

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-X-37L835-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-X-37L835-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture EXAM Light w/
ASYMMETRIC Lens
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

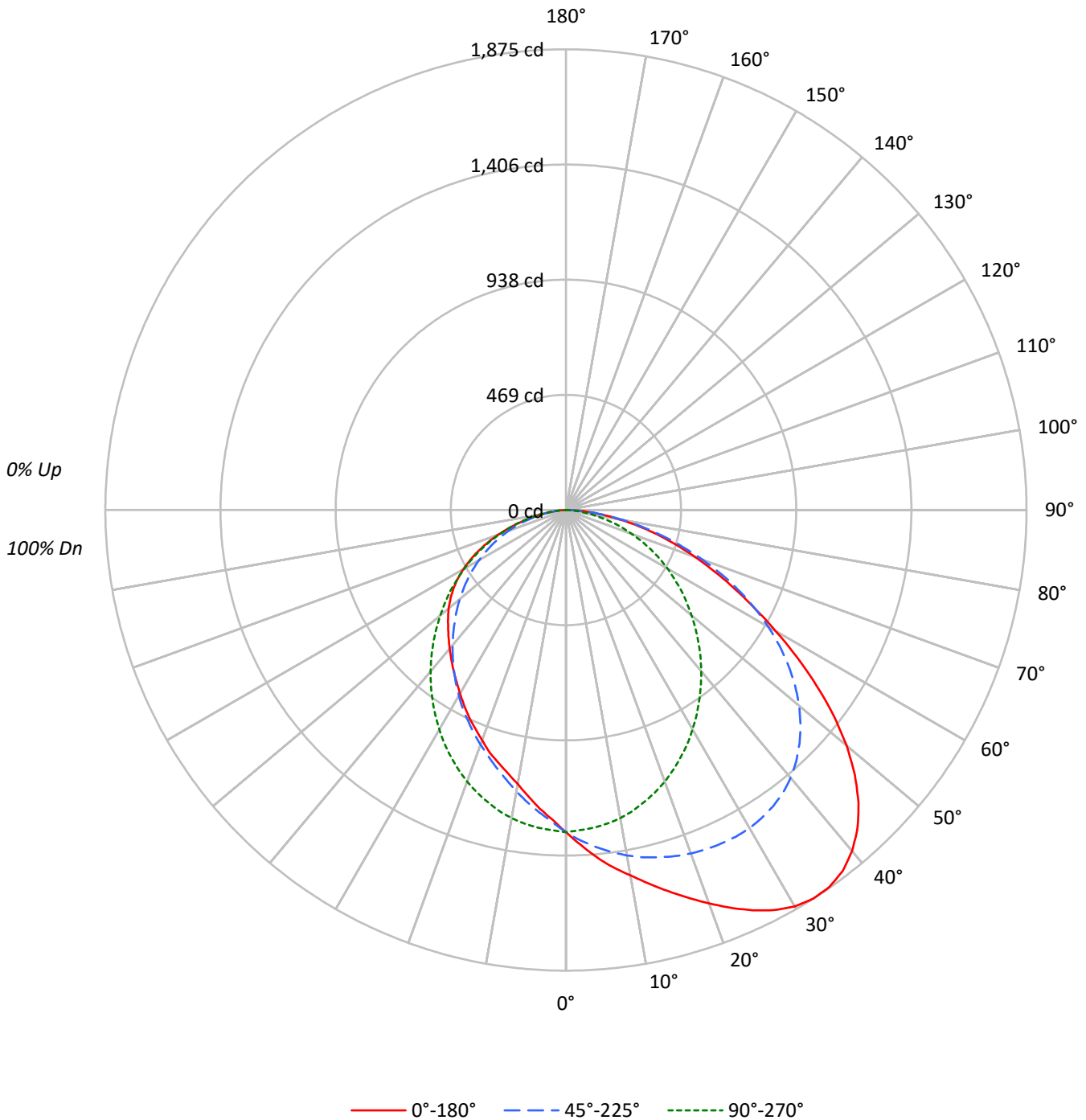
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4061.1 lumens
Efficiency: N/A
Efficacy: 99.5 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): 40.8
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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CATALOG NUMBER: 4APN-X-37L835-UNV-ASY

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°	12622	12622	12622
5°	13697	12546	11790
10°	14756	12449	11063
15°	16006	12267	10608
20°	17452	12052	10213
25°	19091	11770	9897
30°	20709	11460	9579
35°	21997	11122	9374
40°	22776	10768	9251
45°	22936	10397	9230
50°	22333	10000	9331
55°	20912	9643	9389
60°	19008	9204	9296
65°	17236	8704	8937
70°	15774	8070	8205
75°	14313	7257	7056
80°	12519	6065	5439
85°	10538	4407	4043



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	124.5	3.1
10°-20°	362.2	8.9
20°-30°	567.4	14.0
30°-40°	711.3	17.5
40°-50°	757.2	18.6
50°-60°	683.6	16.8
60°-70°	506.0	12.5
70°-80°	277.7	6.8
80°-90°	71.3	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°	1054.0	26.0
0°-40°	1765.3	43.5
0°-60°	3206.1	78.9
0°-90°	4061.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4061.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1311	1311	1311	1311	1311	
5°	1417	1376	1298	1236	1220	138
15°	1606	1463	1231	1087	1064	458
25°	1797	1498	1108	945	932	832
35°	1872	1471	946	795	798	1167
45°	1685	1344	764	640	678	1292
55°	1246	1106	574	487	559	1111
65°	757	779	382	329	392	755
75°	385	408	195	169	190	409
85°	95	94	40	37	37	113
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°	1311.1	1311.1	1311.1	1311.1	1311.1	1311.1	1311.1	1311.1	1311.1	1311.1	1311.1
2.5°	1363.9	1361.2	1358.0	1356.9	1352.1	1345.6	1339.7	1339.7	1332.7	1316.0	1304.1
5°	1417.3	1413.0	1404.9	1398.4	1388.2	1375.8	1363.4	1355.8	1339.1	1313.8	1298.2
7.5°	1466.3	1460.9	1450.7	1438.3	1421.6	1403.3	1382.8	1366.6	1341.3	1307.3	1287.4
10°	1509.4	1504.6	1492.2	1477.1	1453.4	1427.5	1397.3	1373.1	1338.6	1296.6	1273.4
12.5°	1556.8	1552.0	1534.8	1514.3	1481.9	1447.5	1407.6	1374.2	1331.6	1280.9	1254.5
15°	1605.9	1599.4	1580.0	1552.5	1509.4	1463.1	1414.0	1370.9	1320.3	1262.1	1230.8
