

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: P401566

Luminaire Tested: **ENT-SA1D-827-U-SLR**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401566  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-9)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1D-827-U-SLR  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3670 lumens  
Efficiency: N/A  
Efficacy: 85.2 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 43.1  
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

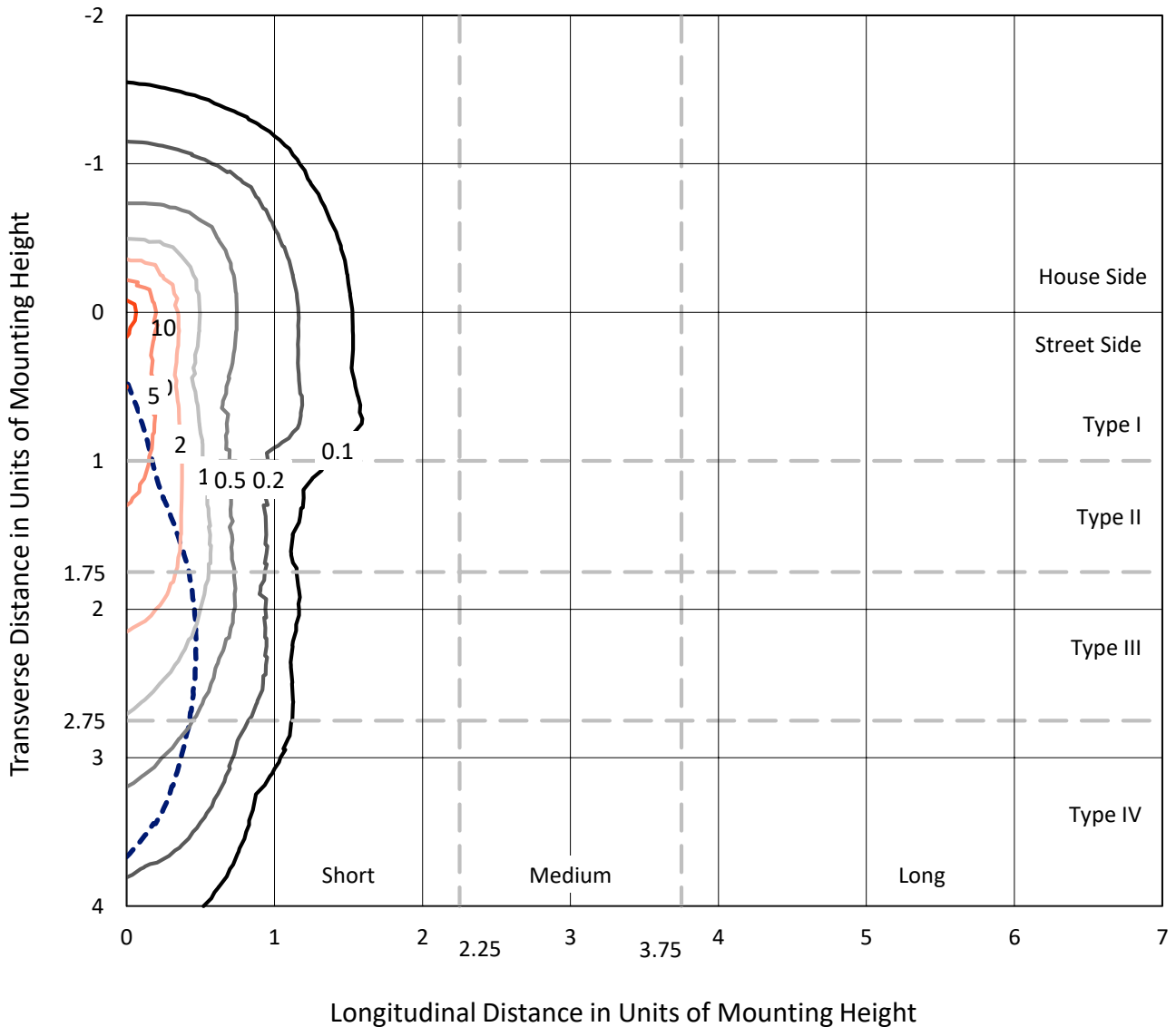


REPORT NUMBER: P401566

CATALOG NUMBER: ENT-SA1D-827-U-SLR

### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

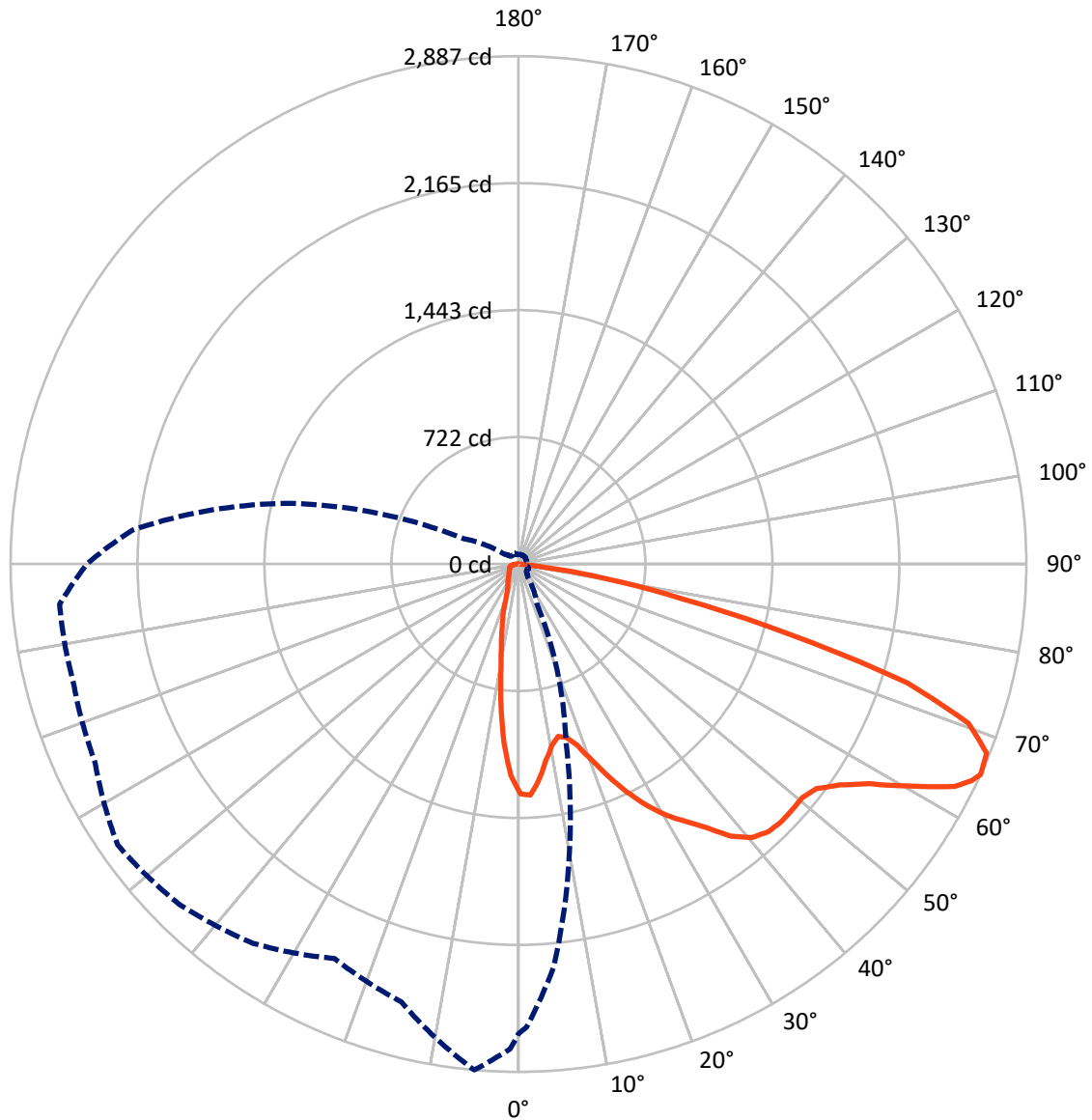


Based on 10 foot mounting height. Maximum calculated value = 13.1 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P401566

