

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-39L840-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-39L840-X-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/
ASYMMETRIC Lens
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

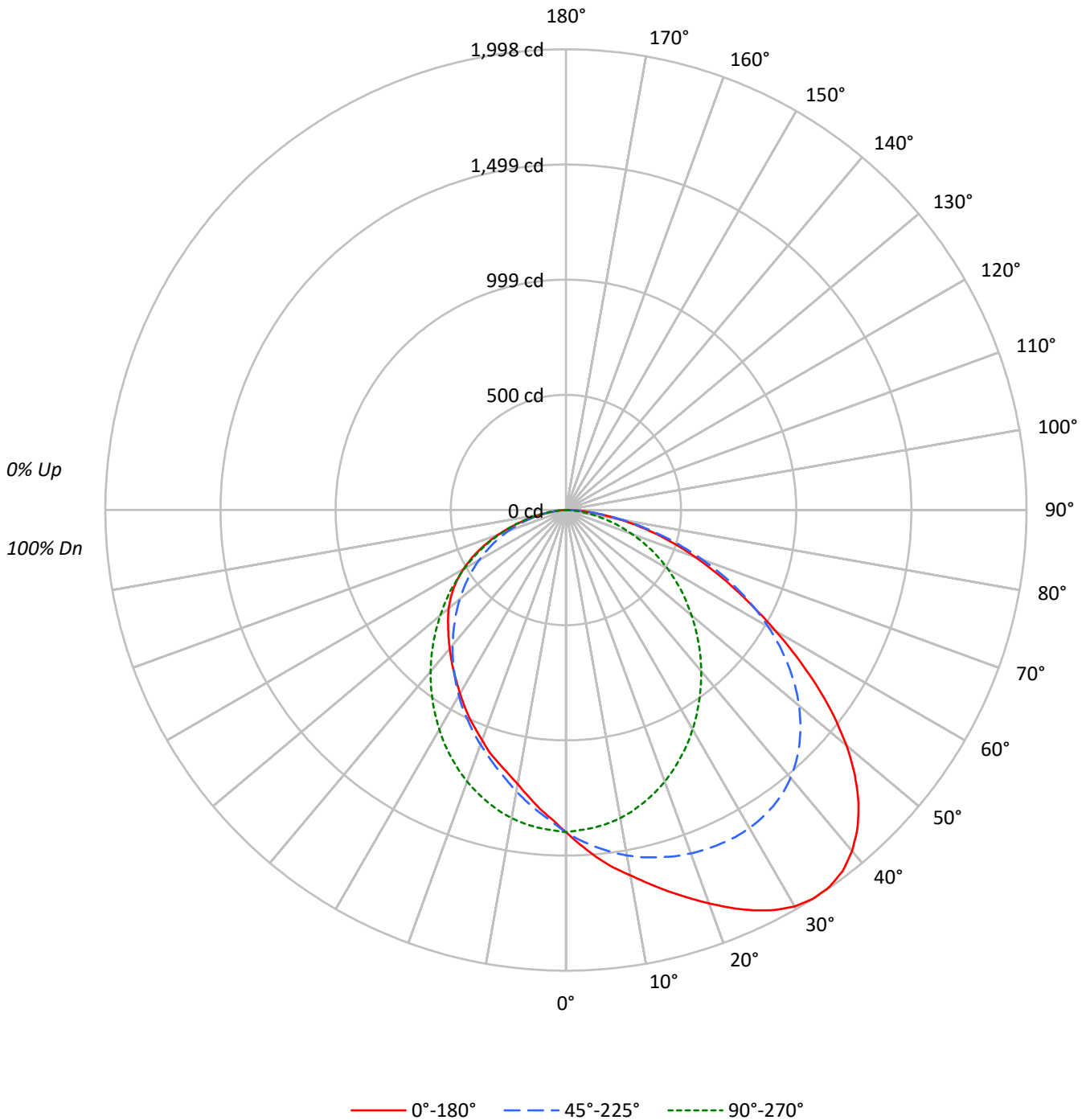
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4327.7 lumens
Efficiency: N/A
Efficacy: 94.5 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	0
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	93	91	88	90	88	86	84
2	99	90	83	78	96	88	82	77	85	80	75	82	77	73	79	75	72	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	62	56	52	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43
6	69	56	47	40	68	55	46	40	53	46	40	51	45	39	50	44	39	37
7	64	51	42	36	63	50	41	35	48	41	35	47	40	35	45	39	35	33
8	60	46	37	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	13451	13451	13451
5°	14596	13369	12564
10°	15724	13266	11790
15°	17056	13073	11305
20°	18598	12843	10885
25°	20344	12542	10547
30°	22069	12213	10208
35°	23440	11852	9989
40°	24272	11475	9858
45°	24442	11079	9836
50°	23799	10656	9944
55°	22285	10276	10005
60°	20258	9808	9907
65°	18368	9276	9524
70°	16810	8599	8746
75°	15251	7733	7518
80°	13339	6464	5794
85°	11223	4695	4319



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	132.7	3.1
10°-20°	385.9	8.9
20°-30°	604.6	14.0
30°-40°	758.0	17.5
40°-50°	806.9	18.6
50°-60°	728.4	16.8
60°-70°	539.3	12.5
70°-80°	295.9	6.8
80°-90°	76.0	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°	1123.2	26.0
0°-40°	1881.2	43.5
0°-60°	3416.6	78.9
0°-90°	4327.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4327.7	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1397	1397	1397	1397	1397	
5°	1510	1466	1383	1317	1300	147
15°	1711	1559	1312	1158	1134	488
25°	1915	1596	1181	1007	993	886
35°	1994	1568	1008	847	850	1244
45°	1795	1433	814	682	722	1376
55°	1328	1179	612	519	596	1184
65°	806	830	407	351	418	804
75°	410	435	208	180	202	436
85°	102	100	42	40	39	120
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°	1397.2	1397.2	1397.2	1397.2	1397.2	1397.2	1397.2	1397.2	1397.2	1397.2	1397.2
2.5°	1453.5	1450.6	1447.2	1446.0	1440.8	1433.9	1427.6	1427.6	1420.2	1402.4	1389.7
5°	1510.3	1505.7	1497.1	1490.2	1479.3	1466.1	1452.9	1444.9	1427.1	1400.1	1383.4
7.5°	1562.6	1556.8	1545.9	1532.7	1514.9	1495.4	1473.6	1456.3	1429.4	1393.2	1371.9
10°	1608.5	1603.4	1590.1	1574.1	1548.8	1521.2	1489.1	1463.2	1426.5	1381.7	1357.0
