

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-35L830-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-35L830-X-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient Light w/
ASYMMETRIC Lens
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

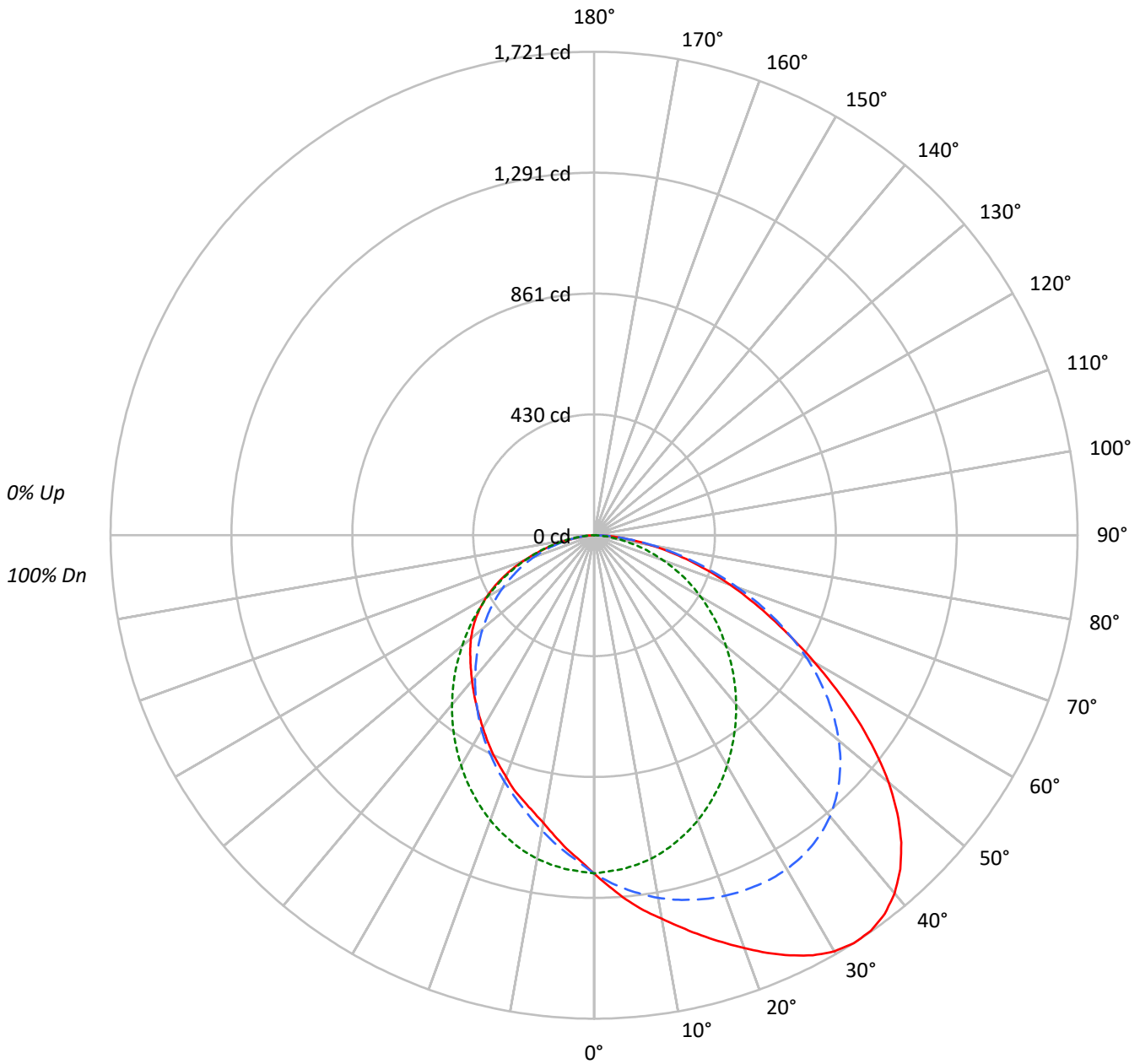
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3728.8 lumens
Efficiency: N/A
Efficacy: 92.3 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): 40.4
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



— 0°-180° - - 45°-225° - - - 90°-270°



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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°	11589	11589	11589
5°	12576	11520	10826
10°	13548	11430	10158
15°	14696	11264	9740
20°	16023	11066	9378
25°	17528	10806	9088
30°	19015	10522	8796
35°	20196	10212	8607
40°	20912	9887	8494
45°	21059	9546	8474
50°	20506	9181	8567
55°	19202	8852	8621
60°	17454	8451	8536
65°	15825	7991	8205
70°	14485	7409	7535
75°	13142	6662	6480
80°	11493	5566	4995
85°	9676	4043	3712



