

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: P401799

Luminaire Tested: **ENT-SA1F-727-U-SLR-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401799  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-10)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1F-727-U-SLR-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 2700K, 1200mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT  
ELIMINATOR RIGHT OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4896 lumens  
Efficiency: N/A  
Efficacy: 74.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

Input Watts (W): 66.1  
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

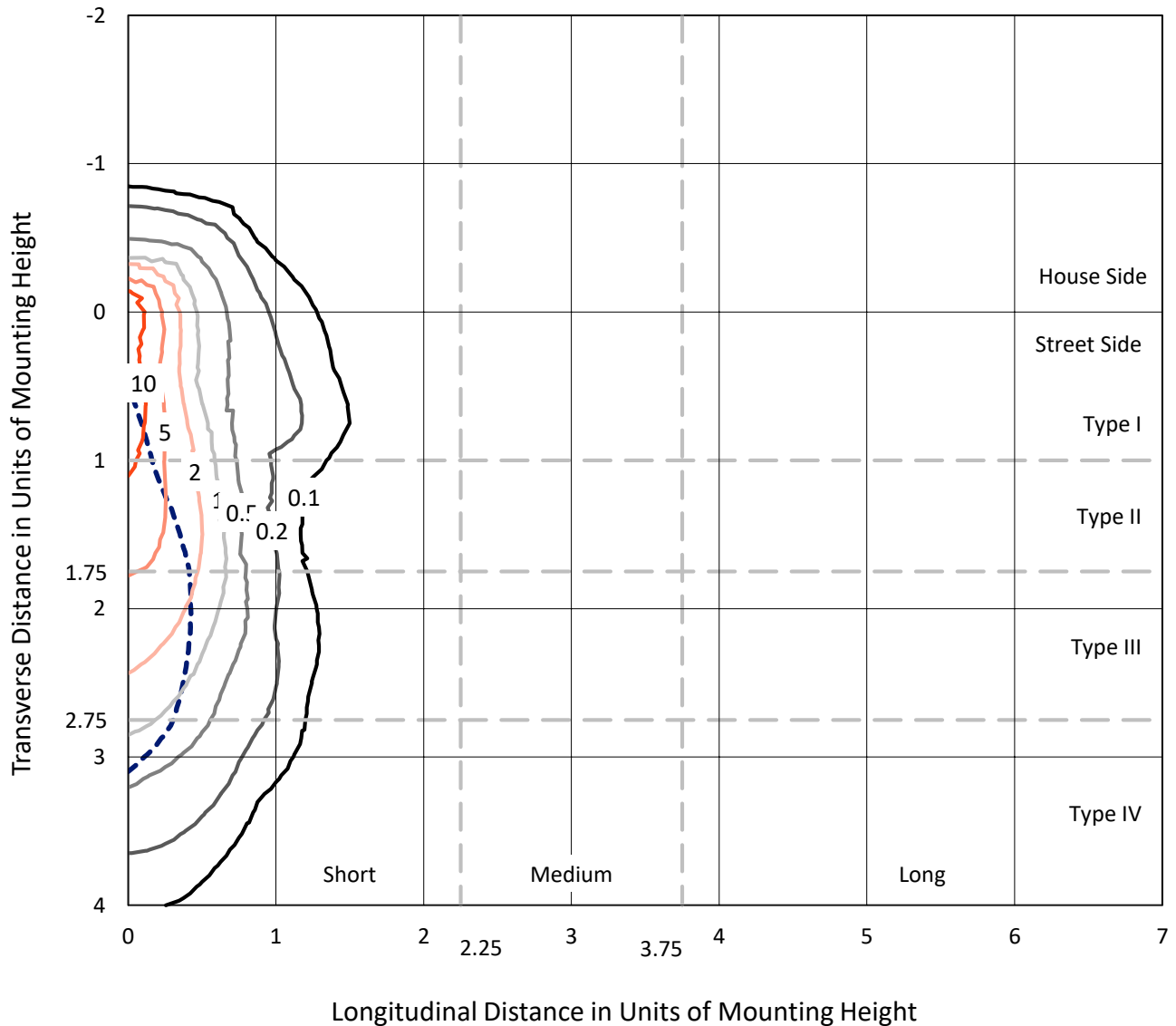


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

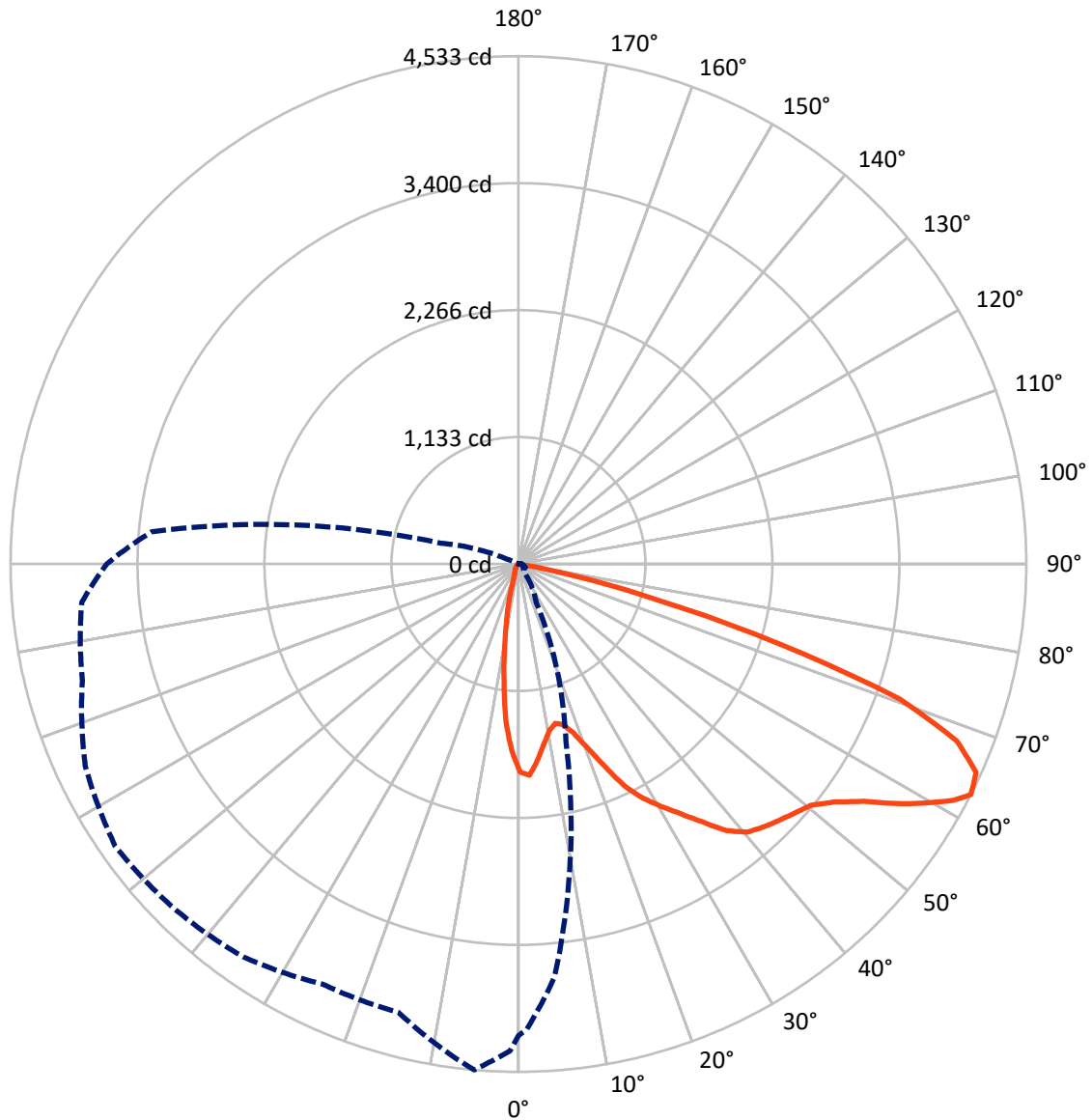


Based on 10 foot mounting height. Maximum calculated value = 18.6 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 355-Deg Lateral    - - - Horizontal Cone Through 62.5-Deg Vertical

