

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: P

Luminaire Tested: **4APN-39L835-X-UNV-ASY**

Issue Date: 06/06/2024



Test Information

Test Method: LM-79-08
Report Number: P
Test Lab: INNOVATION CENTER(G2)
Issue Date: 06/06/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 4APN-39L835-X-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/
ASYMMETRIC Lens
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

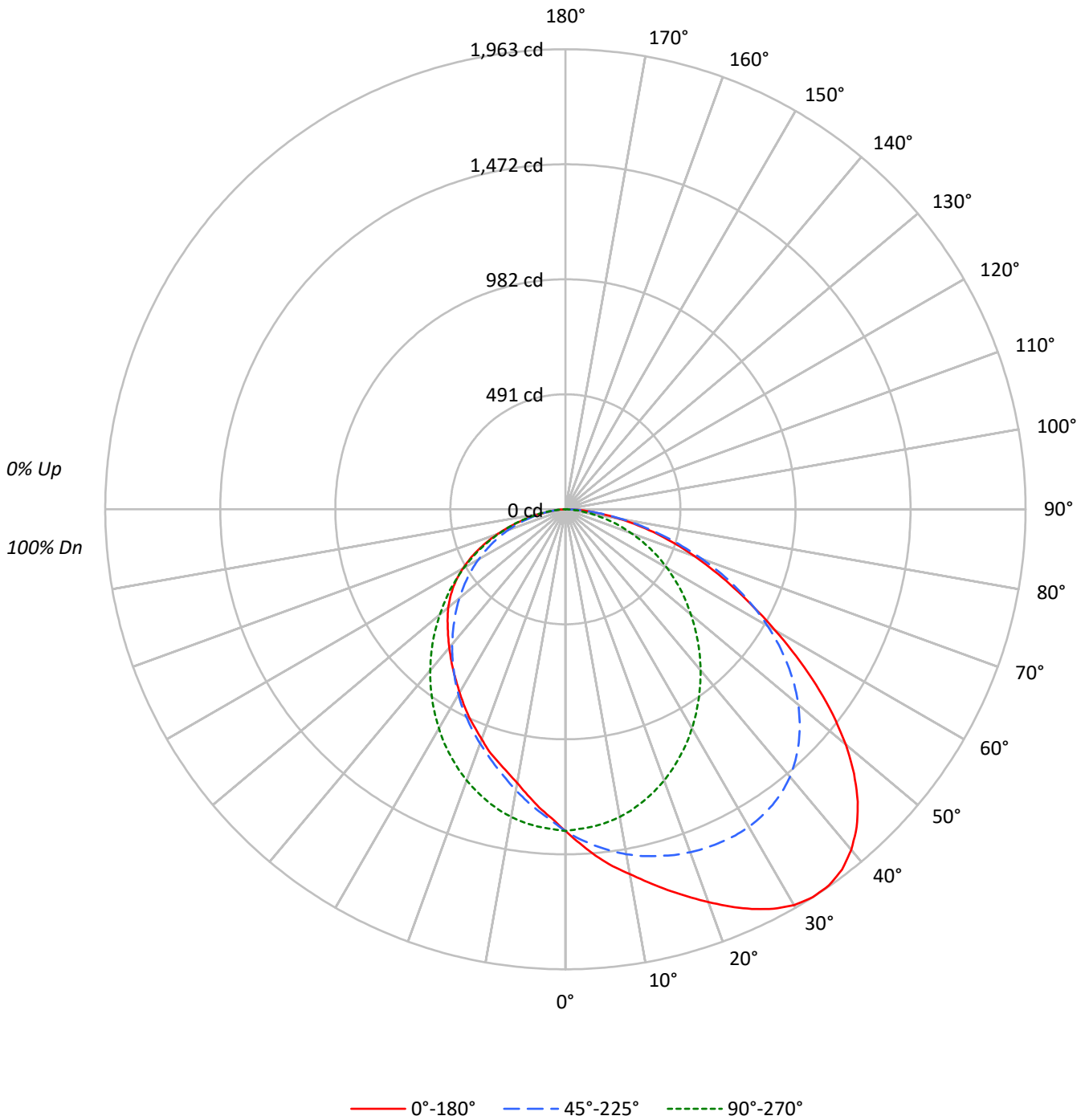
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4251.9 lumens
Efficiency: N/A
Efficacy: 92.8 lumens/watt
Spacing Criteria (0/90/45): 1.53 / 1.18 / 1.46
Luminous Opening: Rectangular (W 0.29' x L: 3.83' x H: 0')
CIE Type: Direct

Input Watts (W): 45.8
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: 25 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				50				30				10			0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	102	102	102	100
1	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	86	86	86	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	72	72	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	60	60	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	52	52	52	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	45	45	45	43
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	39	39	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	35	35	35	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	31	31	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	28	28	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	25	25	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	13215	13215	13215
5°	14341	13135	12345
10°	15450	13033	11583
15°	16758	12844	11106
20°	18272	12619	10694
25°	19989	12322	10362
30°	21683	11998	10029
35°	23030	11645	9814
40°	23847	11274	9686
45°	24013	10885	9664
50°	23383	10471	9768
55°	21896	10096	9831
60°	19902	9637	9733
65°	18047	9112	9358
70°	16518	8450	8591
75°	14987	7596	7387
80°	13106	6348	5694
85°	11035	4617	4242



