

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: INVUE

Report Number: P401221

Luminaire Tested: **ENT-SA1B-830-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401221
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-8)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1B-830-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 450mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR LEFT OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2048 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G1

Input Watts (W): 25.4
Input Voltage (V): NR
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

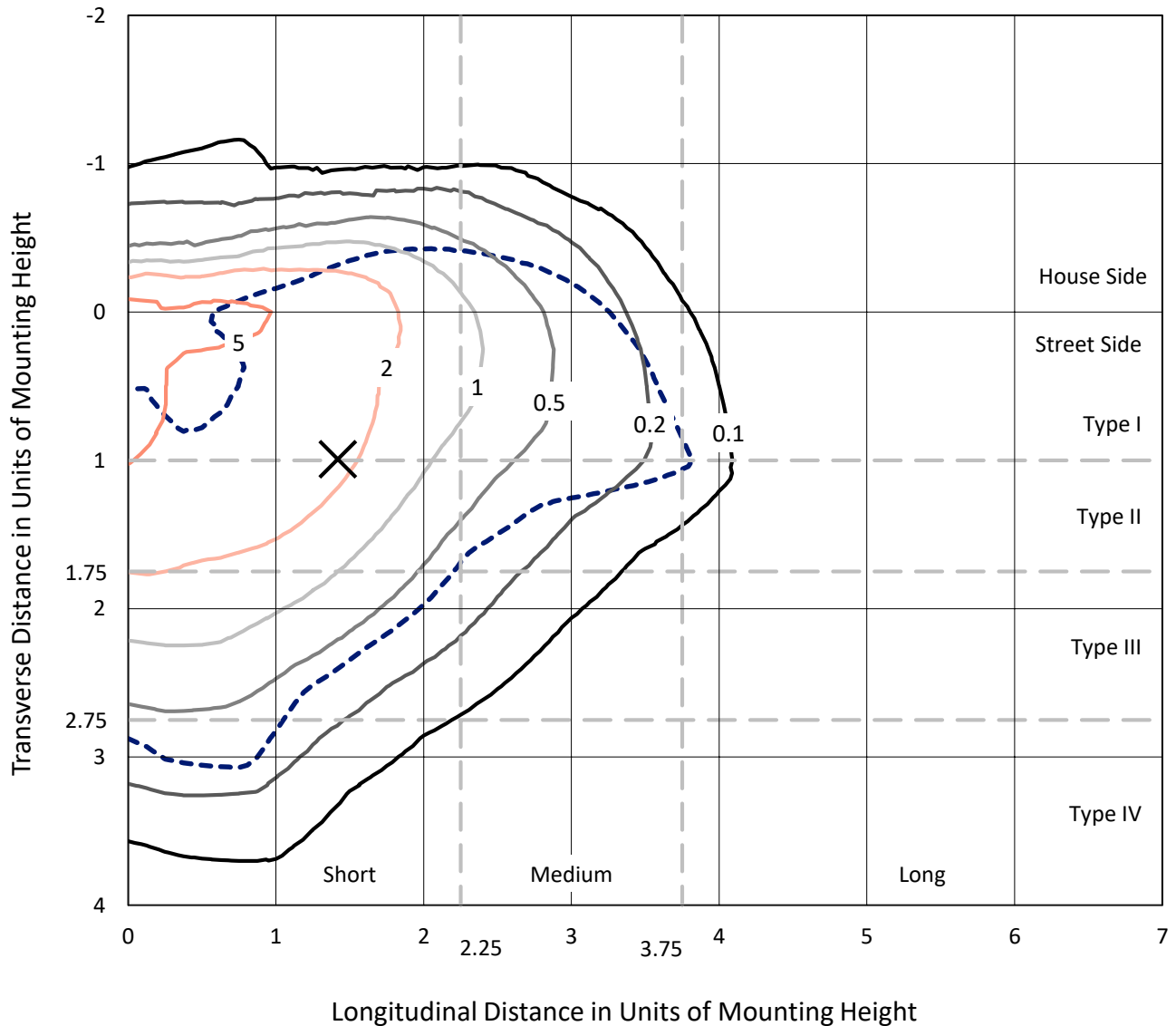


REPORT NUMBER: P401221

CATALOG NUMBER: ENT-SA1B-830-U-SLL-HSS

Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

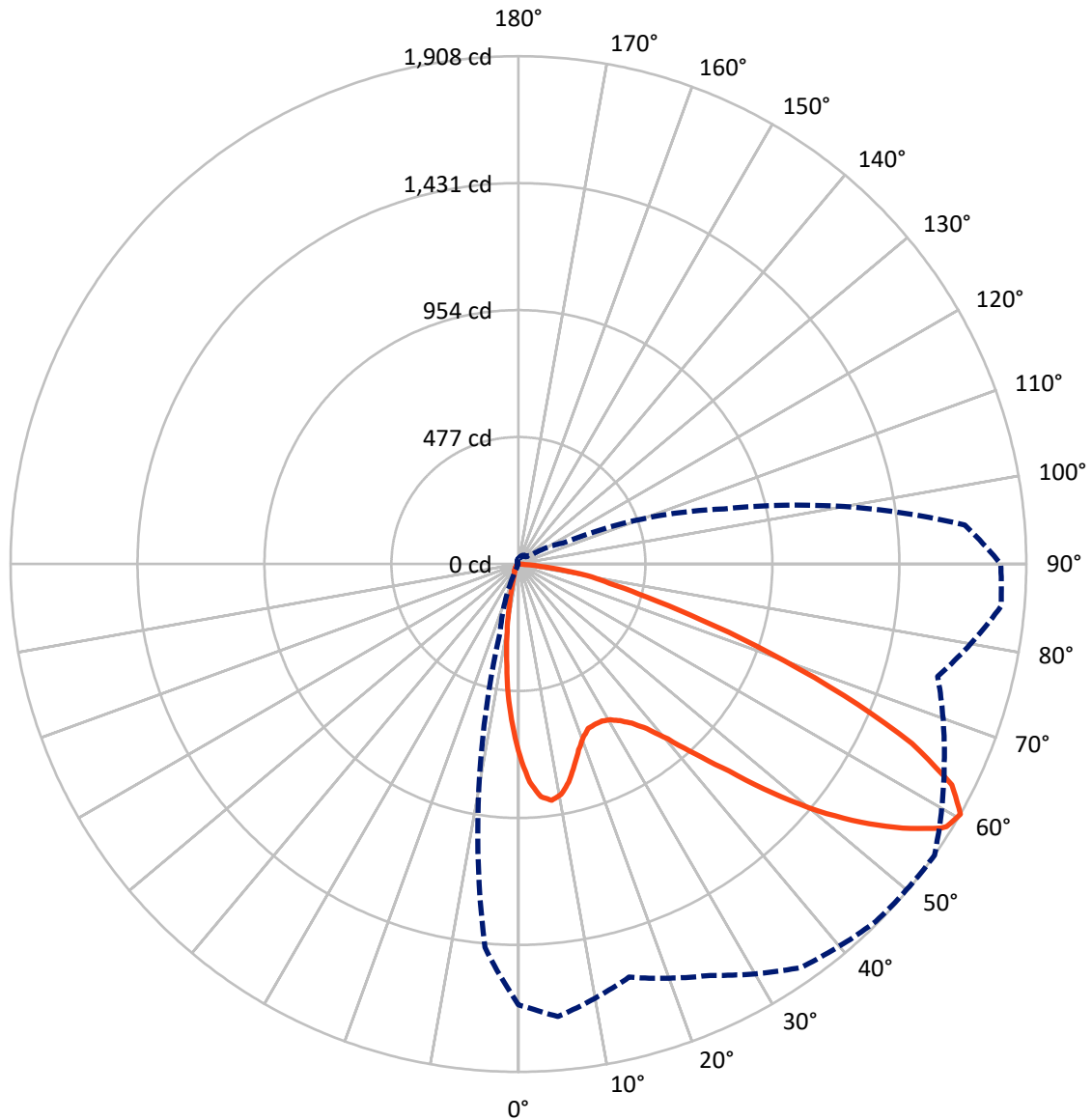


Based on 10 foot mounting height. Maximum calculated value = 8.5 fc
 Type III - Short - Semi-Cutoff

REPORT NUMBER: P401221

CATALOG NUMBER: ENT-SA1B-830-U-SLL-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 55-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