CATALOG NUMBER: ENT-SA1D-827-U-SLR

### Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P401566

CATALOG NUMBER: ENT-SA1D-827-U-SLR

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	753.0	0.0	753.0
	% Fixture	20.5	0.0	20.5
<b>Street Side</b>	Lumens	2917.0	0.0	2917.0
	% Fixture	79.5	0.0	79.5
<b>Total</b>	Lumens	3670.0	0.0	3670.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.6	2.7
10°-20°	198.4	5.4
20°-30°	275.2	7.5
30°-40°	384.6	10.5
40°-50°	523.4	14.3
50°-60°	715.7	19.5
60°-70°	875.1	23.8
70°-80°	528.3	14.4
80°-90°	69.7	1.9
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°	3670.0	100.0
0°-180°	3670.0	100.0



REPORT NUMBER: P401566

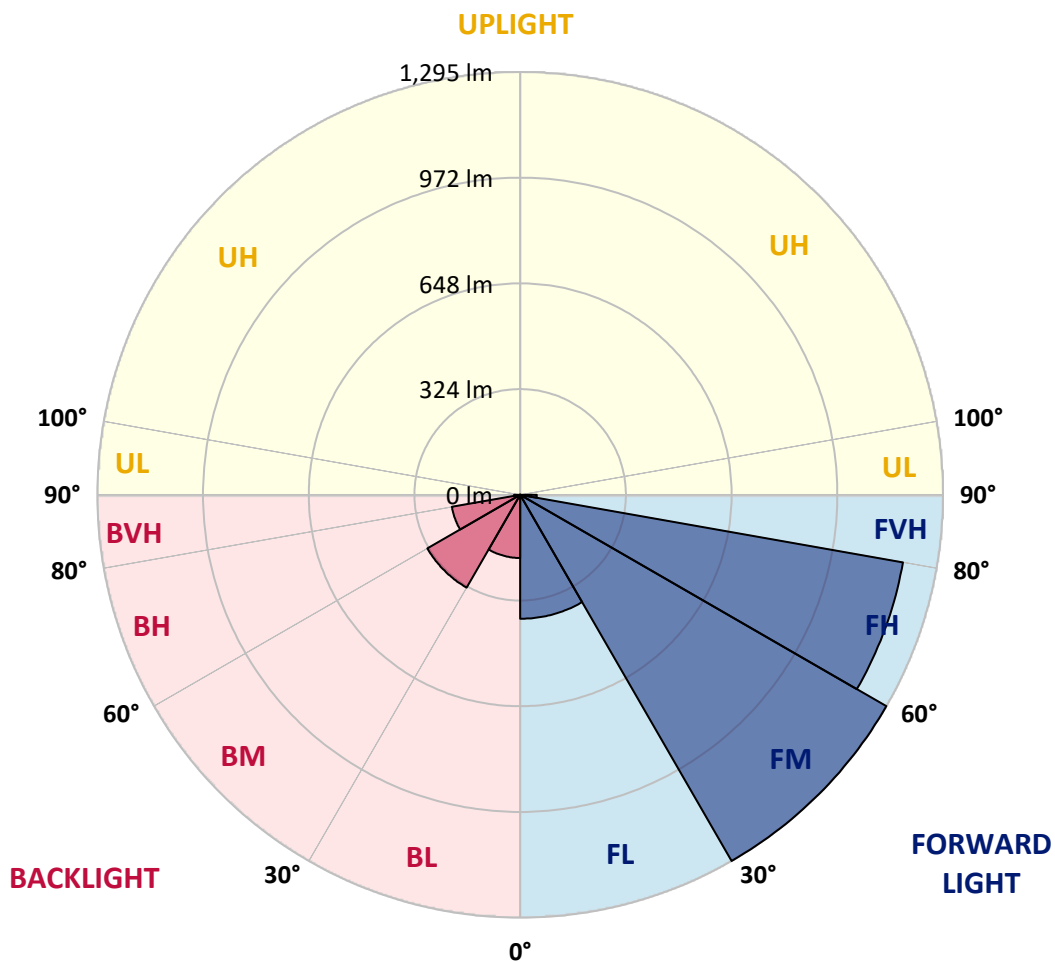
CATALOG NUMBER: ENT-SA1D-827-U-SLR

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	379.7	10.3			
FM	(30°-60°)	1295.5	35.3			
FH	(60°-80°)	1190.9	32.4			G1/1800
FVH	(80°-90°)	50.9	1.4			G1/100
BL	(0°-30°)	193.5	5.3	B1/500		
BM	(30°-60°)	328.3	8.9	B1/1000		
BH	(60°-80°)	212.5	5.8	B1/500		G1/500
BVH	(80°-90°)	18.8	0.5			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type IV Short





REPORT NUMBER: P401566

CATALOG NUMBER: ENT-SA1D-827-U-SLR

**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0
2.5°	1302.9	1299.2	1290.0	1265.5	1239.1	1207.8	1202.3	1168.5	1172.2	1162.4	1164.8