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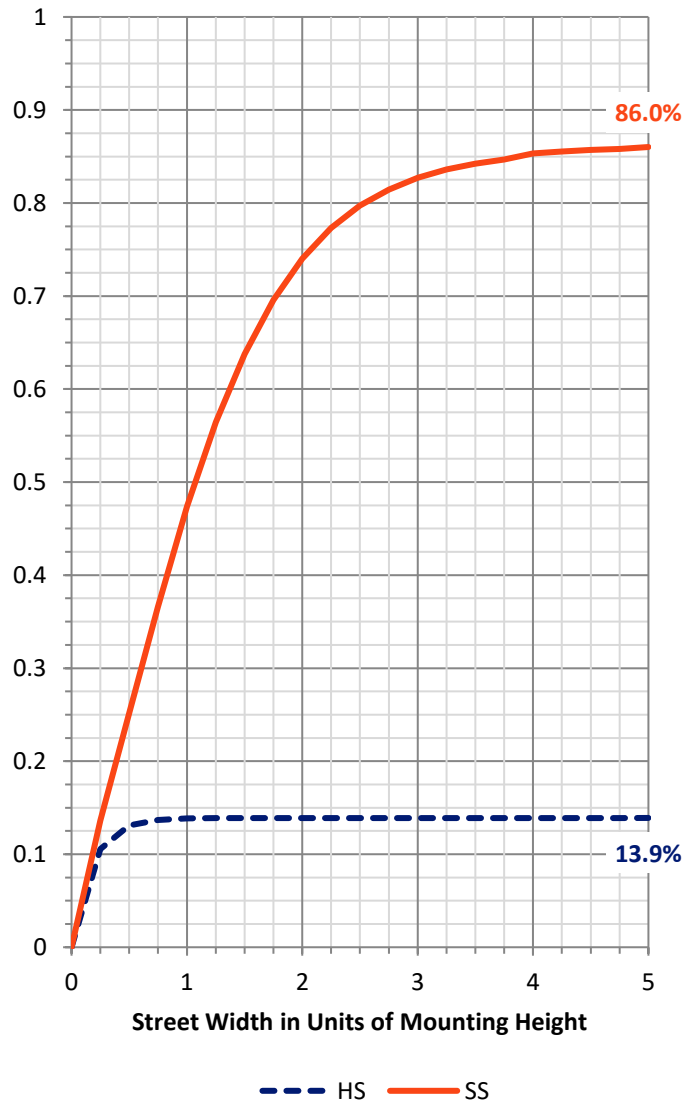
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	688.7	0.0	688.7
	% Fixture	14.1	0.0	14.1
<b>Street Side</b>	Lumens	4207.3	0.0	4207.3
	% Fixture	85.9	0.0	85.9
<b>Total</b>	Lumens	4896.0	0.0	4896.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	139.3	2.8
10°-20°	264.7	5.4
20°-30°	368.4	7.5
30°-40°	532.7	10.9
40°-50°	763.8	15.6
50°-60°	1108.1	22.6
60°-70°	1198.9	24.5
70°-80°	484.2	9.9
80°-90°	35.9	0.7
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°	4896.0	100.0
0°-180°	4896.0	100.0

