

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: METALUX

Report Number: P232587

Luminaire Tested: **4SKB1-LD5-5-N-UNV-L850-CD1-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P232587  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1709-317-6)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 4SKB1-LD5-5-N-UNV-L850-CD1-U  
Description: METALUX SKYBAR 4' WAVESTREAM STRIP  
WITH NARROW LENS  
Light Source: (196) 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5559.0 lumens  
Efficiency: N/A  
Efficacy: 146.3 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.53 / 1.51  
Luminous Opening: Rectangular w/ Sides (W: 0.25' x L: 4' x H: 0.29')  
CIE Type: Direct

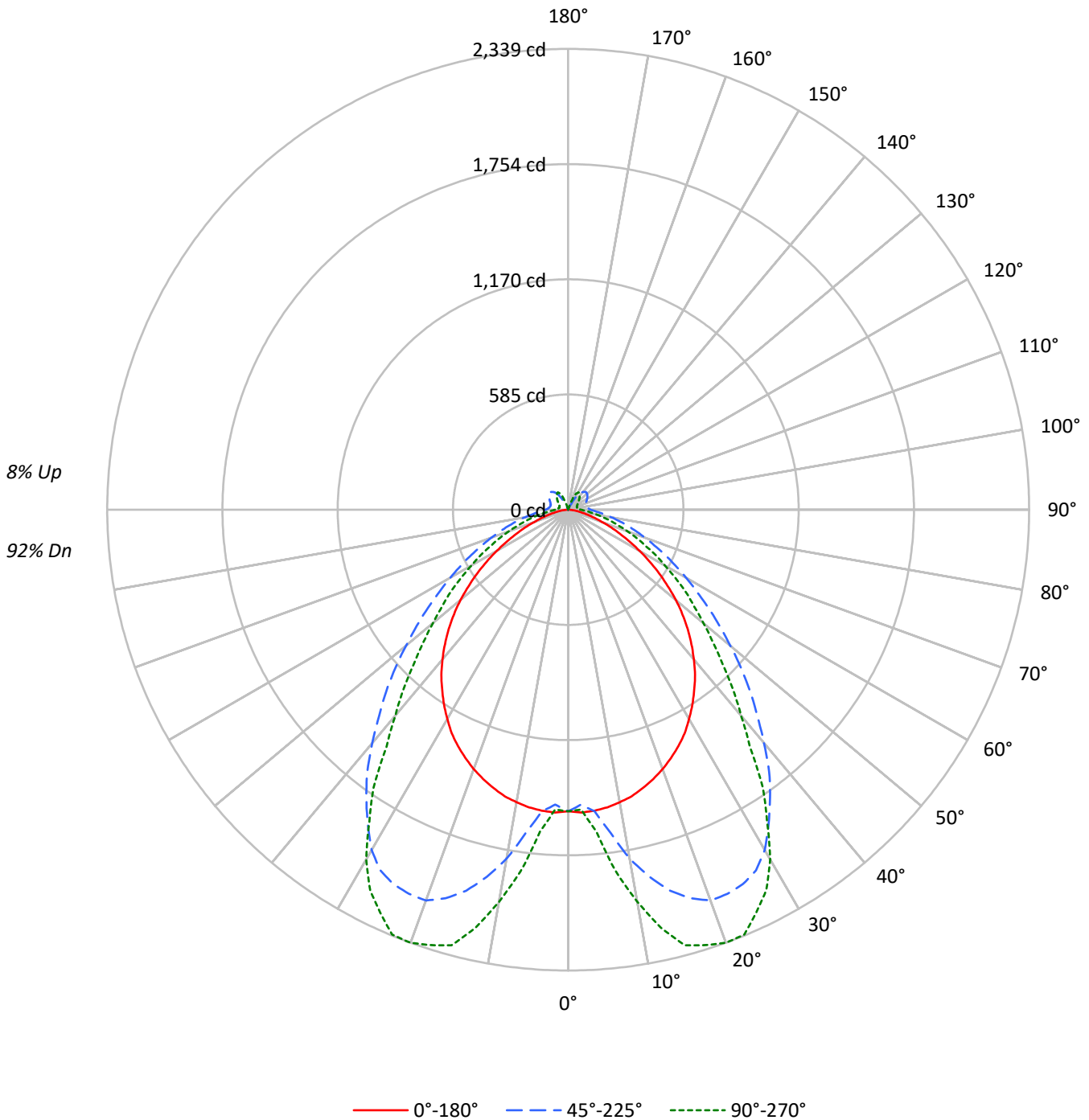
Input Watts (W): 38  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	117	117	117	117	113	113	113	113	107	107	107	100	100	100	95	95	95	92
1	107	103	98	95	104	99	96	92	94	91	88	88	86	84	84	82	80	77
2	98	90	84	78	95	88	82	77	83	78	74	78	74	71	74	71	68	65
3	90	80	72	66	87	78	70	65	74	68	63	70	65	61	66	62	58	56
4	83	71	63	56	80	69	62	56	66	59	54	63	57	52	60	55	51	48
5	76	64	55	49	74	62	54	48	59	52	47	56	51	46	54	49	45	42
6	70	58	49	43	68	56	48	42	54	47	41	51	45	40	49	44	40	37
7	65	52	44	38	63	51	43	38	49	42	37	47	41	36	45	39	35	33
8	61	48	40	34	59	47	39	34	45	38	33	43	37	32	41	36	32	30
9	57	44	36	31	55	43	36	30	41	35	30	40	34	29	38	33	29	27
10	53	41	33	28	52	40	33	28	38	32	27	37	31	27	35	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	16481	16481	16481
5°	16462	15417	16078
10°	16271	17025	18317
15°	15987	18065	19430
20°	15635	18330	18806
25°	15197	17681	17356
30°	14625	16459	15224
35°	13941	14539	12463
40°	13134	12518	9693
45°	12166	10605	7776
50°	10990	8795	6275
55°	9584	7228	5137
60°	7993	5912	4051
65°	6350	4788	3140
70°	4803	3820	2394
75°	3485	3013	1732
80°	2337	2315	1228
85°	1266	1742	841



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	156.7	2.8
10°-20°	545.4	9.8
20°-30°	897.9	16.2
30°-40°	1008.8	18.1
40°-50°	897.7	16.1
50°-60°	694.3	12.5
60°-70°	471.4	8.5
