

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-24-26L950-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-24-26L950-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ ASYMMETRIC Lens
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

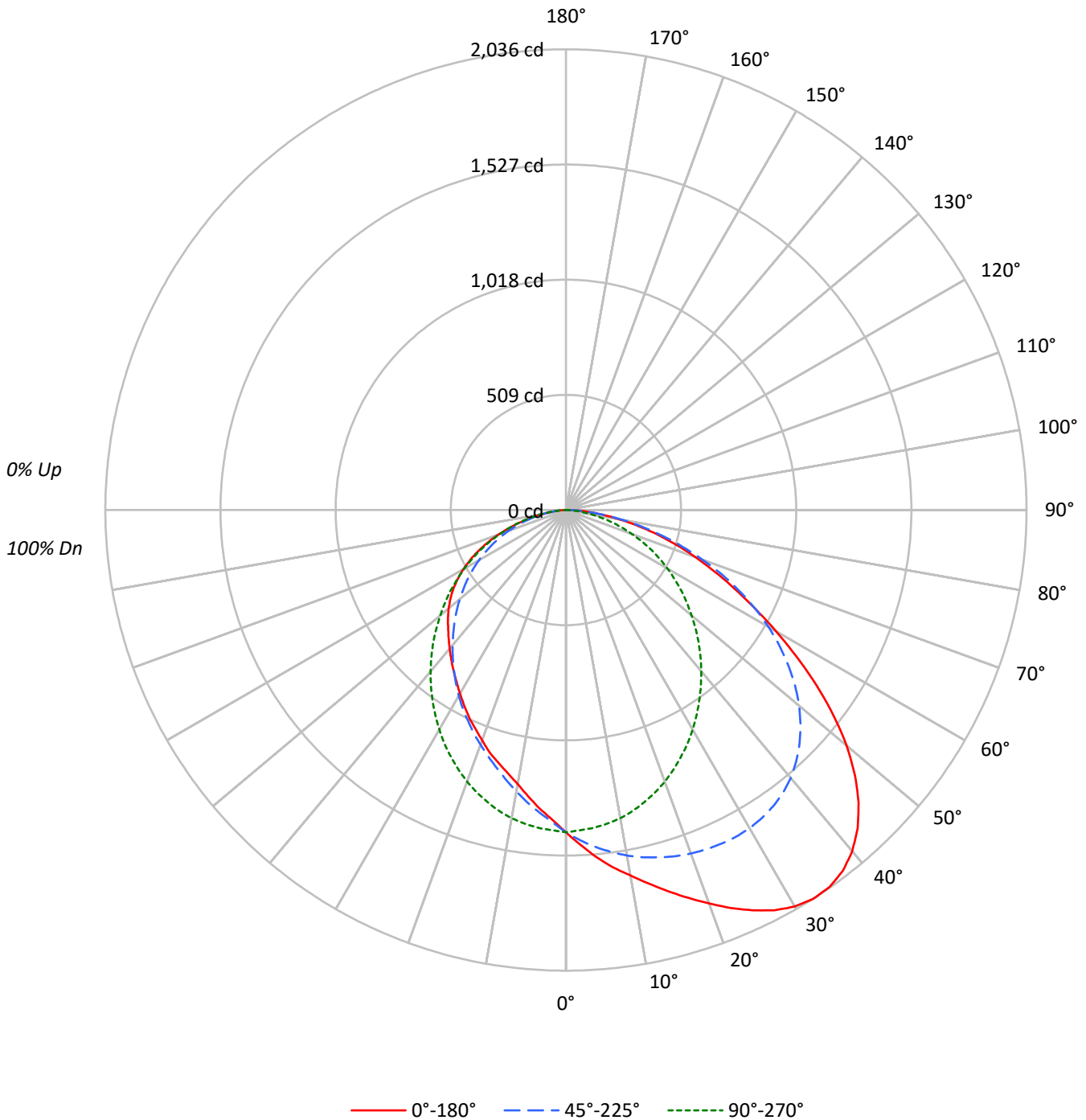
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4410.9 lumens
Efficiency: N/A
Efficacy: 78.8 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): 56
Input Voltage (V): 120
Input Current (A_{in}): 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°	13710	13710	13710
5°	14877	13626	12806
10°	16028	13521	12016
15°	17384	13325	11522
20°	18956	13090	11094
25°	20735	12783	10750
30°	22494	12447	10404
35°	23891	12080	10181
40°	24738	11695	10048
45°	24912	11292	10025
50°	24258	10862	10134
55°	22713	10472	10198
60°	20647	9997	10097
65°	18721	9454	9707
70°	17134	8765	8915
75°	15545	7882	7663
80°	13594	6586	5905
85°	11444	4783	4396



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	135.2	3.1
10°-20°	393.4	8.9
20°-30°	616.2	14.0
30°-40°	772.6	17.5
40°-50°	822.4	18.6
50°-60°	742.5	16.8
60°-70°	549.6	12.5
70°-80°	301.6	6.8
80°-90°	77.4	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°	1144.8	26.0
0°-40°	1917.4	43.5
0°-60°	3482.3	78.9
0°-90°	4410.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4410.9	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1424	1424	1424	1424	1424	
5°	1539	1494	1410	1342	1325	150
15°	1744	1589	1337	1181	1156	497
25°	1952	1627	1203	1026	1012	903
35°	2033	1598	1028	863	866	1268
45°	1830	1460	829	695	736	1403
55°	1353	1202	624	528	608	1207
65°	822	846	415	358	426	820
75°	418	443	212	183	206	444
85°	104	102	43	40	40	122
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°	1424.1	1424.1	1424.1	1424.1	1424.1	1424.1	1424.1	1424.1	1424.1	1424.1	1424.1
2.5°	1481.4	1478.5	1475.0	1473.8	1468.6	1461.5	1455.1	1455.1	1447.5	1429.3	1416.5
5°	1539.4	1534.7	1525.9	1518.9	1507.8	1494.3	1480.8	1472.6	1454.5	1427.0	1410.0
7.5°	1592.6	1586.8	1575.7	1562.2	1544.1	1524.2	1501.9	1484.4	1456.8	1420.0	1398.3
10°	1639.5	1634.2	1620.7	1604.3	1578.6	1550.5	1517.7	1491.4	1453.9	1408.3	1383.1
12.5°	1691.0	1685.7	1667.0	1644.7	1609.6	1572.2	1528.8	1492.5	1446.3	1391.3	1362.6
15°	1744.2	1737.2	1716.1	1686.3	1639.5	1589.1	1535.9	1489.0	1434.0	1370.8	1336.9
17.5°	1796.9	1789.9	1763.5	1725.5	1667.0	1604.3	1538.8	1480.8	1416.5	1345.6	1308.8