REPORT NUMBER: P401221

CATALOG NUMBER: ENT-SA1B-830-U-SLL-HSS

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	362.7	0.0	362.7
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	1685.3	0.0	1685.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	2048.0	0.0	2048.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.4	2.7
10°-20°	103.5	5.1
20°-30°	147.7	7.2
30°-40°	216.6	10.6
40°-50°	319.3	15.6
50°-60°	473.1	23.1
60°-70°	504.2	24.6
70°-80°	209.1	10.2
80°-90°	20.1	1.0
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°-90°	2048.0	100.0
0°-180°	2048.0	100.0



REPORT NUMBER: P401221

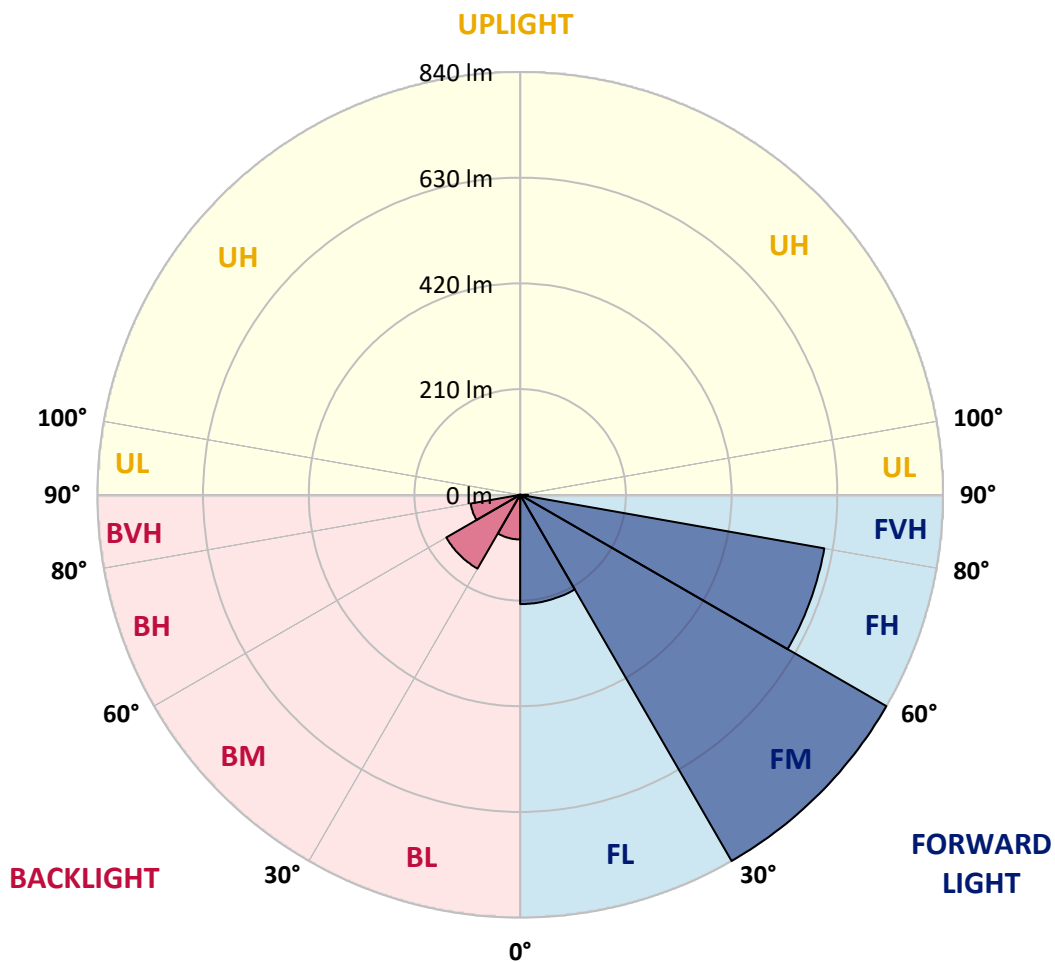
CATALOG NUMBER: ENT-SA1B-830-U-SLL-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	216.9	10.6			
FM (30°-60°)	839.7	41.0			
FH (60°-80°)	613.3	29.9			G0/660
FVH (80°-90°)	15.4	0.8			G1/100
BL (0°-30°)	88.7	4.3	B0/110		
BM (30°-60°)	169.3	8.3	B0/220		
BH (60°-80°)	100.0	4.9	B0/110		G0/110
BVH (80°-90°)	4.7	0.2			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type III Short





