

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-24-26L840-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-24-26L840-UNV-ASY
Description: ArcMed Patient Recessed 4 FT x6 IN Fixture Ambient and Exam Light
w/ ASYMMETRIC Lens
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

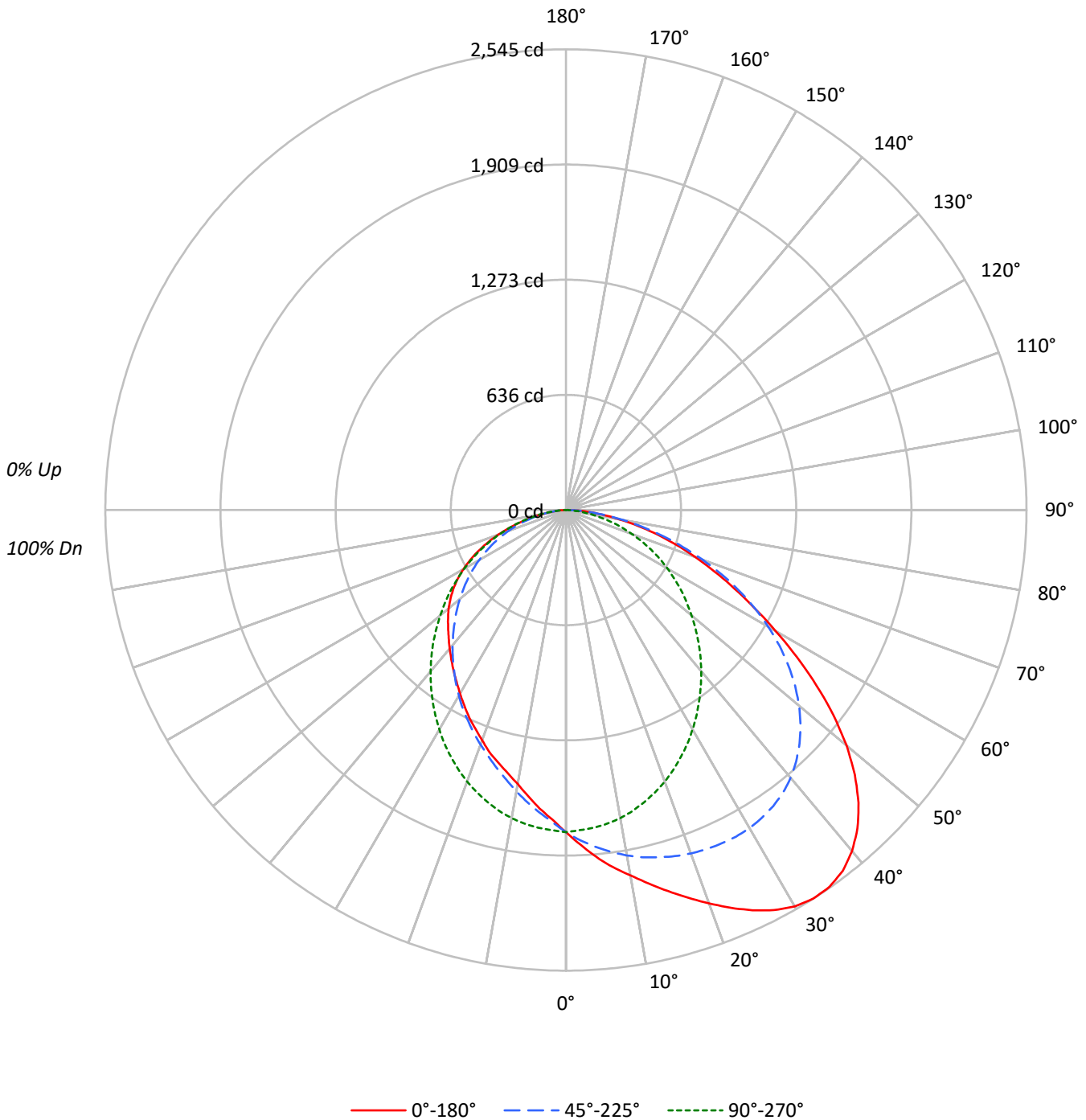
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5512.3 lumens
Efficiency: N/A
Efficacy: 98.4 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				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°	17133	17133	17133
5°	18591	17029	16004
10°	20029	16897	15017
15°	21725	16652	14398
20°	23688	16360	13864
25°	25913	15975	13434
30°	28111	15556	13002
35°	29857	15095	12724
40°	30915	14616	12558
45°	31131	14112	12529
50°	30313	13574	12665
55°	28385	13087	12745
60°	25801	12492	12620
65°	23395	11814	12130
70°	21413	10953	11138
75°	19428	9850	9578
80°	16993	8233	7379
85°	14305	5976	5490



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	169.0	3.1
10°-20°	491.6	8.9
20°-30°	770.1	14.0
30°-40°	965.5	17.5
40°-50°	1027.8	18.6
50°-60°	927.8	16.8
60°-70°	686.9	12.5
70°-80°	376.9	6.8
80°-90°	96.8	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°	1430.7	26.0
0°-40°	2396.1	43.5
0°-60°	4351.8	78.9
0°-90°	5512.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5512.3	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	1780	1780	1780	1780	1780	
5°	1924	1867	1762	1677	1656	187
15°	2180	1986	1671	1475	1445	622
25°	2439	2033	1504	1282	1265	1129
35°	2540	1997	1284	1079	1083	1584
45°	2286	1825	1036	868	920	1753
55°	1691	1502	780	660	759	1508
65°	1027	1058	519	447	532	1025
75°	522	554	265	229	258	555
85°	130	127	54	50	50	153
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°	1779.6	1779.6	1779.6	1779.6	1779.6	1779.6	1779.6	1779.6	1779.6	1779.6	1779.6
2.5°	1851.3	1847.7	1843.3	1841.8	1835.2	1826.5	1818.4	1818.4	1808.9	1786.2	1770.1
5°	1923.7	1917.9	1906.9	1898.1	1884.2	1867.4	1850.6	1840.3	1817.7	1783.3	1762.1
7.5°	1990.3	1983.0	1969.1	1952.3	1929.6	1904.7	1876.9	1855.0	1820.6	1774.5	1747.5
10°	2048.8	2042.2	2025.4	2004.9	1972.7	1937.6	1896.7	1863.8	1816.9	1759.9	1728.4
12.5°	2113.2	2106.6	2083.2	2055.4	2011.5	1964.7	1910.6	1865.2	1807.4	1738.7	1702.8
15°	2179.7	2171.0	2144.6	2107.3	2048.8	1985.9	1919.3	1860.8	1792.1	1713.1	1670.7
17.5°	2245.6	2236.8	2203.9	2156.3	2083.2	2004.9	1923.0	1850.6	1770.1	1681.6	1635.5