20°	1850.2	1843.2	1809.8	1761.8	1691.0	1615.5	1538.2	1468.6	1395.4	1317.0	1277.7
22.5°	1903.4	1895.2	1854.9	1796.3	1710.9	1623.1	1531.8	1451.6	1369.0	1284.2	1242.0
25°	1952.0	1943.8	1899.3	1830.3	1731.9	1626.6	1520.6	1428.2	1339.8	1247.9	1203.4
27.5°	1994.2	1984.2	1938.0	1861.9	1750.1	1627.8	1506.0	1401.8	1305.8	1208.7	1163.6
30°	2023.4	2014.6	1965.5	1884.1	1760.6	1623.7	1487.3	1370.8	1266.6	1166.5	1119.7
32.5°	2036.3	2028.7	1980.1	1894.7	1762.4	1613.1	1464.5	1336.3	1225.6	1122.0	1074.6
35°	2032.8	2025.2	1978.9	1892.9	1757.1	1597.9	1435.8	1297.1	1181.7	1075.8	1027.8
37.5°	2010.6	2001.8	1959.6	1877.1	1741.9	1575.7	1403.0	1254.3	1134.3	1028.4	979.8
40°	1968.4	1959.6	1923.3	1847.2	1716.1	1545.8	1365.5	1208.7	1085.8	978.6	930.6
42.5°	1908.1	1898.8	1870.1	1800.4	1679.3	1506.6	1322.8	1160.1	1034.2	930.6	880.3
45°	1829.7	1820.3	1801.0	1741.9	1631.3	1460.4	1274.2	1107.4	980.4	876.2	829.4
47.5°	1732.5	1724.3	1715.0	1669.3	1572.2	1407.1	1219.8	1051.2	924.2	825.3	777.3
50°	1619.6	1611.4	1614.3	1583.3	1503.7	1345.6	1160.1	992.1	866.3	768.5	725.2
52.5°	1491.4	1484.9	1499.0	1485.5	1424.1	1277.2	1096.3	931.2	807.1	714.7	673.1
55°	1353.2	1346.2	1373.1	1377.2	1335.1	1201.6	1023.7	868.0	747.4	662.0	623.9
57.5°	1211.0	1205.2	1239.7	1259.0	1237.9	1120.3	950.5	803.0	686.0	607.0	568.9
60°	1072.3	1067.6	1103.9	1135.5	1133.2	1034.2	874.5	732.8	624.5	551.4	519.2
62.5°	941.8	936.5	972.8	1010.3	1023.7	942.4	799.0	663.7	563.1	495.8	467.1
65°	821.8	816.5	847.5	886.2	910.7	846.4	717.6	592.3	501.0	439.6	415.0
67.5°	711.7	711.7	731.1	766.8	796.6	748.0	634.5	524.4	437.2	387.5	362.9
70°	608.7	608.1	622.2	647.4	681.9	642.7	550.2	453.0	376.9	333.0	311.4
72.5°	511.0	515.1	520.3	539.7	575.9	542.0	466.5	382.8	317.8	279.2	261.0
75°	417.9	417.3	424.9	441.9	468.3	443.1	382.8	314.3	259.3	227.7	211.9
77.5°	328.9	328.4	334.8	344.7	367.0	347.1	302.0	251.1	201.9	175.6	164.5
80°	245.2	245.2	251.1	256.4	272.8	257.0	225.3	187.9	148.1	127.6	118.8
82.5°	170.3	173.8	171.5	178.5	187.9	174.4	154.5	128.8	98.3	84.3	78.4
85°	103.6	106.5	103.6	109.5	113.6	101.8	91.9	76.7	56.8	47.4	43.3
87.5°	53.3	52.7	52.1	55.0	56.2	49.2	43.3	36.9	25.2	19.3	16.4
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1424.1	1424.1	1424.1	1424.1	1424.1	1424.1	1424.1	1424.1	1424.1	1424.1
2.5°	1408.8	1412.4	1407.1	1387.8	1380.2	1372.0	1368.5	1365.0	1371.4	1369.6