5°	1190.0	1185.1	1159.9	1110.8	1043.9	1005.3	975.2	957.4	942.7	935.3	944.5
7.5°	1080.1	1073.4	1043.3	956.8	882.5	821.1	772.0	742.0	712.5	689.2	678.2
10°	991.1	988.7	948.8	851.2	757.9	683.1	651.1	619.2	594.1	560.9	533.9
12.5°	946.3	939.0	891.7	778.2	687.4	641.3	611.3	570.8	536.4	495.9	460.9
15°	948.2	939.6	880.7	761.6	662.8	607.0	560.9	512.4	462.1	421.0	385.4
17.5°	1001.0	994.8	923.0	777.0	641.9	564.6	492.8	430.2	375.0	323.4	291.5
20°	1089.9	1080.7	981.3	795.4	615.6	516.1	418.6	332.6	273.1	227.7	202.5
22.5°	1205.9	1188.8	1064.2	818.1	589.2	460.9	338.2	242.4	189.6	166.9	160.2
25°	1329.9	1316.4	1164.2	846.9	560.9	400.8	250.4	176.1	157.7	148.5	143.6
27.5°	1444.1	1422.0	1271.6	878.8	523.5	340.6	190.3	151.6	139.3	135.0	131.9
30°	1525.7	1506.7	1345.9	915.7	491.0	278.0	162.6	137.5	127.7	120.9	119.7
32.5°	1603.6	1576.6	1399.9	932.8	464.0	244.3	150.4	127.7	118.4	111.7	109.2
35°	1695.7	1668.7	1461.9	935.3	443.7	230.1	138.7	120.3	110.5	104.3	101.3
37.5°	1804.3	1767.5	1531.8	937.1	423.5	224.6	128.9	114.2	104.3	97.6	95.1
40°	1907.4	1879.2	1603.6	934.1	410.0	216.6	122.7	107.4	98.2	92.1	89.0
42.5°	1985.4	1955.3	1665.0	924.9	402.0	203.1	125.2	102.5	93.9	87.1	83.5