REPORT NUMBER: P401221

CATALOG NUMBER: ENT-SA1B-830-U-SLL-HSS

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3
2.5°	755.4	754.2	765.1	787.5	801.5	810.0	811.5	820.4	811.5	806.9	790.2
5°	733.3	732.9	753.8	803.0	843.3	873.5	888.2	878.1	862.6	832.1	794.9
7.5°	672.2	672.2	711.6	777.5	844.8	897.1	914.9	896.3	859.5	798.0	731.4
10°	622.2	626.9	664.8	743.4	818.1	875.4	895.2	880.8	832.8	753.1	674.9
12.5°	592.4	595.1	637.3	716.3	786.0	832.4	844.4	840.2	805.3	718.6	635.8
15°	595.1	599.0	647.4	712.0	757.3	775.9	780.2	785.6	771.3	704.7	623.0
17.5°	637.7	640.4	689.2	731.0	729.1	723.3	724.8	733.7	750.8	716.3	648.9
20°	705.8	712.8	762.0	762.8	714.4	687.3	680.3	695.0	741.1	746.9	704.3
22.5°	793.3	796.1	846.0	816.2	715.9	662.5	654.3	671.0	744.2	796.4	781.0
25°	894.8	904.5	931.6	885.5	738.4	659.0	653.6	667.5	755.4	849.1	859.9
27.5°	963.3	971.1	997.0	932.7	758.5	660.9	650.9	667.9	768.9	898.7	944.3
30°	1024.5	1029.9	1039.6	957.5	781.3	670.6	654.3	678.7	776.3	909.1	998.9
32.5°	1082.2	1088.8	1083.0	987.3	806.5	688.8	660.9	701.6	792.2	930.0	1046.6
35°	1156.5	1156.9	1137.2	1017.1	835.2	710.5	680.3	734.1	823.2	962.5	1097.7
37.5°	1244.8	1245.6	1195.6	1047.7	867.7	746.9	726.0	784.4	868.1	1000.1	1170.8
40°	1321.8	1324.9	1258.7	1083.0	907.6	817.7	815.8	864.2	925.8	1050.0	1249.4
42.5°	1388.8	1397.7	1316.8	1112.4	964.1	926.5	931.2	975.3	995.8	1091.9	1298.2
45°	1456.6	1456.2	1364.4	1141.8	1058.6	1066.7	1110.8	1108.9	1075.2	1114.3	1336.6
47.5°	1498.8	1496.9	1393.5	1189.8	1185.9	1263.8	1310.6	1285.1	1163.1	1138.3	1384.6
50°	1515.1	1514.3	1416.3	1251.0	1315.7	1442.3	1509.2	1458.1	1270.7	1178.6	1441.9
52.5°	1561.1	1557.3	1469.0	1320.7	1433.0	1614.2	1669.5	1612.6	1378.0	1251.0	1508.5
55°	1633.1	1634.3	1559.6	1402.4	1527.1	1735.4	1803.1	1752.4	1487.6	1350.5	1599.8
57.5°	1681.5	1685.0	1659.9	1493.4	1627.7	1820.2	1886.0	1871.7	1633.5	1469.4	1707.1
58°	1686.2	1688.9	1675.7	1510.8	1642.8	1829.8	1897.2	1887.1	1665.7	1507.3	1732.7
60°	1656.4	1664.5	1706.7	1606.8	1705.2	1850.4	1899.1	1908.0	1765.2	1630.4	1820.2
62.5°	1575.5	1578.2	1654.8	1714.5	1747.8	1799.6	1804.3	1827.5	1806.2	1774.9	1898.4
65°	1476.3	1476.3	1559.2	1719.5	1637.4	1628.9	1601.8	1625.0	1686.6	1865.5	1892.9
67.5°	1304.0	1305.2	1410.9	1531.7	1357.5	1328.0	1310.6	1319.1	1450.4	1790.0	1787.6
70°	1053.9	1053.1	1161.9	1240.2	1007.5	982.3	1003.2	1000.5	1178.2	1590.6	1560.7
72.5°	745.3	751.9	863.8	957.9	684.2	589.7	681.8	717.5	886.3	1340.8	1207.6
75°	419.7	428.6	520.0	665.6	431.7	398.8	446.0	496.8	640.8	1067.5	811.2
77.5°	210.6	214.1	266.4	320.2	261.7	303.9	301.2	349.6	439.5	720.2	463.8
80°	121.6	128.5	146.4	165.3	146.4	192.8	223.8	263.3	270.6	372.5	258.6
82.5°	48.8	54.6	68.5	77.8	60.8	57.3	39.1	123.1	163.0	180.0	99.1
85°	0.0	0.0	0.4	0.8	1.2	1.2	1.9	21.7	39.9	8.9	16.3
87.5°	0.0	0.0	0.4	0.4	0.8	1.2	1.5	2.7	3.5	4.3	14.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P401221