**Coefficient of Utilization**



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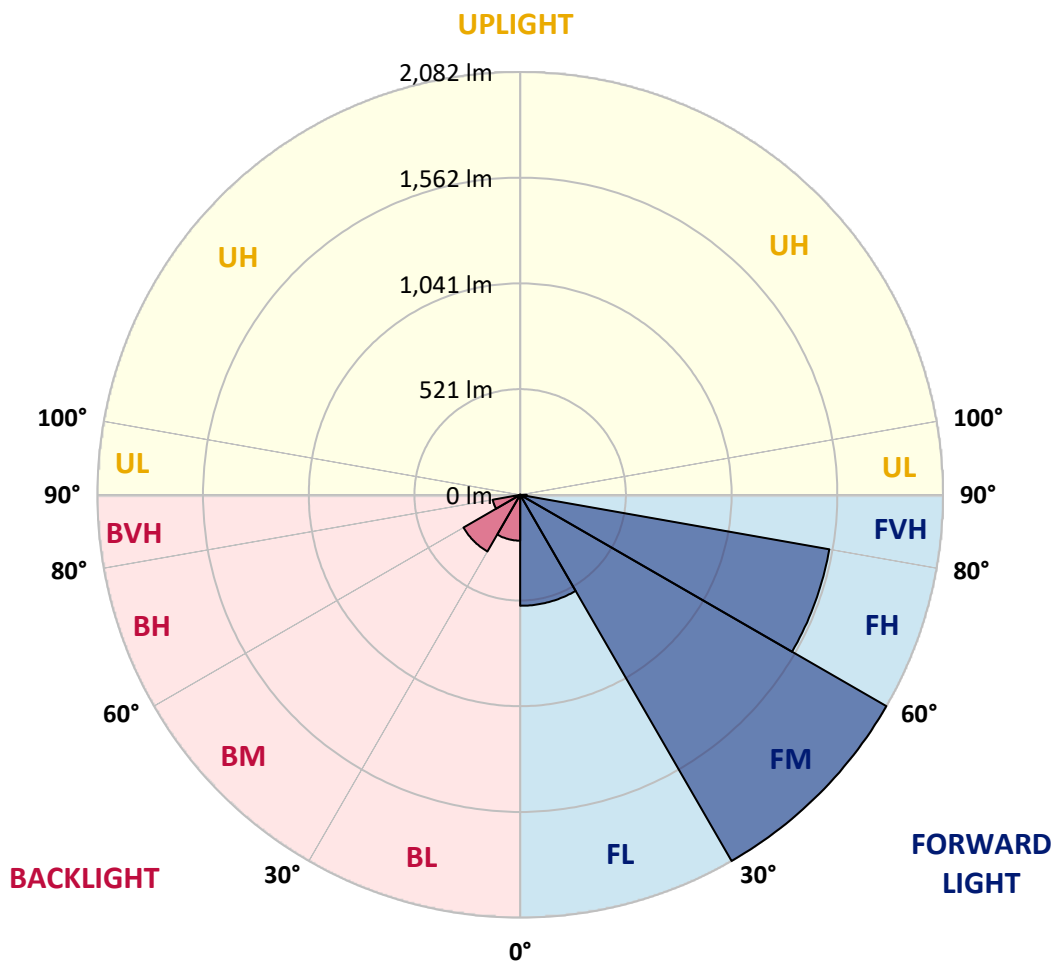
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	546.6	11.2			
FM	(30°-60°)	2082.4	42.5			
FH	(60°-80°)	1546.1	31.6			G1/1800
FVH	(80°-90°)	32.2	0.7			G1/100
BL	(0°-30°)	225.8	4.6	B1/500		
BM	(30°-60°)	322.3	6.6	B1/1000		
BH	(60°-80°)	137.0	2.8	B1/500		G1/500
BVH	(80°-90°)	3.7	0.1			G0/10
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





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**CANDELA DISTRIBUTION (FULL):**