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	114.3	3.1
10°-20°	332.5	8.9
20°-30°	520.9	14.0
30°-40°	653.1	17.5
40°-50°	695.3	18.6
50°-60°	627.6	16.8
60°-70°	464.6	12.5
70°-80°	254.9	6.8
80°-90°	65.4	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°	967.8	26.0
0°-40°	1620.9	43.5
0°-60°	2943.7	78.9
0°-90°	3728.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3728.8	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1204	1204	1204	1204	1204	
5°	1301	1263	1192	1135	1120	127
15°	1474	1343	1130	998	977	421
25°	1650	1375	1017	867	856	764
35°	1718	1351	869	730	732	1072
45°	1547	1234	701	587	622	1186
55°	1144	1016	527	447	514	1020
65°	695	716	351	302	360	693
75°	353	375	179	155	174	376
85°	88	86	37	34	34	103
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°	1203.8	1203.8	1203.8	1203.8	1203.8	1203.8	1203.8	1203.8	1203.8	1203.8	1203.8
2.5°	1252.3	1249.8	1246.9	1245.9	1241.4	1235.5	1230.1	1230.1	1223.6	1208.3	1197.4
5°	1301.3	1297.3	1289.9	1284.0	1274.6	1263.2	1251.8	1244.9	1229.6	1206.3	1192.0
7.5°	1346.3	1341.4	1332.0	1320.6	1305.3	1288.4	1269.6	1254.8	1231.5	1200.4	1182.1
10°	1385.9	1381.5	1370.1	1356.2	1334.5	1310.7	1283.0	1260.7	1229.1	1190.5	1169.2
12.5°	1429.5	1425.0	1409.2	1390.4	1360.7	1329.0	1292.4	1261.7	1222.6	1176.1	1151.9
15°	1474.5	1468.5	1450.7	1425.5	1385.9	1343.4	1298.3	1258.8	1212.2	1158.8	1130.1
17.5°	1519.0	1513.1	1490.8	1458.6	1409.2	1356.2	1300.8	1251.8	1197.4	1137.5	1106.4
20°	1564.0	1558.1	1529.9	1489.3	1429.5	1365.6	1300.3	1241.4	1179.6	1113.3	1080.1
22.5°	1609.1	1602.1	1568.0	1518.5	1446.3	1372.1	1294.9	1227.1	1157.3	1085.6	1050.0
25°	1650.1	1643.2	1605.6	1547.2	1464.1	1375.0	1285.5	1207.3	1132.6	1054.9	1017.3
27.5°	1685.8	1677.3	1638.3	1573.9	1479.4	1376.0	1273.1	1185.0	1103.9	1021.7	983.6
30°	1710.5	1703.1	1661.5	1592.7	1488.3	1372.6	1257.3	1158.8	1070.7	986.1	946.5
32.5°	1721.4	1715.0	1673.9	1601.6	1489.8	1363.6	1238.0	1129.6	1036.1	948.5	908.4
35°	1718.4	1712.0	1672.9	1600.2	1485.4	1350.8	1213.7	1096.5	999.0	909.4	868.9
37.5°	1699.6	1692.2	1656.6	1586.8	1472.5	1332.0	1186.0	1060.3	958.9	869.4	828.3
40°	1664.0	1656.6	1625.9	1561.6	1450.7	1306.7	1154.4	1021.7	917.8	827.3	786.7
42.5°	1613.0	1605.1	1580.9	1522.0	1419.6	1273.6	1118.2	980.7	874.3	786.7	744.2
45°	1546.7	1538.8	1522.5	1472.5	1379.0	1234.5	1077.2	936.1	828.8	740.7	701.1
47.5°	1464.6	1457.7	1449.7	1411.1	1329.0	1189.5	1031.1	888.6	781.3	697.7	657.1
50°	1369.1	1362.2	1364.6	1338.4	1271.1	1137.5	980.7	838.7	732.3	649.7	613.0
52.5°	1260.7	1255.3	1267.2	1255.8	1203.8	1079.6	926.7	787.2	682.3	604.1	569.0
55°	1144.0	1138.0	1160.8	1164.2	1128.6	1015.8	865.4	733.8	631.9	559.6	527.4
57.5°	1023.7	1018.8	1048.0	1064.3	1046.5	947.0	803.5	678.9	579.9	513.1	480.9
60°	906.5	902.5	933.2	959.9	957.9	874.3	739.2	619.5	527.9	466.1	438.9
62.5°	796.1	791.7	822.3	854.0	865.4	796.6	675.4	561.1	476.0	419.1	394.8
65°	694.7	690.2	716.5	749.1	769.9	715.5	606.6	500.7	423.5	371.6	350.8
67.5°	601.7	601.7	618.0	648.2	673.4	632.3	536.4	443.3	369.6	327.6	306.8