20°	2312.1	2303.4	2261.7	2201.7	2113.2	2018.8	1922.3	1835.2	1743.8	1645.8	1596.8
22.5°	2378.7	2368.5	2318.0	2244.8	2138.1	2028.3	1914.2	1814.0	1710.9	1604.8	1552.2
25°	2439.4	2429.2	2373.6	2287.3	2164.4	2032.7	1900.3	1784.8	1674.3	1559.5	1503.9
27.5°	2492.1	2479.6	2421.9	2326.8	2187.1	2034.2	1882.0	1751.8	1631.9	1510.5	1454.1
30°	2528.7	2517.7	2456.2	2354.6	2200.2	2029.1	1858.6	1713.1	1582.9	1457.8	1399.3
32.5°	2544.7	2535.2	2474.5	2367.7	2202.4	2015.9	1830.1	1669.9	1531.7	1402.2	1343.0
35°	2540.4	2530.8	2473.1	2365.5	2195.8	1996.9	1794.3	1620.9	1476.8	1344.4	1284.4
37.5°	2512.6	2501.6	2448.9	2345.8	2176.8	1969.1	1753.3	1567.5	1417.6	1285.2	1224.5
40°	2459.9	2448.9	2403.6	2308.5	2144.6	1931.8	1706.5	1510.5	1356.9	1223.0	1163.0
42.5°	2384.6	2372.9	2337.0	2250.0	2098.6	1882.8	1653.1	1449.8	1292.5	1163.0	1100.1
45°	2286.5	2274.8	2250.7	2176.8	2038.6	1825.0	1592.4	1383.9	1225.2	1095.0	1036.5
47.5°	2165.1	2154.9	2143.2	2086.1	1964.7	1758.4	1524.4	1313.7	1155.0	1031.4	971.4
50°	2023.9	2013.7	2017.4	1978.6	1879.1	1681.6	1449.8	1239.8	1082.6	960.4	906.3
52.5°	1863.8	1855.7	1873.3	1856.4	1779.6	1596.0	1370.0	1163.8	1008.7	893.1	841.2
55°	1691.1	1682.4	1716.0	1721.1	1668.5	1501.7	1279.3	1084.8	934.1	827.3	779.7
57.5°	1513.4	1506.1	1549.2	1573.4	1547.0	1400.0	1187.9	1003.6	857.3	758.5	711.0
60°	1340.0	1334.2	1379.5	1419.0	1416.1	1292.5	1092.8	915.8	780.5	689.0	648.8
62.5°	1176.9	1170.3	1215.7	1262.5	1279.3	1177.6	998.4	829.5	703.7	619.5	583.7
65°	1027.0	1020.4	1059.2	1107.4	1138.1	1057.7	896.8	740.2	626.1	549.3	518.6
67.5°	889.5	889.5	913.6	958.2	995.5	934.8	792.9	655.4	546.4	484.2	453.5
70°	760.7	760.0	777.5	809.0	852.1	803.1	687.6	566.1	471.1	416.2	389.1
72.5°	638.6	643.7	650.3	674.4	719.8	677.3	583.0	478.4	397.2	348.9	326.2
75°	522.3	521.5	531.0	552.3	585.2	553.7	478.4	392.8	324.0	284.5	264.8
77.5°	411.1	410.3	418.4	430.8	458.6	433.8	377.4	313.8	252.4	219.4	205.5
80°	306.5	306.5	313.8	320.4	340.9	321.1	281.6	234.8	185.1	159.5	148.5
82.5°	212.9	217.2	214.3	223.1	234.8	218.0	193.1	160.9	122.9	105.3	98.0
85°	129.5	133.1	129.5	136.8	141.9	127.3	114.8	95.8	71.0	59.2	54.1
87.5°	66.6	65.8	65.1	68.8	70.2	61.4	54.1	46.1	31.5	24.1	20.5
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°	1779.6	1779.6	1779.6	1779.6	1779.6	1779.6	1779.6	1779.6	1779.6	1779.6
2.5°	1760.6	1765.0	1758.4	1734.3	1724.8	1714.5	1710.2	1705.8	1713.8	1711.6