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.4	3.1
10°-20°	379.2	8.9
20°-30°	594.0	14.0
30°-40°	744.7	17.5
40°-50°	792.8	18.6
50°-60°	715.7	16.8
60°-70°	529.8	12.5
70°-80°	290.7	6.8
80°-90°	74.6	1.8
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°	1103.6	26.0
0°-40°	1848.3	43.5
0°-60°	3356.8	78.9
0°-90°	4251.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4251.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1373	1373	1373	1373	1373	
5°	1484	1440	1359	1294	1277	144
15°	1681	1532	1289	1138	1114	480
25°	1882	1568	1160	989	976	871
35°	1960	1540	991	832	835	1222
45°	1764	1408	800	670	710	1352
55°	1304	1158	602	510	586	1163
65°	792	816	400	345	411	790
75°	403	427	204	177	199	428
85°	100	98	42	39	38	118
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1372.7	1372.7	1372.7	1372.7	1372.7	1372.7	1372.7	1372.7	1372.7	1372.7	1372.7
2.5°	1428.0	1425.2	1421.8	1420.7	1415.6	1408.9	1402.6	1402.6	1395.3	1377.8	1365.4
5°	1483.9	1479.4	1470.9	1464.1	1453.4	1440.4	1427.5	1419.6	1402.1	1375.6	1359.2
7.5°	1535.2	1529.6	1518.9	1505.9	1488.4	1469.2	1447.8	1430.9	1404.3	1368.8	1347.9
10°	1580.4	1575.3	1562.3	1546.5	1521.7	1494.6	1463.0	1437.6	1401.5	1357.5	1333.2
12.5°	1630.0	1624.9	1606.9	1585.5	1551.6	1515.5	1473.7	1438.8	1394.2	1341.1	1313.5
15°	1681.4	1674.6	1654.3	1625.5	1580.4	1531.9	1480.5	1435.4	1382.3	1321.4	1288.7
17.5°	1732.1	1725.4	1700.0	1663.3	1606.9	1546.5	1483.3	1427.5	1365.4	1297.1	1261.6
20°	1783.5	1776.7	1744.6	1698.3	1630.0	1557.2	1482.8	1415.6	1345.1	1269.5	1231.7
22.5°	1834.8	1826.9	1788.0	1731.6	1649.2	1564.6	1476.6	1399.3	1319.7	1237.9	1197.3
25°	1881.7	1873.8	1830.9	1764.3	1669.5	1568.0	1465.8	1376.7	1291.5	1202.9	1160.0
27.5°	1922.3	1912.7	1868.1	1794.8	1687.0	1569.1	1451.7	1351.3	1258.8	1165.1	1121.7
30°	1950.5	1942.0	1894.6	1816.2	1697.2	1565.1	1433.7	1321.4	1221.0	1124.5	1079.3
32.5°	1962.9	1955.6	1908.7	1826.4	1698.9	1555.0	1411.7	1288.1	1181.5	1081.6	1035.9
35°	1959.5	1952.2	1907.6	1824.7	1693.8	1540.3	1384.0	1250.3	1139.2	1037.0	990.8
37.5°	1938.1	1929.6	1889.0	1809.4	1679.1	1518.9	1352.4	1209.1	1093.5	991.3	944.5
40°	1897.5	1889.0	1854.0	1780.7	1654.3	1490.1	1316.3	1165.1	1046.6	943.4	897.1
42.5°	1839.4	1830.3	1802.7	1735.5	1618.7	1452.3	1275.1	1118.3	997.0	897.1	848.6
45°	1763.7	1754.7	1736.1	1679.1	1572.5	1407.7	1228.3	1067.5	945.1	844.6	799.5
47.5°	1670.1	1662.2	1653.2	1609.1	1515.5	1356.4	1175.8	1013.3	890.9	795.5	749.3
50°	1561.2	1553.3	1556.1	1526.2	1449.5	1297.1	1118.3	956.3	835.0	740.8	699.1
52.5°	1437.6	1431.4	1445.0	1432.0	1372.7	1231.1	1056.8	897.7	778.1	688.9	648.9
55°	1304.5	1297.7	1323.7	1327.6	1287.0	1158.3	986.8	836.7	720.5	638.1	601.5
57.5°	1167.4	1161.7	1195.0	1213.6	1193.3	1079.9	916.3	774.1	661.3	585.1	548.4
60°	1033.6	1029.1	1064.1	1094.6	1092.3	997.0	842.9	706.4	602.0	531.5	500.5
62.5°	907.8	902.7	937.7	973.8	986.8	908.4	770.2	639.8	542.8	477.9	450.2
65°	792.2	787.1	817.0	854.2	877.9	815.9	691.7	571.0	483.0	423.7	400.0
67.5°	686.1	686.1	704.7	739.1	767.9	721.1	611.6	505.5	421.5	373.5	349.8