45°	2025.2	1998.2	1720.8	916.3	397.7	191.5	122.7	100.6	90.8	82.9	79.2
47.5°	2055.3	2028.9	1777.9	912.6	390.3	182.9	112.9	107.4	87.8	78.6	74.9
50°	2103.8	2081.1	1855.2	933.5	378.7	177.4	103.7	114.8	86.5	74.9	70.6
52.5°	2190.9	2176.2	1982.9	981.9	366.4	168.2	94.5	109.9	87.8	72.4	67.5
55°	2353.6	2344.4	2158.4	1045.8	354.7	156.5	84.7	99.4	87.1	68.1	64.4
57.5°	2529.1	2526.6	2371.4	1101.6	337.5	136.9	78.6	84.1	82.9	64.4	60.1
60°	2646.9	2639.0	2469.6	1132.9	315.4	112.9	73.6	71.2	84.7	60.8	55.8
62.5°	2687.4	2661.0	2440.1	1121.2	282.3	97.6	68.1	65.1	78.6	57.1	51.6
64°	2685.0	2646.3	2363.4	1077.1	260.8	94.5	65.1	60.8	69.3	54.6	49.7
65°	2670.9	2634.0	2299.6	1042.7	249.2	94.5	63.2	58.9	63.2	53.4	48.5
67.5°	2580.7	2532.2	2081.7	883.1	219.1	95.7	58.9	54.0	52.8	49.1	45.4
70°	2375.1	2311.8	1782.8	694.7	203.1	96.4	54.0	49.1	47.3	44.8	41.7
72.5°	1907.4	1822.7	1418.9	496.5	186.6	94.5	49.1	44.8	43.0	40.5	37.4
75°	1279.0	1186.3	1045.8	327.1	152.8	84.7	42.3	38.7	38.1	35.6	33.1
77.5°	721.1	682.4	617.4	179.8	105.6	58.3	33.8	31.3	31.9	30.7	28.2
80°	376.8	359.0	330.2	87.1	50.9	28.2	21.5	21.5	24.5	24.5	23.3
82.5°	133.2	133.8	129.5	19.6	10.4	8.6	7.4	10.4	14.1	17.2	17.2
85°	0.6	0.6	0.0	0.0	0.0	0.0	0.0	0.0	1.2	2.5	4.3
87.5°	0.0	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	0.0