5°	1746.0	1740.9	1724.0	1693.3	1677.2	1660.4	1652.4	1647.2	1658.2	1656.0
7.5°	1726.2	1711.6	1686.7	1649.4	1629.0	1606.3	1595.3	1588.7	1596.0	1594.6
10°	1701.4	1677.2	1646.5	1601.9	1577.8	1552.9	1540.5	1530.9	1536.8	1536.1
12.5°	1669.9	1638.5	1601.2	1550.7	1525.8	1500.2	1489.2	1482.7	1490.0	1487.8
15°	1634.8	1596.8	1553.6	1502.4	1475.4	1451.9	1443.9	1438.8	1444.6	1444.6
17.5°	1596.0	1551.4	1503.9	1451.9	1426.3	1408.1	1400.0	1396.4	1399.3	1403.7
20°	1552.9	1503.1	1451.9	1401.5	1379.5	1360.5	1353.2	1349.5	1356.1	1353.2
22.5°	1505.3	1452.7	1399.3	1351.7	1332.0	1313.0	1305.7	1303.5	1310.8	1307.8
25°	1454.9	1397.8	1345.2	1302.0	1282.2	1266.2	1259.6	1257.4	1261.0	1264.7
27.5°	1407.3	1343.0	1291.0	1252.3	1234.7	1219.3	1213.5	1209.8	1212.8	1217.1
30°	1349.5	1287.4	1236.2	1200.3	1183.5	1168.9	1164.5	1161.6	1165.9	1169.6
32.5°	1295.4	1232.5	1181.3	1146.2	1131.6	1117.7	1116.9	1115.5	1120.6	1125.0
35°	1236.9	1175.5	1125.7	1092.8	1078.9	1067.2	1069.4	1071.6	1077.4	1082.6
37.5°	1177.6	1117.7	1070.1	1040.1	1027.0	1017.5	1024.0	1027.0	1035.0	1040.1
40°	1117.7	1057.7	1013.8	986.7	973.6	969.2	978.7	985.3	994.8	999.2
42.5°	1056.2	1000.6	956.7	931.9	920.9	920.9	933.3	943.6	954.6	958.9
45°	994.8	940.7	899.0	876.3	868.2	874.1	888.7	901.9	915.8	920.2
47.5°	932.6	879.9	841.9	821.4	817.0	825.8	844.1	861.7	877.8	883.6
50°	870.4	822.9	784.9	765.8	765.8	776.8	800.2	822.2	839.7	845.6
52.5°	808.3	762.9	724.1	710.2	713.2	728.5	755.6	778.3	798.0	803.9
55°	745.4	700.7	667.1	655.4	660.5	679.5	707.3	733.7	752.7	759.3
57.5°	683.2	640.8	610.0	600.5	607.8	629.1	661.2	683.9	703.7	709.5
60°	620.3	577.1	553.0	545.7	555.2	577.1	610.0	631.2	649.5	655.4
62.5°	558.1	517.9	496.7	490.1	501.0	524.5	556.6	575.7	589.6	595.4
65°	495.2	459.4	439.6	435.2	446.9	469.6	500.3	516.4	526.7	532.5
67.5°	433.0	402.3	384.0	380.4	392.8	413.3	441.8	450.6	460.1	465.9
70°	371.6	343.8	328.4	326.2	337.2	357.0	381.1	385.5	390.6	395.7
72.5°	310.9	288.9	273.6	272.8	283.1	299.2	318.9	319.6	321.1	326.2
75°	252.4	232.6	220.9	223.1	228.9	242.1	257.5	253.1	253.8	257.5
77.5°	196.0	179.9	171.9	173.4	177.7	187.3	197.5	192.4	189.4	193.1
80°	141.2	127.3	124.3	125.1	128.0	134.6	140.4	136.1	130.2	133.1
82.5°	92.9	84.1	82.7	83.4	85.6	89.2	90.7	84.1	82.7	84.8
85°	51.2	47.5	47.5	49.7	50.5	51.2	51.2	47.5	48.3	49.7
87.5°	20.5	20.5	22.7	24.9	23.4	20.5	17.6	11.7	11.7	13.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)