17.5°	1654.4	1647.9	1623.7	1588.6	1534.8	1477.1	1416.7	1363.4	1304.1	1238.9	1205.0
20°	1703.4	1697.0	1666.2	1622.1	1556.8	1487.3	1416.2	1352.1	1284.7	1212.5	1176.4
22.5°	1752.5	1744.9	1707.7	1653.8	1575.2	1494.3	1410.3	1336.4	1260.5	1182.3	1143.5
25°	1797.2	1789.6	1748.7	1685.1	1594.6	1497.6	1400.0	1314.9	1233.5	1148.9	1108.0
27.5°	1836.0	1826.8	1784.3	1714.2	1611.3	1498.6	1386.6	1290.6	1202.3	1112.8	1071.3
30°	1862.9	1854.9	1809.6	1734.7	1621.0	1494.9	1369.3	1262.1	1166.2	1074.0	1030.9
32.5°	1874.8	1867.8	1823.1	1744.4	1622.6	1485.2	1348.3	1230.3	1128.4	1033.0	989.4
35°	1871.6	1864.6	1822.0	1742.8	1617.7	1471.2	1321.9	1194.2	1088.0	990.5	946.3
37.5°	1851.1	1843.0	1804.2	1728.2	1603.7	1450.7	1291.7	1154.8	1044.4	946.8	902.1
40°	1812.3	1804.2	1770.8	1700.7	1580.0	1423.2	1257.2	1112.8	999.6	901.0	856.8
42.5°	1756.8	1748.2	1721.7	1657.6	1546.1	1387.1	1217.9	1068.1	952.2	856.8	810.5
45°	1684.6	1675.9	1658.2	1603.7	1501.9	1344.5	1173.2	1019.6	902.6	806.7	763.6
47.5°	1595.1	1587.6	1578.9	1536.9	1447.5	1295.5	1123.0	967.8	850.9	759.8	715.6
50°	1491.1	1483.6	1486.3	1457.7	1384.4	1238.9	1068.1	913.4	797.6	707.6	667.7
52.5°	1373.1	1367.2	1380.1	1367.7	1311.1	1175.9	1009.3	857.4	743.1	658.0	619.7
55°	1245.9	1239.4	1264.2	1268.0	1229.2	1106.3	942.5	799.2	688.2	609.5	574.5
57.5°	1115.0	1109.6	1141.4	1159.1	1139.7	1031.4	875.2	739.4	631.6	558.8	523.8
60°	987.2	982.9	1016.3	1045.4	1043.3	952.2	805.1	674.7	575.0	507.6	478.0
62.5°	867.1	862.2	895.6	930.1	942.5	867.6	735.6	611.1	518.4	456.4	430.0
65°	756.6	751.7	780.3	815.9	838.5	779.2	660.7	545.4	461.3	404.7	382.1
67.5°	655.3	655.3	673.1	705.9	733.4	688.7	584.2	482.8	402.5	356.7	334.1
70°	560.4	559.9	572.8	596.0	627.8	591.7	506.6	417.1	347.0	306.6	286.7
72.5°	470.4	474.2	479.1	496.9	530.3	499.0	429.5	352.4	292.6	257.0	240.3
75°	384.8	384.2	391.2	406.9	431.1	407.9	352.4	289.4	238.7	209.6	195.1
77.5°	302.9	302.3	308.2	317.4	337.9	319.6	278.1	231.2	185.9	161.7	151.4
80°	225.8	225.8	231.2	236.0	251.1	236.6	207.5	173.0	136.3	117.5	109.4
82.5°	156.8	160.0	157.9	164.4	173.0	160.6	142.3	118.6	90.5	77.6	72.2
85°	95.4	98.1	95.4	100.8	104.5	93.8	84.6	70.6	52.3	43.6	39.9
87.5°	49.0	48.5	48.0	50.7	51.7	45.3	39.9	33.9	23.2	17.8	15.1
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°	1311.1	1311.1	1311.1	1311.1	1311.1	1311.1	1311.1	1311.1	1311.1	1311.1