70°-80°	281.3	5.1
80°-90°	150.9	2.7
90°-100°	99.3	1.8
100°-110°	84.2	1.5
110°-120°	77.9	1.4
120°-130°	72.6	1.3
130°-140°	61.6	1.1
140°-150°	42.1	0.8
150°-160°	16.3	0.3
160°-170°	0.5	0.0
170°-180°	0.0	0.0
0°-30°	1600.1	28.8
0°-40°	2608.9	46.9
0°-60°	4200.9	75.6
0°-90°	5104.6	91.8
90°-120°	261.5	4.7
90°-150°	437.7	7.9
90°-180°	454.0	8.2
0°-180°	5559.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1531	1531	1531	1531	1531	
5°	1533	1512	1536	1618	1640	146
15°	1463	1643	2002	2252	2289	412
25°	1323	1699	2097	2262	2256	609
35°	1115	1530	1786	1769	1723	697
45°	858	1183	1307	1195	1107	660
55°	564	806	867	787	730	504
65°	288	501	541	488	432	291
75°	107	302	309	267	223	117
85°	19	190	155	122	98	23
90°	2	161	113	83	64	2
95°	1	156	99	70	53	1
105°	1	142	92	59	46	1
115°	1	131	102	65	50	1
125°	1	107	119	79	62	1
135°	1	41	127	101	80	1
145°	1	4	98	115	99	1
155°	1	2	22	76	84	0
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
0°	1531.1	1531.1	1531.1	1531.1	1531.1	1531.1	1531.1	1531.1	1531.1	1531.1	1531.1
2.5°	1538.6	1532.6	1522.0	1521.3	1514.5	1511.5	1512.3	1510.0	1507.8	1504.0	1498.0
5°	1533.3	1522.0	1504.8	1504.8	1508.5	1512.3	1521.3	1529.6	1531.8	1537.1	1536.3
7.5°	1523.5	1506.3	1489.8	1503.3	1516.8	1522.0	1532.6	1547.6	1570.9	1613.7	1655.7
10°	1507.8	1484.5	1479.2	1501.0	1519.0	1534.8	1558.8	1628.7	1693.3	1757.1	1798.4
12.5°	1489.8	1461.2	1468.7	1496.5	1538.6	1568.6	1630.2	1722.5	1773.6	1847.9	1908.8
15°	1462.7	1435.7	1449.2	1490.5	1578.4	1642.9	1677.5	1790.1	1872.0	1933.5	2001.9
17.5°	1433.4	1409.4	1428.2	1501.0	1620.4	1682.7	1738.3	1833.7	1912.5	2003.4	2067.9
20°	1401.2	1380.1	1404.2	1514.5	1640.7	1704.5	1766.1	1856.9	1961.3	2055.2	2110.7
22.5°	1363.6	1344.8	1381.6	1520.5	1648.2	1712.0	1772.1	1878.0	1986.1	2063.4	2110.7
25°	1323.1	1304.3	1354.6	1508.5	1640.7	1699.3	1763.8	1889.2	1977.8	2038.7	2097.2
27.5°	1279.5	1258.5	1334.3	1483.8	1610.7	1676.7	1749.6	1867.5	1937.3	2004.9	2064.2
30°	1226.2	1207.4	1299.0	1447.7	1568.6	1646.7	1709.0	1814.9	1881.7	1948.6	1994.4