5°	1397.1	1393.0	1379.6	1355.0	1342.1	1328.7	1322.2	1318.1	1326.9	1325.1
7.5°	1381.3	1369.6	1349.7	1319.9	1303.5	1285.3	1276.6	1271.3	1277.2	1276.0
10°	1361.4	1342.1	1317.5	1281.8	1262.5	1242.6	1232.7	1225.1	1229.7	1229.2
12.5°	1336.3	1311.1	1281.3	1240.9	1221.0	1200.5	1191.7	1186.4	1192.3	1190.5
15°	1308.2	1277.7	1243.2	1202.2	1180.6	1161.8	1155.4	1151.3	1156.0	1156.0
17.5°	1277.2	1241.4	1203.4	1161.8	1141.4	1126.7	1120.3	1117.4	1119.7	1123.2
20°	1242.6	1202.8	1161.8	1121.5	1103.9	1088.7	1082.8	1079.9	1085.2	1082.8
22.5°	1204.6	1162.4	1119.7	1081.7	1065.9	1050.6	1044.8	1043.0	1048.9	1046.5
25°	1164.2	1118.5	1076.4	1041.9	1026.1	1013.2	1007.9	1006.2	1009.1	1012.0
27.5°	1126.1	1074.6	1033.1	1002.1	988.0	975.7	971.0	968.1	970.4	974.0
30°	1079.9	1030.2	989.2	960.5	947.0	935.3	931.8	929.5	933.0	935.9
32.5°	1036.6	986.3	945.3	917.2	905.5	894.4	893.8	892.6	896.7	900.2
35°	989.8	940.6	900.8	874.5	863.3	854.0	855.7	857.5	862.2	866.3
37.5°	942.4	894.4	856.3	832.3	821.8	814.2	819.4	821.8	828.2	832.3
40°	894.4	846.4	811.2	789.6	779.1	775.5	783.1	788.4	796.0	799.5
42.5°	845.2	800.7	765.6	745.7	736.9	736.9	746.9	755.1	763.8	767.3
45°	796.0	752.7	719.4	701.2	694.8	699.4	711.2	721.7	732.8	736.3
47.5°	746.3	704.1	673.7	657.3	653.8	660.8	675.5	689.5	702.4	707.1
50°	696.5	658.5	628.0	612.8	612.8	621.6	640.3	657.9	671.9	676.6
52.5°	646.8	610.5	579.5	568.3	570.7	583.0	604.6	622.8	638.6	643.3
55°	596.4	560.7	533.8	524.4	528.5	543.8	566.0	587.1	602.3	607.6
57.5°	546.7	512.7	488.2	480.5	486.4	503.4	529.1	547.3	563.1	567.8
60°	496.3	461.8	442.5	436.6	444.3	461.8	488.2	505.1	519.8	524.4
62.5°	446.6	414.4	397.4	392.2	400.9	419.7	445.4	460.6	471.8	476.4
65°	396.3	367.6	351.8	348.3	357.6	375.8	400.4	413.2	421.4	426.1
67.5°	346.5	321.9	307.3	304.4	314.3	330.7	353.5	360.6	368.2	372.8
70°	297.3	275.1	262.8	261.0	269.8	285.6	304.9	308.5	312.6	316.7
72.5°	248.8	231.2	218.9	218.3	226.5	239.4	255.2	255.8	257.0	261.0
75°	201.9	186.1	176.8	178.5	183.2	193.7	206.0	202.5	203.1	206.0
77.5°	156.9	144.0	137.5	138.7	142.2	149.8	158.0	153.9	151.6	154.5
80°	113.0	101.8	99.5	100.1	102.4	107.7	112.4	108.9	104.2	106.5
82.5°	74.3	67.3	66.1	66.7	68.5	71.4	72.6	67.3	66.1	67.9
85°	41.0	38.0	38.0	39.8	40.4	41.0	41.0	38.0	38.6	39.8
87.5°	16.4	16.4	18.1	19.9	18.7	16.4	14.0	9.4	9.4	11.1
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)