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2
2.5°	1864.9	1857.2	1839.7	1801.9	1747.7	1712.8	1690.5	1661.5	1631.4	1621.7	1602.4
5°	1702.1	1689.6	1665.3	1570.4	1485.1	1399.9	1338.9	1280.7	1261.4	1222.6	1245.9
7.5°	1545.2	1539.4	1483.2	1360.2	1224.5	1115.1	1045.3	960.1	934.9	895.2	863.2
10°	1422.2	1417.3	1349.5	1188.7	1042.4	951.3	896.1	840.9	785.7	729.5	684.9
12.5°	1360.2	1349.5	1271.0	1097.6	962.0	886.4	828.3	754.7	695.6	620.0	565.8
15°	1369.9	1360.2	1270.1	1083.1	923.2	818.6	732.4	645.2	561.9	487.3	434.0
17.5°	1447.4	1443.5	1334.0	1095.7	876.7	738.2	622.9	505.7	406.9	326.5	280.9
20°	1598.5	1586.9	1428.0	1122.8	828.3	645.2	487.3	342.9	260.6	205.4	186.0
22.5°	1785.5	1759.3	1576.2	1162.5	781.8	545.4	352.6	230.6	186.0	164.7	151.1
25°	2005.4	2006.3	1760.3	1215.8	735.3	452.4	247.0	183.1	156.9	141.4	129.8
27.5°	2183.6	2170.1	1925.9	1269.1	684.9	371.0	207.3	159.8	137.6	121.1	114.3
30°	2315.4	2295.0	2035.4	1305.9	620.0	313.9	186.0	152.1	129.8	111.4	102.7
32.5°	2451.0	2425.8	2134.2	1326.3	581.3	286.8	164.7	132.7	116.3	108.5	96.9
35°	2609.9	2587.6	2243.7	1324.3	560.9	271.3	149.2	120.1	98.8	86.2	78.5
37.5°	2787.2	2741.7	2357.0	1315.6	546.4	263.5	135.6	111.4	92.0	78.5	68.8
40°	2939.3	2893.8	2461.7	1304.0	536.7	255.8	127.9	105.6	87.2	72.7	63.0
42.5°	3058.4	3014.8	2559.5	1289.4	531.9	239.3	131.8	101.7	83.3	68.8	58.1
45°	3161.1	3116.6	2675.8	1287.5	529.9	227.7	129.8	100.8	81.4	63.9	54.3
47.5°	3280.3	3257.0	2828.8	1319.5	522.2	218.9	119.2	108.5	80.4	62.0	51.3
50°	3456.6	3436.3	3029.4	1414.4	510.5	210.2	108.5	119.2	80.4	60.1	48.4
52.5°	3703.7	3680.4	3345.2	1538.4	499.9	200.5	97.8	115.3	81.4	57.2	46.5
55°	3959.4	3955.5	3643.6	1670.2	490.2	179.2	86.2	103.7	79.4	53.3	43.6
57.5°	4159.9	4157.0	3867.4	1759.3	471.8	144.3	78.5	86.2	73.6	48.4	39.7
60°	4242.3	4218.1	3891.6	1759.3	429.2	119.2	71.7	67.8	74.6	43.6	34.9
61°	4242.3	4211.3	3848.0	1733.2	407.9	113.3	67.8	63.0	76.5	41.7	32.9
62.5°	4209.4	4158.0	3698.8	1639.2	373.9	113.3	62.0	56.2	69.8	39.7	30.0
65°	4063.1	3978.8	3349.1	1425.1	339.1	116.3	53.3	47.5	50.4	33.9	26.2
67.5°	3701.7	3606.8	2895.7	1127.7	311.0	123.0	44.6	41.7	38.8	30.0	23.3
70°	3049.7	2969.3	2362.9	844.8	288.7	125.0	38.8	34.9	32.9	26.2	20.3
72.5°	1949.2	1816.5	1475.5	572.6	231.5	108.5	32.0	32.9	30.0	21.3	16.5
75°	941.7	978.5	858.3	288.7	156.0	70.7	25.2	27.1	24.2	19.4	14.5
77.5°	421.4	413.7	409.8	73.6	39.7	24.2	15.5	18.4	19.4	17.4	12.6
80°	43.6	59.1	34.9	22.3	14.5	10.7	8.7	9.7	11.6	12.6	6.8