32.5°	1172.9	1154.9	1256.2	1396.6	1520.5	1594.1	1654.2	1736.8	1812.6	1864.5	1893.0
35°	1115.1	1094.8	1206.7	1334.3	1466.5	1530.3	1580.6	1655.7	1719.5	1757.8	1785.6
37.5°	1057.2	1035.5	1143.6	1269.0	1395.1	1453.7	1495.8	1571.6	1620.4	1652.0	1675.2
40°	991.9	969.4	1078.3	1195.4	1320.8	1362.1	1405.7	1473.2	1509.3	1534.8	1546.1
42.5°	925.8	903.3	1007.7	1118.1	1230.0	1270.5	1315.6	1368.9	1404.2	1419.2	1419.2
45°	857.5	835.7	934.9	1041.5	1136.1	1182.6	1222.4	1265.2	1294.5	1306.5	1307.3
47.5°	786.2	768.2	862.8	959.6	1048.2	1088.8	1119.6	1160.9	1186.4	1189.4	1188.7
50°	713.3	697.6	782.4	877.8	956.6	992.7	1019.7	1058.0	1078.3	1077.5	1073.8
52.5°	636.8	627.0	705.8	792.9	864.3	896.6	920.6	954.4	970.9	970.9	967.9
55°	563.9	557.9	626.2	710.3	777.2	805.7	828.2	858.3	871.8	871.8	867.3
57.5°	490.3	489.6	553.4	628.5	692.3	717.8	741.9	768.2	780.2	780.2	772.7
60°	418.2	422.0	485.1	554.2	612.7	637.5	658.5	684.1	691.6	693.1	691.6
62.5°	351.4	361.2	421.2	484.3	542.9	563.9	582.7	607.5	613.5	615.7	612.0
65°	288.3	303.4	364.2	424.3	479.1	500.8	517.4	534.6	539.9	542.1	541.4
67.5°	236.5	252.3	313.1	372.4	422.7	440.0	456.5	471.6	472.3	476.1	473.1
70°	183.2	207.2	268.1	324.4	371.7	387.5	401.0	411.5	413.7	414.5	413.7
72.5°	141.2	169.7	227.5	283.1	325.9	340.9	351.4	359.7	359.7	360.4	358.2
75°	106.6	141.2	197.5	248.5	286.8	301.9	310.1	315.4	312.4	311.6	309.4
77.5°	77.3	117.1	170.5	218.5	254.6	265.8	273.3	274.1	269.6	268.8	264.3
80°	53.3	95.4	147.2	192.2	225.3	236.5	240.3	237.3	233.5	229.0	223.0
82.5°	35.3	77.3	127.7	170.5	201.2	210.2	213.3	208.7	203.5	196.0	186.2
85°	18.8	62.3	111.1	152.4	181.7	190.0	191.5	183.2	175.0	165.2	155.4
87.5°	8.3	51.1	99.1	140.4	165.9	172.0	172.7	163.7	153.2	141.9	129.9
90°	1.5	43.6	91.6	131.4	156.2	161.4	161.4	149.4	138.9	126.9	113.4
92.5°	0.8	41.3	89.4	128.4	153.2	158.4	157.7	144.9	132.2	118.6	105.1
95°	0.8	36.0	84.1	125.4	150.9	156.2	155.4	141.9	128.4	114.1	99.1
97.5°	0.8	30.0	78.8	120.1	147.2	152.4	152.4	139.7	126.1	111.1	95.4
100°	0.0	23.3	72.8	114.9	141.9	148.7	149.4	137.4	123.1	108.1	93.1