CATALOG NUMBER: ENT-SA1B-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3
2.5°	784.0	779.8	765.5	743.8	730.2	709.3	700.8	681.1	671.0	654.3	654.3
5°	776.3	758.9	722.9	676.0	642.7	607.9	596.7	573.4	556.8	537.0	528.9
7.5°	705.8	681.4	625.3	570.7	517.7	482.4	447.6	424.0	401.5	385.2	387.6
10°	641.2	606.3	544.8	475.5	420.5	383.7	352.3	324.8	301.6	278.8	275.3
12.5°	599.0	559.1	485.5	411.2	370.1	343.0	314.0	283.8	255.2	230.0	219.9
15°	581.2	537.8	455.7	385.6	348.1	313.2	279.5	242.4	209.5	179.3	171.1
17.5°	600.5	548.6	453.0	368.6	316.3	272.6	225.7	185.1	146.4	124.7	118.1
20°	653.2	585.8	461.9	351.6	281.1	224.6	167.3	121.2	99.5	86.3	82.1
22.5°	729.5	647.4	477.0	334.9	245.5	167.3	115.4	87.5	74.7	67.8	65.8
25°	812.3	726.7	504.9	321.0	209.9	124.3	85.6	71.6	63.9	58.9	56.9
27.5°	905.6	805.3	539.0	310.5	176.9	99.5	73.6	63.1	56.9	53.4	51.9
30°	964.1	861.9	564.9	291.9	154.5	90.6	70.1	59.6	53.0	50.3	49.2
32.5°	1017.9	906.4	589.7	270.6	137.5	80.1	68.1	62.7	55.0	49.6	47.2
35°	1077.1	952.1	601.7	257.9	126.2	69.7	56.1	48.8	44.5	43.8	42.6
37.5°	1165.4	1006.3	609.4	250.9	119.3	63.5	52.3	44.1	39.1	34.5	32.5
40°	1249.1	1062.4	613.3	244.3	115.8	59.6	49.9	41.8	36.4	32.1	30.2
42.5°	1314.5	1113.5	615.6	239.7	109.6	57.3	48.0	40.3	34.5	30.2	28.3
45°	1367.9	1172.8	613.7	238.1	104.5	58.9	47.2	39.1	32.9	28.7	26.7
47.5°	1420.2	1237.1	621.0	236.2	99.5	56.5	47.6	38.7	31.7	27.5	25.6
50°	1488.7	1314.9	647.8	230.8	96.0	53.0	51.5	39.1	31.4	26.7	25.2
52.5°	1577.4	1422.5	696.2	225.0	91.8	49.9	53.8	39.1	30.6	25.9	24.0
55°	1685.0	1543.3	749.6	216.4	84.4	46.1	51.5	39.1	29.8	25.6	23.2
57.5°	1772.9	1651.0	791.8	206.4	70.9	41.4	47.2	37.6	27.9	24.0	22.1
58°	1780.7	1663.3	797.6	203.7	69.3	40.7	46.1	37.2	27.1	23.6	21.7
60°	1812.0	1683.5	799.9	188.9	57.7	38.7	39.9	36.0	25.6	22.1	20.5
62.5°	1801.2	1616.9	750.8	163.0	51.5	35.2	33.3	36.8	23.6	20.1	18.6
65°	1747.4	1486.0	657.8	146.0	51.9	31.4	28.7	32.1	21.7	18.2	16.6
67.5°	1619.2	1287.4	534.3	136.7	54.2	27.9	24.8	24.0	19.4	16.3	15.1
70°	1381.1	1055.1	405.0	128.5	57.3	24.8	22.8	21.3	17.8	15.1	13.6
72.5°	1017.1	781.3	294.6	120.4	55.8	22.1	21.3	19.4	16.3	13.6	12.8
75°	634.6	453.8	201.7	98.3	49.9	19.4	19.7	18.2	14.7	12.8	11.6
77.5°	370.5	318.7	99.5	73.2	34.5	17.0	17.4	16.6	15.1	12.0	11.2
80°	221.9	198.2	42.6	31.4	19.0	15.1	14.7	15.5	14.3	11.2	10.5
82.5°	96.0	86.0	20.5	17.4	15.5	13.2	12.8	13.2	12.4	9.3	8.9
85°	5.4	14.3	9.7	12.8	11.6	9.7	9.7	10.1	8.9	7.4	7.4
87.5°	5.0	10.8	6.2	7.7	8.5	7.4	7.7	7.7	7.4	6.6	6.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P401221