REPORT NUMBER: P401566

CATALOG NUMBER: ENT-SA1D-827-U-SLR

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0
2.5°	1144.0	1147.6	1157.5	1155.6	1165.4	1161.1	1174.0	1180.8	1184.5	1203.5	1212.7
5°	937.1	938.4	973.3	980.7	999.1	989.3	1012.0	1003.4	1021.8	1024.3	1055.0
7.5°	688.6	691.0	708.2	748.7	788.6	805.2	811.9	822.4	813.8	810.7	815.0
10°	523.5	525.3	527.2	556.0	591.0	626.0	626.0	626.6	611.3	595.9	592.8
12.5°	447.4	435.7	417.3	417.9	442.5	459.1	471.9	458.4	456.0	463.4	471.3
15°	368.2	356.6	344.3	329.6	330.2	341.8	348.6	348.0	360.2	365.8	382.3
17.5°	286.0	269.4	270.0	261.4	249.8	257.1	259.0	270.0	286.0	293.4	296.4
20°	192.1	192.1	197.0	207.4	201.9	206.8	207.4	216.0	223.4	219.1	223.4
22.5°	159.0	158.3	160.2	166.9	172.5	176.7	178.0	177.4	170.0	166.9	173.1
25°	144.2	143.6	144.2	147.9	154.0	159.6	157.1	153.4	144.8	144.2	145.4
27.5°	131.9	132.6	133.8	136.2	139.9	146.7	144.2	136.9	132.6	131.3	131.3
30°	121.5	121.5	124.0	126.4	130.7	136.9	132.6	126.4	122.1	120.9	120.3
32.5°	111.1	112.9	114.8	117.2	120.9	127.0	123.4	117.8	113.5	111.1	109.2
35°	100.6	101.9	105.6	109.2	112.3	117.2	114.8	109.9	105.6	100.0	97.6
37.5°	94.5	94.5	96.4	101.9	104.3	108.0	106.8	102.5	95.7	91.4	90.8
40°	89.0	89.0	89.6	92.7	97.0	101.3	98.8	92.1	87.8	85.9	85.3
42.5°	83.5	83.5	84.1	84.1	89.6	97.0	90.8	84.1	82.2	81.0	80.4
45°	78.6	78.6	78.6	77.9	81.0	90.2	83.5	77.9	76.7	76.7	76.1
47.5°	74.9	74.3	73.6	72.4	74.3	81.6	76.1	73.0	72.4	73.0	72.4
50°	70.0	69.3	68.7	68.1	69.3	72.4	71.2	68.1	68.7	68.7	69.3
52.5°	65.7	65.1	64.4	63.8	65.1	67.5	67.5	65.1	65.1	65.7	66.3
55°	63.2	62.0	61.4	61.4	62.0	65.1	64.4	62.6	62.6	63.8	64.4
57.5°	59.5	58.3	58.3	57.7	58.9	62.6	62.0	60.1	60.1	60.8	62.0
60°	55.8	55.2	54.6	55.8	56.5	60.1	59.5	58.3	57.7	59.5	59.5
62.5°	51.6	51.6	51.6	52.8	53.4	57.7	57.1	56.5	56.5	57.1	56.5
64°	49.1	49.1	49.7	50.3	51.6	55.2	55.2	55.2	55.2	55.2	54.6
65°	47.9	47.9	49.1	49.7	50.3	54.6	54.0	54.6	55.2	54.6	53.4
67.5°	44.8	44.8	46.6	46.6	47.3	52.2	51.6	52.8	54.0	52.8	51.6
70°	41.1	41.7	43.6	43.0	44.2	49.7	47.9	50.3	52.8	50.9	49.7
72.5°	37.4	38.1	40.5	39.3	39.9	46.6	44.2	46.6	50.3	49.1	47.9
75°	33.8	34.4	36.2	35.6	36.8	43.0	40.5	43.0	46.6	46.6	46.0
77.5°	28.8	30.1	31.3	30.7	33.1	38.7	36.2	38.1	41.1	43.6	42.3
80°	23.3	25.2	25.8	26.4	28.8	33.1	31.3	31.9	35.0	36.8	37.4
82.5°	16.0	19.0	20.3	20.9	24.5	25.8	26.4	25.8	27.6	30.1	28.2
85°	4.9	6.1	11.7	14.7	18.4	18.4	21.5	20.3	21.5	19.0	16.0
87.5°	0.0	0.0	0.0	4.3	11.0	11.0	15.3	14.1	14.7	11.0	9.8
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: P401566