102.5°	0.0	15.8	67.6	110.4	138.2	144.9	146.4	136.7	121.6	106.6	91.6
105°	0.8	9.8	60.8	105.1	134.4	141.9	144.2	135.9	120.9	106.6	91.6
107.5°	0.8	6.8	54.1	99.9	131.4	139.7	142.7	135.9	121.6	107.4	93.1
110°	0.8	6.0	45.8	94.6	127.7	136.7	141.2	136.7	123.1	109.6	95.4



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	22.5°	25°	30°	35°	40°	45°
112.5°	0.8	4.5	34.5	87.9	123.1	133.7	139.7	137.4	125.4	111.9	98.4
115°	0.8	3.8	23.3	81.1	118.6	130.7	138.2	138.2	127.7	114.9	102.1
117.5°	0.8	3.8	15.8	72.1	113.4	126.9	135.2	138.9	130.7	117.9	106.6
120°	0.8	3.0	7.5	61.6	106.6	121.6	132.2	138.9	132.9	121.6	110.4
122.5°	0.8	3.0	6.0	47.3	99.1	115.6	127.7	138.2	135.2	124.6	114.9
125°	0.8	2.3	5.3	31.5	89.4	107.4	121.6	135.9	135.9	127.7	118.6
127.5°	0.8	2.3	4.5	22.5	76.6	98.4	113.4	132.2	135.9	129.9	122.4
130°	0.8	2.3	3.8	6.8	58.6	85.6	103.6	126.1	134.4	131.4	124.6
132.5°	0.8	1.5	3.8	5.3	37.5	66.8	90.1	116.4	129.9	131.4	126.9
135°	0.8	1.5	3.0	4.5	27.0	41.3	72.1	104.4	121.6	126.9	126.9
137.5°	0.8	1.5	3.0	3.8	12.0	30.8	45.1	90.1	111.1	120.9	123.1
140°	0.8	1.5	2.3	3.0	4.5	16.5	32.3	71.3	98.4	111.9	117.9
142.5°	0.8	1.5	2.3	3.0	3.8	3.8	19.5	41.3	82.6	99.9	109.6
145°	0.8	1.5	1.5	2.3	3.0	3.8	3.8	31.5	59.3	85.6	98.4
147.5°	0.8	0.8	1.5	2.3	3.0	3.0	3.0	14.3	35.3	65.3	84.1
150°	0.8	0.8	1.5	1.5	2.3	2.3	3.0	3.0	23.3	36.8	62.3
152.5°	0.8	0.8	1.5	1.5	2.3	2.3	2.3	3.0	3.0	24.8	34.5
155°	0.8	0.8	1.5	1.5	1.5	2.3	2.3	2.3	2.3	3.0	21.8
157.5°	0.8	0.8	1.5	1.5	1.5	1.5	1.5	2.3	2.3	3.0	3.0
160°	0.8	1.5	1.5	1.5	1.5	1.5	1.5	2.3	2.3	2.3	3.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	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):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
0°	1531.1	1531.1	1531.1	1531.1	1531.1	1531.1	1531.1	1531.1	1531.1	1531.1
2.5°	1505.5	1516.8	1516.8	1526.6	1531.8	1530.3	1531.8	1534.8	1525.8	1522.8
5°	1552.8	1575.4	1586.6	1612.2	1618.2	1629.4	1633.2	1645.9	1648.9	1639.9
7.5°	1701.5	1748.1	1778.1	1808.9	1822.4	1829.2	1841.2	1849.4	1862.2	1852.4
10°	1841.2	1897.5	1940.3	1974.1	1982.3	1989.1	2003.4	2023.6	2022.1	2020.6