CATALOG NUMBER: ENT-SA1B-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3
2.5°	645.4	641.2	628.4	623.8	603.6	608.7	610.2	608.3	609.0	610.6	616.4
5°	534.7	527.7	511.1	500.2	494.4	490.6	472.4	472.8	475.5	465.0	478.6
7.5°	379.8	387.6	389.1	379.1	372.9	359.7	343.0	333.8	317.9	326.8	328.7
10°	271.8	267.9	275.3	271.8	262.1	257.1	239.3	237.7	236.2	235.0	246.2
12.5°	207.1	195.5	187.0	188.9	181.6	169.2	166.1	166.5	168.0	168.0	171.1
15°	164.2	146.4	132.8	124.7	125.8	113.4	110.0	98.3	96.8	93.3	94.1
17.5°	115.0	107.6	99.5	90.2	86.3	75.1	61.6	55.4	50.7	51.5	53.8
20°	79.4	76.3	74.0	69.3	65.4	52.3	43.8	41.0	40.7	41.4	42.2
22.5°	63.9	60.8	58.5	56.9	51.9	42.2	37.6	35.6	35.6	35.6	36.0
25°	55.0	51.9	48.8	48.8	44.1	36.8	33.3	31.7	31.4	31.0	31.7
27.5°	51.1	46.8	43.8	41.8	38.3	32.5	29.4	27.9	27.5	27.5	27.9
30°	47.2	43.0	39.9	37.2	33.3	29.0	25.9	24.8	24.0	24.0	24.4
32.5°	44.9	40.7	36.8	33.3	29.0	25.6	22.8	21.3	20.5	20.9	21.3
35°	39.9	36.4	32.9	29.4	25.6	22.5	19.7	18.2	17.8	17.8	18.2
37.5°	31.4	28.7	27.9	25.9	22.5	19.4	16.6	15.1	14.7	14.7	15.1
40°	28.3	24.8	23.2	22.5	20.5	16.6	13.6	12.0	12.0	11.6	12.4
42.5°	25.9	22.5	19.7	19.0	17.8	14.3	10.8	9.7	9.3	9.3	9.7
45°	24.4	20.5	17.0	15.1	15.1	11.6	8.9	7.4	7.0	7.0	7.4
47.5°	23.6	19.4	15.1	12.4	12.0	9.7	7.0	5.4	5.0	5.0	5.0
50°	22.8	17.8	13.6	10.5	9.3	8.1	5.4	4.3	3.9	3.9	3.9
52.5°	21.7	17.0	12.4	9.3	7.4	6.2	4.3	3.1	2.7	2.3	2.7
55°	20.9	15.9	12.0	8.5	6.2	4.6	3.1	2.3	1.9	1.9	1.9
57.5°	19.7	14.7	10.8	8.1	5.8	3.5	2.3	1.5	1.2	1.2	1.5
58°	19.4	14.7	10.5	7.7	5.4	3.5	2.3	1.5	1.2	1.2	1.5
60°	18.2	13.6	10.1	7.0	5.0	3.1	1.9	1.2	0.8	0.8	1.2
62.5°	17.0	12.4	8.9	6.2	4.3	2.7	1.5	0.8	0.4	0.4	0.4
65°	15.1	11.2	7.7	5.8	3.5	1.9	1.2	0.4	0.0	0.0	0.0
67.5°	13.6	10.5	7.0	5.0	3.1	1.5	0.8	0.0	0.0	0.0	0.0
70°	12.4	9.7	6.2	4.3	2.7	1.2	0.4	0.0	0.0	0.0	0.0
72.5°	11.6	8.9	5.8	3.9	1.9	1.2	0.4	0.0	0.0	0.0	0.0
75°	11.2	8.5	5.8	3.5	1.9	1.2	0.8	0.4	0.0	0.0	0.4
77.5°	10.8	8.5	5.8	3.5	2.3	1.2	1.2	0.8	0.8	0.4	1.2
80°	10.1	7.7	5.0	3.1	1.9	1.5	1.2	0.8	0.0	0.0	0.0
82.5°	8.5	6.2	4.3	3.1	1.9	1.2	0.4	0.0	0.0	0.0	0.0
85°	7.0	5.0	3.5	1.9	1.2	0.4	0.0	0.0	0.0	0.0	0.0
87.5°	6.2	3.9	2.7	1.5	0.8	0.4	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P401221