CATALOG NUMBER: ENT-SA1D-827-U-SLR

**CANDELA DISTRIBUTION (continued):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0
2.5°	1214.5	1225.0	1248.3	1275.3	1290.0	1321.9	1341.6	1362.4	1383.3	1387.6	1394.4
5°	1061.1	1073.4	1099.8	1136.0	1172.2	1214.5	1263.6	1315.8	1373.5	1398.0	1422.0
7.5°	826.7	829.1	866.6	932.2	964.1	1024.3	1094.2	1174.6	1263.6	1309.7	1358.8
10°	610.6	635.8	664.0	718.7	799.1	868.4	954.9	1048.8	1141.5	1208.4	1259.3
12.5°	479.9	511.8	558.5	618.6	679.4	745.0	845.1	945.7	1059.9	1120.0	1182.6
15°	395.2	435.7	496.5	559.7	616.2	674.5	763.5	886.8	1032.9	1094.2	1150.1
17.5°	313.0	357.8	422.8	489.1	556.6	627.8	730.9	883.7	1061.7	1132.9	1190.6
20°	240.0	274.9	329.6	396.5	475.6	573.2	705.2	907.1	1147.0	1236.0	1274.1
22.5°	178.0	198.2	241.2	311.2	404.4	524.7	679.4	940.2	1252.6	1356.9	1385.8
25°	147.3	152.8	172.5	233.2	329.6	470.1	659.7	983.2	1358.1	1475.4	1496.2
27.5°	132.6	135.6	144.8	167.5	257.8	425.3	634.0	1032.9	1469.2	1592.6	1590.7
30°	119.7	120.3	125.8	141.8	209.3	385.4	603.9	1088.1	1568.0	1676.7	1671.1
32.5°	108.0	108.0	115.4	127.7	178.6	349.2	567.7	1128.0	1653.9	1745.4	1727.6
35°	97.6	99.4	106.2	118.4	158.3	308.7	533.9	1142.7	1727.6	1828.2	1777.9
37.5°	90.2	92.7	99.4	111.1	141.2	278.6	506.3	1159.9	1818.4	1928.3	1834.4
40°	85.3	87.1	93.3	103.1	127.7	253.5	476.2	1171.6	1908.6	2035.1	1893.9
42.5°	80.4	82.2	88.4	97.6	121.5	224.0	447.4	1178.3	2002.5	2127.7	1943.6
45°	76.1	78.6	84.7	93.3	122.1	197.6	423.5	1175.9	2059.0	2194.6	1982.3
47.5°	73.0	75.5	82.2	93.3	118.4	182.3	403.2	1167.3	2100.7	2238.2	2000.1
50°	70.0	72.4	80.4	103.1	112.3	178.0	387.9	1166.0	2144.3	2246.8	2000.1
52.5°	66.9	71.2	81.0	103.7	103.1	176.1	375.6	1198.6	2204.4	2261.5	2017.9
55°	65.1	68.7	83.5	95.7	90.2	170.0	368.2	1243.4	2305.7	2342.5	2107.5
57.5°	62.6	65.7	82.2	89.6	80.4	155.9	362.1	1286.3	2438.9	2492.9	2286.1
60°	59.5	63.2	79.8	76.7	73.0	132.6	358.4	1321.9	2488.6	2589.9	2478.2
62.5°	56.5	60.8	87.1	66.9	67.5	110.5	351.7	1356.3	2383.7	2566.5	2601.5
64°	54.6	58.9	81.0	62.6	64.4	100.6	344.9	1358.1	2291.0	2511.3	2624.8
65°	53.4	57.1	75.5	60.1	62.0	98.2	338.8	1332.4	2203.8	2452.4	2618.1
67.5°	51.6	54.0	58.3	55.8	57.7	93.9	297.0	1218.8	2018.5	2300.8	2513.1
70°	49.1	50.9	51.6	50.9	54.0	90.8	251.0	1057.4	1816.0	2141.8	2349.9
72.5°	46.6	46.6	46.6	46.0	49.7	86.5	225.8	854.3	1569.3	1933.2	2146.8
75°	44.8	43.0	42.3	41.1	45.4	84.1	203.8	641.3	1212.7	1610.4	1798.8
77.5°	41.1	39.3	37.4	36.2	40.5	74.9	170.0	452.9	894.2	1171.6	1388.2
80°	35.6	34.4	31.9	30.1	33.8	58.9	128.9	279.9	654.2	791.1	910.7
82.5°	28.8	28.2	25.8	23.3	24.5	42.3	87.8	142.4	436.3	429.6	508.8
85°	17.8	22.1	19.0	15.3	16.6	24.5	35.6	45.4	133.8	80.4	124.6
87.5°	10.4	14.1	11.7	8.0	6.1	11.0	9.8	9.2	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: P401566