12.5°	1962.1	2011.6	2064.2	2113.0	2137.8	2143.0	2164.1	2188.8	2193.3	2173.1
15°	2061.9	2131.0	2190.3	2242.1	2251.9	2265.4	2281.2	2289.5	2285.7	2288.7
17.5°	2145.3	2203.9	2245.9	2273.7	2279.7	2290.2	2304.5	2315.0	2316.5	2317.2
20°	2178.3	2217.4	2257.9	2296.2	2308.2	2318.7	2336.0	2345.0	2343.5	2339.0
22.5°	2172.3	2229.4	2266.9	2298.5	2310.5	2320.2	2335.3	2341.3	2339.0	2334.5
25°	2163.3	2212.1	2245.2	2261.7	2261.7	2269.2	2265.4	2260.9	2255.7	2256.4
27.5°	2120.5	2149.0	2171.6	2190.3	2192.6	2193.3	2191.1	2186.6	2183.6	2176.8
30°	2033.4	2067.9	2078.5	2077.0	2073.9	2073.2	2064.2	2057.4	2049.2	2049.9
32.5°	1931.3	1938.8	1943.3	1930.5	1923.0	1921.5	1913.3	1902.0	1890.7	1878.7
35°	1799.9	1794.6	1784.1	1775.1	1769.1	1760.1	1748.1	1736.8	1722.5	1723.3
37.5°	1673.0	1656.5	1641.4	1616.7	1612.2	1591.1	1567.9	1549.8	1526.6	1513.8
40°	1540.8	1524.3	1505.5	1478.5	1466.5	1447.0	1421.4	1391.4	1372.6	1365.1
42.5°	1414.7	1394.4	1372.6	1340.3	1325.3	1309.5	1282.5	1253.2	1239.7	1237.5
45°	1291.5	1268.2	1247.2	1211.2	1195.4	1176.6	1148.9	1130.8	1111.3	1106.8
47.5°	1172.9	1152.6	1120.3	1092.5	1077.5	1061.8	1033.2	1016.7	1002.4	997.2
50°	1058.0	1038.5	1013.7	982.9	968.6	953.6	933.4	917.6	901.1	895.8
52.5°	955.1	935.6	910.1	886.0	871.8	862.8	844.0	826.0	813.2	805.0
55°	856.0	838.0	814.7	792.2	786.9	774.9	753.1	737.4	729.1	729.9
57.5°	765.2	749.4	731.4	709.6	701.3	690.1	675.8	657.0	647.3	644.3
60°	682.6	667.5	652.5	636.0	625.5	617.2	597.7	582.7	569.9	568.4
62.5°	603.7	592.4	579.7	563.2	554.2	545.1	527.9	513.6	503.8	500.8
65°	535.4	525.6	510.6	497.1	488.1	479.1	462.5	448.3	440.0	431.8
67.5°	467.8	459.5	448.3	434.0	425.8	416.7	402.5	386.7	376.9	374.7
70°	407.7	398.7	389.7	374.7	367.2	361.9	346.2	330.4	322.9	319.9
72.5°	355.9	346.2	333.4	322.9	318.4	308.6	293.6	283.1	273.3	267.3
75°	301.9	295.8	286.8	274.8	266.6	259.8	247.8	237.3	229.0	223.0
77.5°	257.6	250.0	242.5	230.5	224.5	218.5	205.7	196.7	188.5	185.5
80°	216.3	209.5	199.0	190.0	184.7	179.5	169.7	159.9	153.9	150.9
82.5°	178.7	172.7	164.4	156.9	150.9	147.2	138.2	129.9	124.6	120.1