CATALOG NUMBER: ENT-SA1B-830-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3	723.3
2.5°	621.4	639.2	646.6	671.4	682.2	704.7	724.0	740.7	748.8	755.4
5°	482.0	499.1	517.3	554.1	585.8	619.9	662.5	706.6	719.4	733.3
7.5°	336.5	361.6	392.2	425.1	470.4	521.9	583.1	637.7	665.2	672.2
10°	261.3	291.2	323.7	356.2	393.8	448.7	510.3	580.8	610.2	622.2
12.5°	196.3	236.2	274.9	313.2	345.8	393.4	460.4	544.4	576.9	592.4
15°	118.1	163.0	210.6	262.1	307.4	363.2	438.7	536.6	577.7	595.1
17.5°	58.9	80.5	124.3	201.7	268.7	338.0	438.3	564.5	615.2	637.7
20°	43.8	49.6	66.2	125.8	223.4	317.1	442.9	612.1	686.9	705.8
22.5°	37.6	41.8	47.6	73.6	167.3	297.7	459.2	675.2	768.2	793.3
25°	32.9	36.4	41.0	50.7	114.6	274.9	489.8	764.3	860.3	894.8
27.5°	29.0	32.1	36.0	42.6	76.7	231.9	507.2	839.0	934.7	963.3
30°	25.6	27.9	31.7	36.4	56.5	179.3	523.5	904.9	1002.0	1024.5
32.5°	22.5	24.4	27.5	31.0	43.0	135.9	524.2	961.4	1060.9	1082.2
35°	19.0	21.3	23.6	26.7	34.1	106.1	508.4	1017.5	1130.6	1156.5
37.5°	15.9	17.8	20.5	23.2	31.0	82.1	475.5	1083.3	1215.4	1244.8
40°	13.6	15.5	17.8	20.9	27.5	59.6	422.8	1143.0	1294.7	1321.8
42.5°	10.8	12.8	15.5	20.5	22.8	43.0	369.8	1200.3	1363.7	1388.8
45°	8.5	10.8	14.3	19.7	19.0	30.2	324.1	1251.0	1422.9	1456.6
47.5°	6.2	8.9	14.3	17.8	15.5	21.7	300.8	1299.8	1475.9	1498.8
50°	4.6	7.4	15.5	15.1	13.2	18.6	304.3	1354.0	1500.3	1515.1
52.5°	3.5	6.2	12.0	10.8	11.2	16.3	317.9	1425.6	1550.7	1561.1
55°	3.1	4.6	7.4	8.1	10.1	15.5	314.4	1493.4	1614.9	1633.1
57.5°	2.7	3.9	5.8	6.6	8.9	14.7	294.6	1523.2	1656.4	1681.5
58°	2.3	3.9	5.4	6.6	8.9	14.3	289.6	1515.1	1654.4	1686.2
60°	1.9	3.5	5.0	5.8	7.7	12.8	265.2	1446.1	1611.8	1656.4
62.5°	1.5	2.3	3.9	4.3	6.2	10.5	218.4	1334.6	1520.5	1575.5
65°	0.8	1.5	2.3	3.1	4.3	7.7	155.3	1202.6	1422.5	1476.3
67.5°	0.0	0.8	1.5	1.9	2.7	5.8	89.4	1020.6	1261.4	1304.0
70°	0.0	0.4	0.8	1.2	1.5	3.9	47.2	749.2	977.3	1053.9
72.5°	0.4	0.4	0.4	0.0	0.8	3.1	20.9	444.5	666.3	745.3
75°	0.4	0.4	0.0	0.0	0.0	1.5	8.9	234.2	382.2	419.7
77.5°	1.5	0.8	0.0	0.0	0.0	0.4	4.3	126.2	198.2	210.6
80°	0.4	0.0	0.0	0.0	0.0	0.0	1.5	42.2	118.9	121.6
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.8	51.1	48.8
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)