12.5°	1659.1	1653.9	1635.5	1613.7	1579.2	1542.5	1500.0	1464.4	1419.0	1365.0	1336.9
15°	1711.3	1704.4	1683.8	1654.5	1608.5	1559.1	1506.9	1460.9	1407.0	1344.9	1311.6
17.5°	1763.0	1756.1	1730.3	1692.9	1635.5	1574.1	1509.7	1452.9	1389.7	1320.2	1284.1
20°	1815.3	1808.4	1775.6	1728.5	1659.1	1585.0	1509.2	1440.8	1369.1	1292.1	1253.6
22.5°	1867.5	1859.5	1819.9	1762.4	1678.6	1592.4	1502.9	1424.2	1343.2	1259.9	1218.6
25°	1915.2	1907.1	1863.5	1795.7	1699.3	1595.9	1491.9	1401.2	1314.5	1224.3	1180.7
27.5°	1956.5	1946.8	1901.4	1826.7	1717.1	1597.0	1477.6	1375.4	1281.2	1185.9	1141.6
30°	1985.2	1976.6	1928.4	1848.6	1727.4	1593.0	1459.2	1344.9	1242.7	1144.5	1098.6
32.5°	1997.9	1990.4	1942.7	1858.9	1729.1	1582.7	1436.8	1311.1	1202.5	1100.9	1054.4
35°	1994.4	1987.0	1941.6	1857.2	1724.0	1567.8	1408.7	1272.6	1159.4	1055.5	1008.4
37.5°	1972.6	1964.0	1922.6	1841.7	1709.0	1545.9	1376.5	1230.7	1112.9	1009.0	961.3
40°	1931.3	1922.6	1887.0	1812.4	1683.8	1516.6	1339.8	1185.9	1065.3	960.2	913.1
42.5°	1872.1	1862.9	1834.8	1766.4	1647.6	1478.2	1297.8	1138.2	1014.7	913.1	863.7
45°	1795.2	1786.0	1767.0	1709.0	1600.5	1432.8	1250.2	1086.5	961.9	859.7	813.7
47.5°	1699.8	1691.8	1682.6	1637.8	1542.5	1380.5	1196.8	1031.4	906.8	809.7	762.6
50°	1589.0	1581.0	1583.8	1553.4	1475.3	1320.2	1138.2	973.4	849.9	754.0	711.5
52.5°	1463.2	1456.9	1470.7	1457.5	1397.2	1253.1	1075.6	913.7	791.9	701.2	660.4
55°	1327.7	1320.8	1347.2	1351.3	1309.9	1179.0	1004.4	851.6	733.3	649.5	612.2
57.5°	1188.2	1182.4	1216.3	1235.2	1214.6	1099.1	932.6	787.9	673.0	595.5	558.2
60°	1052.1	1047.5	1083.1	1114.1	1111.8	1014.7	858.0	719.0	612.7	541.0	509.4
62.5°	924.0	918.8	954.4	991.2	1004.4	924.6	783.9	651.2	552.4	486.4	458.3
65°	806.3	801.1	831.5	869.4	893.6	830.4	704.1	581.2	491.6	431.3	407.2
67.5°	698.3	698.3	717.3	752.3	781.6	733.9	622.5	514.5	429.0	380.2	356.0
70°	597.2	596.7	610.4	635.1	669.0	630.5	539.8	444.5	369.8	326.8	305.5
72.5°	501.3	505.4	510.5	529.5	565.1	531.8	457.7	375.6	311.8	273.9	256.1
75°	410.0	409.5	416.9	433.6	459.4	434.7	375.6	308.4	254.4	223.4	207.9
77.5°	322.7	322.2	328.5	338.2	360.1	340.5	296.3	246.4	198.1	172.3	161.4
80°	240.6	240.6	246.4	251.5	267.6	252.1	221.1	184.3	145.3	125.2	116.6
82.5°	167.1	170.6	168.3	175.2	184.3	171.1	151.6	126.3	96.5	82.7	77.0
85°	101.6	104.5	101.6	107.4	111.4	99.9	90.2	75.2	55.7	46.5	42.5
87.5°	52.3	51.7	51.1	54.0	55.1	48.2	42.5	36.2	24.7	19.0	16.1
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°	1397.2	1397.2	1397.2	1397.2	1397.2	1397.2	1397.2	1397.2	1397.2	1397.2