70°	514.6	514.1	526.0	547.2	576.4	543.3	465.1	383.0	318.6	281.5	263.2
72.5°	432.0	435.4	439.9	456.2	486.9	458.2	394.4	323.6	268.7	236.0	220.7
75°	353.3	352.8	359.2	373.6	395.8	374.6	323.6	265.7	219.2	192.5	179.1
77.5°	278.1	277.6	283.0	291.4	310.2	293.4	255.3	212.3	170.7	148.4	139.0
80°	207.3	207.3	212.3	216.7	230.6	217.2	190.5	158.8	125.2	107.9	100.4
82.5°	144.0	147.0	145.0	150.9	158.8	147.4	130.6	108.9	83.1	71.3	66.3
85°	87.6	90.1	87.6	92.5	96.0	86.1	77.7	64.8	48.0	40.1	36.6
87.5°	45.0	44.5	44.0	46.5	47.5	41.6	36.6	31.2	21.3	16.3	13.9
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°	1203.8	1203.8	1203.8	1203.8	1203.8	1203.8	1203.8	1203.8	1203.8	1203.8
2.5°	1191.0	1193.9	1189.5	1173.2	1166.7	1159.8	1156.8	1153.9	1159.3	1157.8
5°	1181.1	1177.6	1166.2	1145.4	1134.6	1123.2	1117.7	1114.3	1121.7	1120.2
7.5°	1167.7	1157.8	1141.0	1115.8	1101.9	1086.6	1079.1	1074.7	1079.6	1078.6
10°	1150.9	1134.6	1113.8	1083.6	1067.3	1050.4	1042.0	1035.6	1039.6	1039.1
12.5°	1129.6	1108.3	1083.1	1049.0	1032.1	1014.8	1007.4	1002.9	1007.9	1006.4
15°	1105.9	1080.1	1050.9	1016.3	998.0	982.2	976.7	973.3	977.2	977.2
17.5°	1079.6	1049.5	1017.3	982.2	964.8	952.5	947.0	944.6	946.5	949.5
20°	1050.4	1016.8	982.2	948.0	933.2	920.3	915.4	912.9	917.3	915.4
22.5°	1018.3	982.7	946.5	914.4	901.0	888.2	883.2	881.7	886.7	884.7
25°	984.1	945.5	909.9	880.7	867.4	856.5	852.0	850.5	853.0	855.5
27.5°	952.0	908.4	873.3	847.1	835.2	824.8	820.9	818.4	820.4	823.3
30°	912.9	870.8	836.2	812.0	800.6	790.7	787.7	785.7	788.7	791.2
32.5°	876.3	833.7	799.1	775.3	765.4	756.0	755.5	754.6	758.0	761.0
35°	836.7	795.1	761.5	739.2	729.8	721.9	723.4	724.9	728.8	732.3
37.5°	796.6	756.0	723.9	703.6	694.7	688.3	692.7	694.7	700.1	703.6
40°	756.0	715.5	685.8	667.5	658.6	655.6	662.0	666.5	672.9	675.9
42.5°	714.5	676.9	647.2	630.4	622.9	622.9	631.4	638.3	645.7	648.7
45°	672.9	636.3	608.1	592.8	587.3	591.3	601.2	610.1	619.5	622.4
47.5°	630.9	595.2	569.5	555.7	552.7	558.6	571.0	582.9	593.8	597.7
50°	588.8	556.6	530.9	518.0	518.0	525.5	541.3	556.1	568.0	572.0
52.5°	546.7	516.1	489.8	480.4	482.4	492.8	511.1	526.5	539.8	543.8
55°	504.2	474.0	451.3	443.3	446.8	459.7	478.5	496.3	509.1	513.6
57.5°	462.1	433.4	412.7	406.2	411.2	425.5	447.3	462.6	476.0	479.9
60°	419.6	390.4	374.1	369.1	375.5	390.4	412.7	427.0	439.4	443.3
62.5°	377.5	350.3	336.0	331.5	338.9	354.8	376.5	389.4	398.8	402.8
65°	335.0	310.7	297.4	294.4	302.3	317.7	338.4	349.3	356.3	360.2
67.5°	292.9	272.1	259.8	257.3	265.7	279.6	298.9	304.8	311.2	315.2
70°	251.4	232.6	222.2	220.7	228.1	241.5	257.8	260.8	264.2	267.7
72.5°	210.3	195.4	185.1	184.6	191.5	202.4	215.7	216.2	217.2	220.7
75°	170.7	157.3	149.4	150.9	154.9	163.8	174.2	171.2	171.7	174.2
77.5°	132.6	121.7	116.3	117.3	120.2	126.7	133.6	130.1	128.2	130.6
80°	95.5	86.1	84.1	84.6	86.6	91.0	95.0	92.0	88.1	90.1
82.5°	62.8	56.9	55.9	56.4	57.9	60.4	61.4	56.9	55.9	57.4
85°	34.6	32.2	32.2	33.6	34.1	34.6	34.6	32.2	32.7	33.6
87.5°	13.9	13.9	15.3	16.8	15.8	13.9	11.9	7.9	7.9	9.4
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)