82.5°	1.9	1.0	1.0	2.9	2.9	1.9	0.0	0.0	1.9	1.9	1.0
85°	0.0	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	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2
2.5°	1584.9	1611.1	1599.5	1596.6	1612.1	1604.3	1627.6	1628.5	1646.0	1669.2	1683.7
5°	1245.9	1225.5	1266.2	1293.3	1327.2	1316.6	1357.3	1352.4	1374.7	1411.5	1397.0
7.5°	865.1	868.0	889.3	913.6	1004.6	1023.0	1036.6	1047.3	1046.3	1055.0	1070.5
10°	661.7	645.2	630.7	664.6	700.4	740.1	746.0	760.5	720.8	737.2	745.0
12.5°	541.5	522.2	490.2	472.8	481.5	504.7	514.4	523.1	499.9	500.9	518.3
15°	410.8	384.6	372.0	348.8	340.0	338.1	342.9	330.4	327.4	316.8	323.6
17.5°	267.4	259.6	252.9	248.0	241.2	239.3	221.9	191.8	174.4	170.5	170.5
20°	178.3	172.4	172.4	182.1	179.2	171.5	148.2	123.0	110.4	106.6	108.5
22.5°	146.3	142.4	136.6	136.6	140.5	134.7	113.3	94.9	86.2	86.2	86.2
25°	126.9	125.0	119.2	113.3	115.3	110.4	92.0	80.4	74.6	73.6	74.6
27.5°	111.4	110.4	103.7	97.8	97.8	94.0	79.4	68.8	64.9	63.0	63.9
30°	100.8	98.8	91.1	86.2	85.3	81.4	67.8	60.1	56.2	55.2	55.2
32.5°	93.0	89.1	82.3	77.5	74.6	68.8	59.1	51.3	47.5	46.5	46.5
35°	74.6	74.6	71.7	68.8	64.9	56.2	49.4	42.6	38.8	37.8	37.8
37.5°	64.9	61.0	56.2	57.2	55.2	47.5	40.7	33.9	31.0	30.0	30.0
40°	59.1	54.3	47.5	44.6	45.5	41.7	33.9	26.2	22.3	23.3	22.3
42.5°	53.3	49.4	41.7	34.9	33.9	34.9	26.2	18.4	15.5	15.5	15.5
45°	49.4	45.5	36.8	29.1	24.2	27.1	20.3	12.6	9.7	9.7	9.7
47.5°	46.5	42.6	32.9	24.2	17.4	18.4	14.5	7.8	5.8	3.9	4.8
50°	44.6	39.7	30.0	19.4	12.6	10.7	9.7	3.9	1.0	1.0	0.0
52.5°	41.7	37.8	27.1	16.5	9.7	6.8	4.8	1.0	0.0	0.0	0.0
55°	39.7	34.9	24.2	14.5	7.8	3.9	1.0	0.0	0.0	0.0	0.0
57.5°	35.8	32.0	21.3	11.6	5.8	1.9	0.0	0.0	0.0	0.0	0.0
60°	32.0	29.1	18.4	8.7	3.9	0.0	0.0	0.0	0.0	0.0	0.0
61°	30.0	27.1	17.4	7.8	2.9	0.0	0.0	0.0	0.0	0.0	0.0
62.5°	28.1	25.2	15.5	5.8	1.9	0.0	0.0	0.0	0.0	0.0	0.0
65°	24.2	21.3	13.6	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
67.5°	21.3	19.4	11.6	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
70°	18.4	16.5	8.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
72.5°	15.5	14.5	6.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
75°	13.6	11.6	5.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
77.5°	10.7	9.7	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
80°	5.8	4.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
82.5°	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
85°	0.0	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	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