85°	147.9	140.4	132.9	126.1	121.6	118.6	111.9	105.9	99.1	97.6
87.5°	121.6	115.6	108.9	102.1	99.1	95.4	89.4	84.9	79.6	77.3
90°	104.4	96.9	90.9	85.6	82.6	80.3	75.8	69.8	66.1	63.8
92.5°	94.6	87.9	82.6	77.3	75.1	72.8	67.6	63.1	59.3	56.3
95°	88.6	81.8	76.6	72.1	69.8	68.3	63.8	59.3	55.6	53.3
97.5°	84.1	76.6	71.3	67.6	65.3	63.8	60.1	56.3	52.6	50.3
100°	80.3	72.8	67.6	63.8	62.3	60.8	57.1	53.3	50.3	48.1
102.5°	78.8	70.6	65.3	62.3	60.8	59.3	55.6	52.6	48.8	46.6
105°	78.8	69.8	64.6	60.8	59.3	57.8	54.8	51.8	48.1	45.8
107.5°	80.3	70.6	64.6	61.6	60.1	58.6	54.8	51.8	48.1	45.8
110°	82.6	72.8	66.1	62.3	60.8	59.3	55.6	52.6	48.8	46.6





TEST NUMBER: P232587

CATALOG NUMBER: 4SKB1-LD5-5-N-UNV-L850-CD1-U

**CANDELA DISTRIBUTION (continued):**

	50°	55°	60°	65°	67.5°	70°	75°	80°	85°	90°
112.5°	85.6	75.1	68.3	63.8	62.3	60.8	57.1	54.1	50.3	48.1
115°	89.4	78.1	71.3	66.1	64.6	63.1	59.3	55.6	52.6	50.3
117.5°	93.9	82.6	74.3	69.1	67.6	65.3	61.6	57.8	54.8	52.6
120°	98.4	87.9	78.8	72.8	70.6	68.3	64.6	60.8	57.1	54.8
122.5°	103.6	92.4	83.3	77.3	75.1	72.8	68.3	64.6	60.8	57.8
125°	108.9	98.4	88.6	81.8	78.8	76.6	72.1	67.6	64.6	61.6
127.5°	113.4	103.6	93.9	87.1	84.1	81.1	76.6	72.1	68.3	66.1
130°	117.1	108.9	99.9	92.4	89.4	87.1	81.1	76.6	72.8	70.6
132.5°	120.9	113.4	105.9	98.4	95.4	92.4	87.1	81.8	78.1	75.1
135°	123.1	117.1	111.1	104.4	101.4	97.6	92.4	87.1	82.6	79.6
137.5°	123.1	120.1	114.9	109.6	106.6	103.6	97.6	92.4	87.9	85.6
140°	119.4	120.1	117.9	114.1	111.1	108.9	103.6	97.6	93.1	90.9
142.5°	114.1	116.4	117.9	115.6	114.1	112.6	108.1	102.9	98.4	95.4
145°	105.9	110.4	113.4	115.6	114.9	114.1	110.4	106.6	102.1	99.1
147.5°	95.4	102.1	105.9	111.1	112.6	112.6	111.1	108.1	104.4	102.1
150°	80.3	90.1	96.9	102.1	104.4	107.4	107.4	105.1	102.9	100.6
152.5°	57.1	72.8	82.6	90.1	93.1	96.1	99.9	98.4	95.4	93.9
155°	32.3	39.8	60.1	72.1	75.8	79.6	85.6	87.1	86.4	84.1
157.5°	16.5	27.0	33.8	39.0	41.3	47.3	59.3	67.6	66.8	68.3
160°	3.8	4.5	12.8	24.0	27.0	28.5	31.5	33.8	33.8	32.3
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)