70°	586.8	586.2	599.8	624.0	657.3	619.5	530.4	436.7	363.4	321.0	300.2
72.5°	492.6	496.5	501.6	520.2	555.2	522.5	449.7	369.0	306.4	269.1	251.6
75°	402.9	402.3	409.6	426.0	451.4	427.1	369.0	303.0	249.9	219.5	204.2
77.5°	317.1	316.5	322.7	332.3	353.8	334.6	291.1	242.0	194.7	169.3	158.5
80°	236.4	236.4	242.0	247.1	262.9	247.7	217.2	181.1	142.7	123.0	114.5
82.5°	164.2	167.6	165.3	172.1	181.1	168.1	149.0	124.1	94.8	81.2	75.6
85°	99.9	102.7	99.9	105.5	109.5	98.2	88.6	73.9	54.7	45.7	41.8
87.5°	51.3	50.8	50.2	53.0	54.2	47.4	41.8	35.5	24.3	18.6	15.8
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1372.7	1372.7	1372.7	1372.7	1372.7	1372.7	1372.7	1372.7	1372.7	1372.7
2.5°	1358.1	1361.5	1356.4	1337.8	1330.4	1322.5	1319.1	1315.8	1322.0	1320.3
5°	1346.8	1342.8	1329.9	1306.2	1293.8	1280.8	1274.6	1270.6	1279.1	1277.4
7.5°	1331.6	1320.3	1301.1	1272.3	1256.5	1239.0	1230.6	1225.5	1231.1	1230.0
10°	1312.4	1293.8	1270.1	1235.6	1217.0	1197.8	1188.2	1180.9	1185.4	1184.9
12.5°	1288.1	1263.8	1235.1	1196.1	1177.0	1157.2	1148.7	1143.7	1149.3	1147.6
15°	1261.0	1231.7	1198.4	1158.9	1138.0	1120.0	1113.8	1109.8	1114.3	1114.3
17.5°	1231.1	1196.7	1160.0	1120.0	1100.2	1086.1	1079.9	1077.1	1079.3	1082.7
20°	1197.8	1159.5	1120.0	1081.0	1064.1	1049.4	1043.8	1041.0	1046.1	1043.8
22.5°	1161.2	1120.5	1079.3	1042.7	1027.4	1012.8	1007.1	1005.4	1011.1	1008.8
25°	1122.2	1078.2	1037.6	1004.3	989.1	976.7	971.6	969.9	972.7	975.5
27.5°	1085.6	1035.9	995.8	965.9	952.4	940.6	936.0	933.2	935.5	938.9
30°	1041.0	993.0	953.5	925.9	912.9	901.6	898.2	896.0	899.4	902.2
32.5°	999.2	950.7	911.2	884.1	872.8	862.1	861.6	860.4	864.4	867.8
35°	954.1	906.7	868.3	842.9	832.2	823.2	824.9	826.6	831.1	835.0
37.5°	908.4	862.1	825.5	802.3	792.2	784.8	789.9	792.2	798.4	802.3
40°	862.1	815.9	782.0	761.1	751.0	747.6	754.9	760.0	767.3	770.7
42.5°	814.7	771.8	738.0	718.8	710.4	710.4	719.9	727.8	736.3	739.7
45°	767.3	725.6	693.4	675.9	669.7	674.2	685.5	695.7	706.4	709.8
47.5°	719.4	678.8	649.4	633.6	630.2	637.0	651.1	664.6	677.1	681.6
50°	671.4	634.7	605.4	590.7	590.7	599.2	617.3	634.2	647.7	652.2
52.5°	623.5	588.5	558.6	547.9	550.1	562.0	582.8	600.3	615.6	620.1
55°	574.9	540.5	514.6	505.5	509.5	524.2	545.6	565.9	580.6	585.7
57.5°	527.0	494.3	470.6	463.2	468.9	485.2	510.1	527.5	542.8	547.3
60°	478.5	445.2	426.5	420.9	428.2	445.2	470.6	486.9	501.0	505.5
62.5°	430.5	399.5	383.1	378.0	386.5	404.5	429.4	444.0	454.8	459.3
65°	382.0	354.3	339.1	335.7	344.7	362.2	385.9	398.3	406.2	410.8
67.5°	334.0	310.3	296.2	293.4	303.0	318.8	340.8	347.6	354.9	359.4
70°	286.6	265.2	253.3	251.6	260.1	275.3	294.0	297.3	301.3	305.2
72.5°	239.8	222.9	211.0	210.5	218.4	230.8	246.0	246.6	247.7	251.6
75°	194.7	179.4	170.4	172.1	176.6	186.8	198.6	195.2	195.8	198.6
77.5°	151.2	138.8	132.6	133.7	137.1	144.4	152.3	148.4	146.1	149.0
80°	108.9	98.2	95.9	96.5	98.7	103.8	108.3	104.9	100.4	102.7
82.5°	71.7	64.9	63.8	64.3	66.0	68.8	70.0	64.9	63.8	65.4
85°	39.5	36.7	36.7	38.4	38.9	39.5	39.5	36.7	37.2	38.4
87.5°	15.8	15.8	17.5	19.2	18.1	15.8	13.5	9.0	9.0	10.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)