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**CANDELA DISTRIBUTION (continued):**

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2
2.5°	1697.3	1731.2	1763.2	1803.9	1826.2	1887.2	1930.8	1967.6	1996.7	2002.5	2025.7
5°	1435.7	1483.2	1514.2	1599.5	1646.9	1748.7	1827.1	1920.1	2003.4	2049.0	2090.6
7.5°	1081.2	1104.4	1157.7	1242.9	1355.3	1443.5	1576.2	1693.4	1843.6	1925.9	2003.4
10°	763.4	784.7	863.2	952.3	1055.0	1203.2	1364.0	1518.1	1670.2	1775.8	1866.8
12.5°	536.7	606.5	684.0	797.3	898.1	1006.6	1178.0	1358.2	1548.1	1648.9	1747.7
15°	352.6	414.6	522.2	664.6	790.5	896.1	1056.0	1267.2	1508.4	1620.8	1714.7
17.5°	174.4	219.9	314.9	467.9	635.5	802.2	994.9	1250.7	1559.7	1686.6	1774.8
20°	109.5	123.0	157.9	264.5	457.3	703.3	949.4	1283.6	1699.2	1839.7	1896.9
22.5°	88.2	92.0	105.6	140.5	279.0	581.3	909.7	1328.2	1852.3	2023.8	2082.9
25°	75.6	78.5	86.2	103.7	161.8	436.0	861.2	1406.7	2030.6	2237.9	2252.4
27.5°	64.9	67.8	74.6	88.2	115.3	293.5	791.5	1498.7	2243.7	2425.8	2416.1
30°	55.2	59.1	65.9	75.6	91.1	198.6	661.7	1591.7	2400.6	2546.9	2531.4
32.5°	47.5	50.4	56.2	64.9	75.6	136.6	497.0	1652.7	2531.4	2661.2	2627.3
35°	38.8	41.7	46.5	54.3	61.0	96.9	375.9	1654.7	2666.1	2802.7	2717.4
37.5°	31.0	32.9	37.8	44.6	50.4	75.6	276.1	1622.7	2832.7	2986.8	2820.1
40°	23.3	26.2	31.0	36.8	42.6	63.9	206.4	1545.2	2995.5	3170.8	2944.1
42.5°	15.5	19.4	24.2	30.0	40.7	51.3	145.3	1416.4	3127.2	3334.5	3065.2
45°	9.7	12.6	18.4	25.2	41.7	40.7	96.9	1262.3	3221.2	3459.5	3147.6
47.5°	4.8	7.8	13.6	24.2	36.8	30.0	60.1	1115.1	3306.5	3532.2	3185.4
50°	1.0	2.9	9.7	30.0	31.0	22.3	39.7	1023.0	3351.0	3513.8	3181.5
52.5°	0.0	0.0	6.8	29.1	22.3	17.4	31.0	1009.5	3420.8	3538.0	3248.3
55°	0.0	0.0	2.9	12.6	12.6	14.5	27.1	991.1	3544.8	3682.3	3449.8
57.5°	0.0	0.0	0.0	5.8	7.8	11.6	25.2	942.6	3675.6	3835.4	3694.9
60°	0.0	0.0	0.0	2.9	4.8	9.7	22.3	832.2	3555.4	3836.4	3898.4
61°	0.0	0.0	0.0	2.9	3.9	8.7	20.3	793.4	3447.9	3774.4	3923.6
62.5°	0.0	0.0	0.0	1.0	2.9	6.8	17.4	716.9	3287.1	3674.6	3911.9
65°	0.0	0.0	0.0	0.0	1.0	3.9	13.6	579.3	3018.7	3423.7	3778.2
67.5°	0.0	0.0	0.0	0.0	0.0	1.0	8.7	407.9	2633.1	3139.8	3492.5
70°	0.0	0.0	0.0	0.0	0.0	0.0	3.9	236.4	2121.6	2658.3	2991.6
72.5°	0.0	0.0	0.0	0.0	0.0	0.0	1.9	107.5	1376.6	2052.8	2360.0
75°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	45.5	847.7	1483.2	1763.2
77.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.3	574.5	987.2	1186.8
80°	0.0	1.9	1.0	0.0	0.0	0.0	0.0	7.8	353.6	616.1	669.4
82.5°	0.0	1.0	1.0	0.0	0.0	0.0	0.0	0.0	183.1	435.0	443.7
85°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	76.5	92.0
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



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CATALOG NUMBER: ENT-SA1F-727-U-SLR-HSS

