.5	1205.5
25°	1225.3	1187.9	1159.5	1138.5	1141.9	1135.4	1142.8	1145.9	1154.2	1167.2	1180.5
27.5°	1184.2	1144.7	1114.4	1094.3	1100.8	1094.3	1105.4	1111.6	1124.3	1138.5	1154.9
30°	1140.6	1099.6	1068.4	1050.5	1056.7	1050.8	1068.7	1077.0	1089.7	1109.2	1128.6
32.5°	1094.9	1051.7	1021.1	1007.3	1011.6	1010.7	1030.7	1040.0	1057.0	1079.2	1099.9
35°	1048.0	1002.9	972.1	960.3	965.6	966.8	990.9	1001.7	1020.2	1047.1	1069.3
37.5°	999.5	953.5	923.3	913.7	918.3	923.0	951.1	961.9	982.9	1012.2	1036.6
40°	949.2	903.2	873.6	865.8	870.5	875.4	906.0	920.8	943.6	975.4	1002.0
42.5°	898.3	852.2	823.5	818.0	822.6	832.2	864.6	878.5	902.6	937.8	967.1
45°	846.4	798.5	773.5	769.2	774.1	785.2	817.0	833.7	859.3	897.9	929.4
47.5°	793.9	747.3	723.5	720.7	725.6	738.0	773.2	788.3	815.5	856.6	890.5
50°	740.8	695.4	672.5	671.6	676.2	689.5	723.2	741.1	769.2	815.2	850.1
52.5°	687.0	643.5	622.8	622.8	627.1	640.7	674.7	693.2	722.2	770.7	809.3
55°	633.3	591.9	572.2	573.7	579.9	591.6	624.7	644.1	673.5	723.8	764.5
57.5°	579.6	540.4	522.5	524.6	530.5	542.2	574.6	596.6	623.1	675.3	717.0
60°	526.5	489.4	473.7	476.1	481.4	493.1	526.8	545.6	572.2	625.3	667.0
62.5°	472.7	439.1	424.3	427.4	432.0	443.7	475.5	493.7	520.0	572.2	614.2
65°	419.6	388.5	375.8	378.9	383.2	394.0	424.0	441.6	466.6	517.5	557.7
67.5°	367.1	338.7	328.2	331.3	334.7	344.9	369.6	388.8	412.2	460.7	498.7
70°	315.3	289.9	280.7	283.8	286.9	296.1	317.7	335.3	357.0	401.4	436.6
72.5°	264.0	239.3	234.7	237.5	239.9	248.0	268.6	282.5	301.4	340.9	371.2
75°	214.0	192.7	189.6	192.4	194.5	200.7	218.0	230.0	245.8	280.1	304.8
77.5°	165.8	147.9	146.7	148.8	151.0	155.3	168.9	181.6	193.9	219.2	241.2
80°	120.7	106.2	106.2	108.4	107.8	113.0	122.6	132.8	141.7	160.0	176.0
82.5°	79.7	68.2	69.8	71.3	72.3	74.4	80.3	88.0	93.6	104.7	115.2
85°	44.2	36.4	38.0	39.2	38.6	41.1	44.2	48.8	51.6	56.8	62.4
87.5°	16.4	13.6	13.9	14.8	15.4	16.7	16.7	19.5	19.8	20.4	21.6
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°	1412.7	1412.7	1412.7
2.5°	1379.0	1386.4	1392.0
5°	1355.3	1361.4	1366.4
7.5°	1332.1	1337.7	1342.0
10°	1310.2	1316.3	1319.4
12.5°	1287.6	1294.7	1297.2
15°	1265.4	1272.5	1275.6
17.5°	1242.5	1251.8	1255.2
20°	1221.2	1233.0	1235.8
22.5°	1199.6	1211.7	1215.1
25°	1176.2	1190.4	1193.8
27.5°	1151.1	1168.1	1171.5
30°	1126.1	1144.7	1148.1
32.5°	1099.3	1119.3	1122.4
35°	1071.2	1091.2	1094.9
37.5°	1040.0	1061.9	1069.3
40°	1007.6	1031.3	1039.1
42.5°	973.6	999.5	1007.6
45°	937.2	965.6	974.8
47.5°	900.4	932.5	940.6
50°	860.6	894.9	904.4
52.5°	818.9	856.3	865.8
55°	775.7	813.3	823.8
57.5°	728.7	767.6	778.8
60°	679.6	718.5	729.0
62.5°	629.3	664.5	674.7
65°	573.1	606.1	615.4
67.5°	513.5	543.8	551.5
70°	450.2	476.5	483.2
72.5°	384.1	402.3	411.3
75°	315.9	330.4	337.2
77.5°	247.3	257.5	263.1
80°	180.3	186.2	190.8
82.5°	118.0	120.4	123.8
85°	63.6	63.6	65.8
87.5°	21.6	20.7	21.6
90°	0.0	0.0	0.0

(END OF REPORT)