2.5°	1297.1	1300.3	1295.5	1277.7	1270.7	1263.2	1259.9	1256.7	1262.6	1261.0
5°	1286.3	1282.6	1270.2	1247.5	1235.7	1223.3	1217.3	1213.6	1221.7	1220.0
7.5°	1271.8	1261.0	1242.7	1215.2	1200.1	1183.4	1175.3	1170.5	1175.9	1174.8
10°	1253.5	1235.7	1213.0	1180.2	1162.4	1144.1	1134.9	1127.9	1132.2	1131.7
12.5°	1230.3	1207.1	1179.6	1142.4	1124.1	1105.3	1097.2	1092.3	1097.7	1096.1
15°	1204.4	1176.4	1144.6	1106.9	1086.9	1069.7	1063.8	1060.0	1064.3	1064.3
17.5°	1175.9	1143.0	1108.0	1069.7	1050.8	1037.4	1031.4	1028.7	1030.9	1034.1
20°	1144.1	1107.4	1069.7	1032.5	1016.3	1002.3	996.9	994.2	999.1	996.9
22.5°	1109.0	1070.2	1030.9	995.9	981.3	967.3	961.9	960.3	965.7	963.5
25°	1071.8	1029.8	991.0	959.2	944.7	932.8	928.0	926.3	929.0	931.7
27.5°	1036.8	989.4	951.1	922.6	909.6	898.3	894.0	891.3	893.5	896.7
30°	994.2	948.4	910.7	884.3	871.9	861.1	857.9	855.8	859.0	861.7
32.5°	954.4	908.0	870.3	844.4	833.7	823.4	822.9	821.8	825.6	828.8
35°	911.3	866.0	829.3	805.1	794.9	786.2	787.9	789.5	793.8	797.6
37.5°	867.6	823.4	788.4	766.3	756.6	749.6	754.4	756.6	762.5	766.3
40°	823.4	779.2	746.9	727.0	717.3	714.0	721.0	725.9	732.9	736.1
42.5°	778.2	737.2	704.9	686.5	678.5	678.5	687.6	695.2	703.2	706.5
45°	732.9	693.0	662.3	645.6	639.7	644.0	654.7	664.4	674.7	677.9
47.5°	687.1	648.3	620.3	605.2	601.9	608.4	621.9	634.8	646.7	651.0
50°	641.3	606.2	578.2	564.2	564.2	572.3	589.5	605.7	618.6	623.0
52.5°	595.5	562.1	533.5	523.3	525.4	536.7	556.7	573.4	587.9	592.2
55°	549.1	516.3	491.5	482.8	486.6	500.6	521.1	540.5	554.5	559.4
57.5°	503.3	472.1	449.4	442.4	447.8	463.4	487.2	503.9	518.4	522.7
60°	457.0	425.2	407.4	402.0	409.0	425.2	449.4	465.1	478.5	482.8
62.5°	411.2	381.5	365.9	361.1	369.1	386.4	410.1	424.1	434.3	438.7
65°	364.8	338.4	323.9	320.6	329.3	346.0	368.6	380.5	388.0	392.3
67.5°	319.0	296.4	282.9	280.2	289.4	304.5	325.5	332.0	339.0	343.3
70°	273.8	253.3	242.0	240.3	248.4	263.0	280.8	284.0	287.8	291.5
72.5°	229.0	212.9	201.5	201.0	208.5	220.4	235.0	235.5	236.6	240.3
75°	185.9	171.4	162.7	164.4	168.7	178.4	189.7	186.5	187.0	189.7
77.5°	144.4	132.6	126.6	127.7	130.9	138.0	145.5	141.7	139.6	142.3
80°	104.0	93.8	91.6	92.1	94.3	99.2	103.5	100.2	95.9	98.1
82.5°	68.4	62.0	60.9	61.4	63.0	65.7	66.8	62.0	60.9	62.5
85°	37.7	35.0	35.0	36.6	37.2	37.7	37.7	35.0	35.6	36.6
87.5°	15.1	15.1	16.7	18.3	17.2	15.1	12.9	8.6	8.6	10.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)