**CANDELA DISTRIBUTION (continued):**

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2	1857.2
2.5°	2047.0	2052.8	2056.7	2049.9	2008.3	1985.0	1938.5	1887.2	1869.7	1864.9
5°	2166.2	2199.1	2193.3	2148.8	2076.1	1987.0	1876.5	1762.2	1718.6	1702.1
7.5°	2142.9	2229.2	2245.6	2199.1	2076.1	1920.1	1760.3	1624.6	1561.7	1545.2
10°	2024.8	2133.3	2185.6	2171.0	2055.8	1875.6	1678.9	1512.3	1443.5	1422.2
12.5°	1910.4	2015.1	2048.0	2059.6	1996.7	1840.7	1638.2	1459.0	1387.3	1360.2
15°	1833.9	1898.8	1896.9	1918.2	1913.3	1827.1	1664.4	1486.1	1405.7	1369.9
17.5°	1808.7	1789.3	1764.2	1781.6	1815.5	1831.0	1749.6	1583.0	1489.0	1447.4
20°	1824.2	1729.3	1674.1	1673.1	1744.8	1863.0	1874.6	1742.8	1654.7	1598.5
22.5°	1903.7	1699.2	1614.0	1615.9	1704.1	1910.4	2018.9	1952.1	1855.2	1785.5
25°	2020.9	1705.1	1590.7	1602.4	1700.2	1952.1	2174.9	2190.4	2066.4	2005.4
27.5°	2140.0	1755.4	1591.7	1604.3	1716.7	1974.4	2264.0	2365.8	2259.2	2183.6
30°	2223.4	1817.4	1609.1	1622.7	1742.8	1991.8	2298.0	2510.1	2399.7	2315.4
32.5°	2301.8	1881.4	1637.2	1650.8	1795.2	2027.7	2361.9	2655.4	2534.3	2451.0
35°	2378.4	1944.3	1689.6	1713.8	1879.4	2092.6	2426.8	2825.9	2725.2	2609.9
37.5°	2444.2	2014.1	1779.7	1831.0	1993.8	2192.4	2515.0	3019.7	2916.0	2787.2
40°	2499.5	2096.4	1965.7	2022.8	2168.1	2298.0	2612.8	3146.6	3077.8	2939.3
42.5°	2544.0	2241.8	2232.1	2312.5	2414.2	2419.0	2640.9	3207.6	3181.5	3058.4
45°	2618.6	2502.4	2581.8	2713.6	2706.8	2564.4	2633.1	3263.8	3265.8	3161.1
47.5°	2740.7	2828.8	3058.4	3147.6	3102.0	2763.0	2640.9	3319.0	3362.6	3280.3
50°	2915.1	3198.9	3499.2	3617.4	3484.7	2962.5	2709.7	3384.9	3516.7	3456.6
52.5°	3064.3	3478.9	3906.1	4011.7	3830.6	3175.7	2870.5	3527.3	3723.0	3703.7
55°	3277.4	3720.1	4195.8	4277.2	4131.9	3416.9	3086.5	3736.6	3949.7	3959.4
57.5°	3495.4	3938.1	4384.7	4467.1	4356.6	3717.2	3393.6	4036.9	4162.9	4159.9
60°	3737.6	4141.5	4470.0	4515.5	4452.5	4017.5	3724.0	4312.0	4309.1	4242.3
61°	3876.1	4206.5	4464.1	4477.7	4416.7	4105.7	3894.5	4417.6	4330.5	4242.3
62.5°	4029.2	4265.5	4392.5	4346.9	4281.0	4136.7	4141.5	4532.9	4345.0	4209.4
65°	4184.2	4117.3	4062.1	3844.1	3782.1	3851.9	4349.8	4489.3	4256.8	4063.1
67.5°	3918.7	3528.3	3409.1	3190.2	2945.1	3229.9	4152.2	4222.9	3959.4	3701.7
70°	3202.8	2592.5	2451.0	2443.3	2266.9	2579.9	3662.0	3610.7	3286.1	3049.7
72.5°	2510.1	1769.0	1576.2	1620.8	1585.9	1923.0	2995.5	2422.9	2107.1	1949.2
75°	1967.6	1257.5	1085.0	1077.3	1039.5	1309.8	2193.3	1276.9	1054.0	941.7
77.5°	1298.2	905.8	902.9	834.1	805.1	710.1	984.3	511.5	417.5	421.4
80°	747.9	555.1	651.0	516.4	517.3	416.6	398.2	74.6	60.1	43.6
82.5°	429.2	266.4	201.5	79.4	166.6	166.6	32.0	1.0	1.0	1.9
85°	41.7	12.6	0.0	0.0	0.0	0.0	0.0	0.0	1.0	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)