CATALOG NUMBER: ENT-SA1D-827-U-SLR

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0	1306.0
2.5°	1410.3	1418.3	1422.6	1406.6	1389.4	1374.1	1344.6	1315.2	1299.8	1302.9
5°	1468.0	1481.5	1485.2	1461.9	1413.4	1363.7	1291.9	1229.9	1192.4	1190.0
7.5°	1445.9	1490.1	1497.5	1472.3	1402.9	1310.3	1212.7	1126.2	1088.7	1080.1
10°	1367.3	1434.9	1456.9	1448.4	1380.8	1274.7	1156.2	1046.4	1008.9	991.1
12.5°	1287.0	1357.5	1371.0	1379.6	1338.5	1248.9	1118.8	1005.9	961.1	946.3
15°	1234.2	1282.7	1286.3	1294.3	1285.7	1236.6	1136.0	1022.4	968.4	948.2
17.5°	1226.8	1209.6	1198.0	1214.5	1225.0	1237.2	1180.8	1084.4	1026.7	1001.0
20°	1228.0	1174.6	1141.5	1140.3	1185.1	1253.2	1271.6	1188.8	1113.9	1089.9
22.5°	1272.8	1156.2	1101.0	1094.2	1148.9	1280.2	1364.3	1312.7	1237.9	1205.9
25°	1339.7	1145.2	1072.2	1074.0	1128.6	1298.0	1443.4	1436.7	1371.0	1329.9
27.5°	1404.2	1163.6	1068.5	1073.4	1135.4	1309.7	1509.1	1553.3	1479.7	1444.1
30°	1455.7	1204.7	1079.5	1083.8	1156.2	1325.6	1541.6	1657.0	1568.0	1525.7
32.5°	1500.5	1243.4	1096.1	1099.2	1189.4	1348.3	1572.3	1744.2	1653.9	1603.6
35°	1541.0	1276.5	1121.2	1131.7	1231.7	1380.8	1603.6	1838.7	1758.9	1695.7
37.5°	1576.6	1317.0	1171.0	1188.1	1293.7	1428.1	1644.1	1963.3	1876.1	1804.3
40°	1596.9	1353.2	1244.6	1270.4	1374.1	1489.5	1695.7	2044.3	1988.4	1907.4
42.5°	1612.2	1402.9	1363.1	1409.7	1498.7	1547.2	1720.2	2080.5	2054.7	1985.4
45°	1620.2	1501.1	1541.0	1584.6	1639.2	1610.4	1706.7	2092.8	2084.8	2025.2
47.5°	1656.4	1649.0	1747.2	1807.4	1804.3	1705.5	1681.0	2091.5	2104.4	2055.3
50°	1730.0	1821.5	1959.0	2017.9	1995.2	1794.5	1676.0	2089.7	2143.7	2103.8
52.5°	1817.8	1993.9	2187.9	2212.4	2164.6	1884.7	1712.9	2121.6	2217.3	2190.9
55°	1933.2	2156.0	2367.7	2375.7	2308.2	1972.5	1791.4	2215.5	2354.8	2353.6
57.5°	2094.0	2301.4	2518.7	2508.8	2413.7	2094.0	1917.8	2356.0	2507.6	2529.1
60°	2268.9	2454.8	2640.8	2635.3	2534.0	2233.9	2091.5	2564.1	2641.4	2646.9
62.5°	2436.4	2597.2	2758.6	2732.2	2618.1	2378.7	2332.1	2785.0	2728.6	2687.4
64°	2545.7	2645.1	2788.7	2747.0	2638.3	2448.1	2470.8	2856.8	2753.1	2685.0
65°	2618.1	2656.8	2781.9	2731.6	2631.6	2473.9	2575.7	2886.9	2757.4	2670.9
67.5°	2748.2	2589.9	2599.1	2559.2	2469.6	2449.9	2747.6	2870.3	2710.1	2580.7
70°	2712.0	2320.4	2194.0	2168.9	2061.5	2171.9	2726.1	2714.4	2532.8	2375.1
72.5°	2402.7	1863.2	1681.6	1658.9	1509.7	1646.0	2352.4	2311.8	2038.1	1907.4
75°	1979.8	1412.1	1201.0	1220.1	1106.5	1232.3	1871.2	1584.0	1356.9	1279.0
77.5°	1536.7	997.9	829.7	807.0	784.3	797.8	1286.3	951.3	792.9	721.1
80°	979.5	627.2	622.3	568.9	550.5	464.0	661.0	506.3	398.3	376.8
82.5°	520.4	361.5	410.6	328.9	264.5	190.3	224.0	150.4	127.0	133.2
85°	142.4	74.9	20.9	0.0	0.0	0.0	0.0	0.6	0.6	0.6
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	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)