2.5°	1382.3	1385.7	1380.5	1361.6	1354.1	1346.1	1342.6	1339.2	1345.5	1343.8
5°	1370.8	1366.8	1353.5	1329.4	1316.8	1303.6	1297.3	1293.3	1301.9	1300.1
7.5°	1355.3	1343.8	1324.3	1295.0	1278.9	1261.1	1252.5	1247.3	1253.1	1251.9
10°	1335.7	1316.8	1292.7	1257.6	1238.7	1219.2	1209.4	1201.9	1206.5	1206.0
12.5°	1311.1	1286.4	1257.1	1217.4	1197.9	1177.8	1169.2	1164.0	1169.8	1168.1
15°	1283.5	1253.6	1219.7	1179.5	1158.3	1139.9	1133.6	1129.6	1134.2	1134.2
17.5°	1253.1	1218.0	1180.7	1139.9	1119.8	1105.5	1099.1	1096.3	1098.6	1102.0
20°	1219.2	1180.1	1139.9	1100.3	1083.1	1068.1	1062.4	1059.5	1064.7	1062.4
22.5°	1181.8	1140.5	1098.6	1061.2	1045.7	1030.8	1025.1	1023.3	1029.1	1026.8
25°	1142.2	1097.4	1056.1	1022.2	1006.7	994.1	988.9	987.2	990.0	992.9
27.5°	1104.9	1054.4	1013.6	983.1	969.4	957.3	952.7	949.8	952.1	955.6
30°	1059.5	1010.7	970.5	942.4	929.2	917.7	914.2	911.9	915.4	918.3
32.5°	1017.0	967.6	927.4	899.9	888.4	877.5	876.9	875.8	879.8	883.2
35°	971.1	922.8	883.8	858.0	847.0	837.9	839.6	841.3	845.9	849.9
37.5°	924.6	877.5	840.2	816.6	806.3	798.8	804.0	806.3	812.6	816.6
40°	877.5	830.4	795.9	774.7	764.4	760.9	768.4	773.5	781.0	784.4
42.5°	829.2	785.6	751.1	731.6	723.0	723.0	732.8	740.8	749.4	752.9
45°	781.0	738.5	705.8	688.0	681.7	686.2	697.7	708.1	719.0	722.4
47.5°	732.2	690.8	661.0	644.9	641.5	648.3	662.7	676.5	689.1	693.7
50°	683.4	646.1	616.2	601.3	601.3	609.9	628.2	645.5	659.3	663.9
52.5°	634.6	599.0	568.5	557.6	559.9	572.0	593.2	611.0	626.5	631.1
55°	585.2	550.1	523.7	514.5	518.6	533.5	555.3	576.0	590.9	596.1
57.5°	536.4	503.1	478.9	471.5	477.2	493.9	519.1	536.9	552.4	557.0
60°	487.0	453.1	434.1	428.4	435.9	453.1	478.9	495.6	509.9	514.5
62.5°	438.2	406.6	389.9	384.8	393.4	411.7	437.0	451.9	462.9	467.5
65°	388.8	360.6	345.1	341.7	350.9	368.7	392.8	405.4	413.5	418.1
67.5°	340.0	315.8	301.5	298.6	308.4	324.5	346.9	353.7	361.2	365.8
70°	291.7	269.9	257.8	256.1	264.7	280.2	299.2	302.6	306.7	310.7
72.5°	244.1	226.8	214.8	214.2	222.2	234.9	250.4	251.0	252.1	256.1
75°	198.1	182.6	173.4	175.2	179.7	190.1	202.1	198.7	199.3	202.1
77.5°	153.9	141.3	135.0	136.1	139.5	147.0	155.1	151.0	148.7	151.6
80°	110.8	99.9	97.6	98.2	100.5	105.7	110.3	106.8	102.2	104.5
82.5°	72.9	66.0	64.9	65.5	67.2	70.1	71.2	66.0	64.9	66.6
85°	40.2	37.3	37.3	39.1	39.6	40.2	40.2	37.3	37.9	39.1
87.5°	16.1	16.1	17.8	19.5	18.4	16.1	13.8	9.2	9.2	10.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)