

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: P401815

Luminaire Tested: **ENT-SA1F-730-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401815
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-SA1F-730-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3000K, 1200mA 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: 5331 lumens
Efficiency: N/A
Efficacy: 80.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - 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

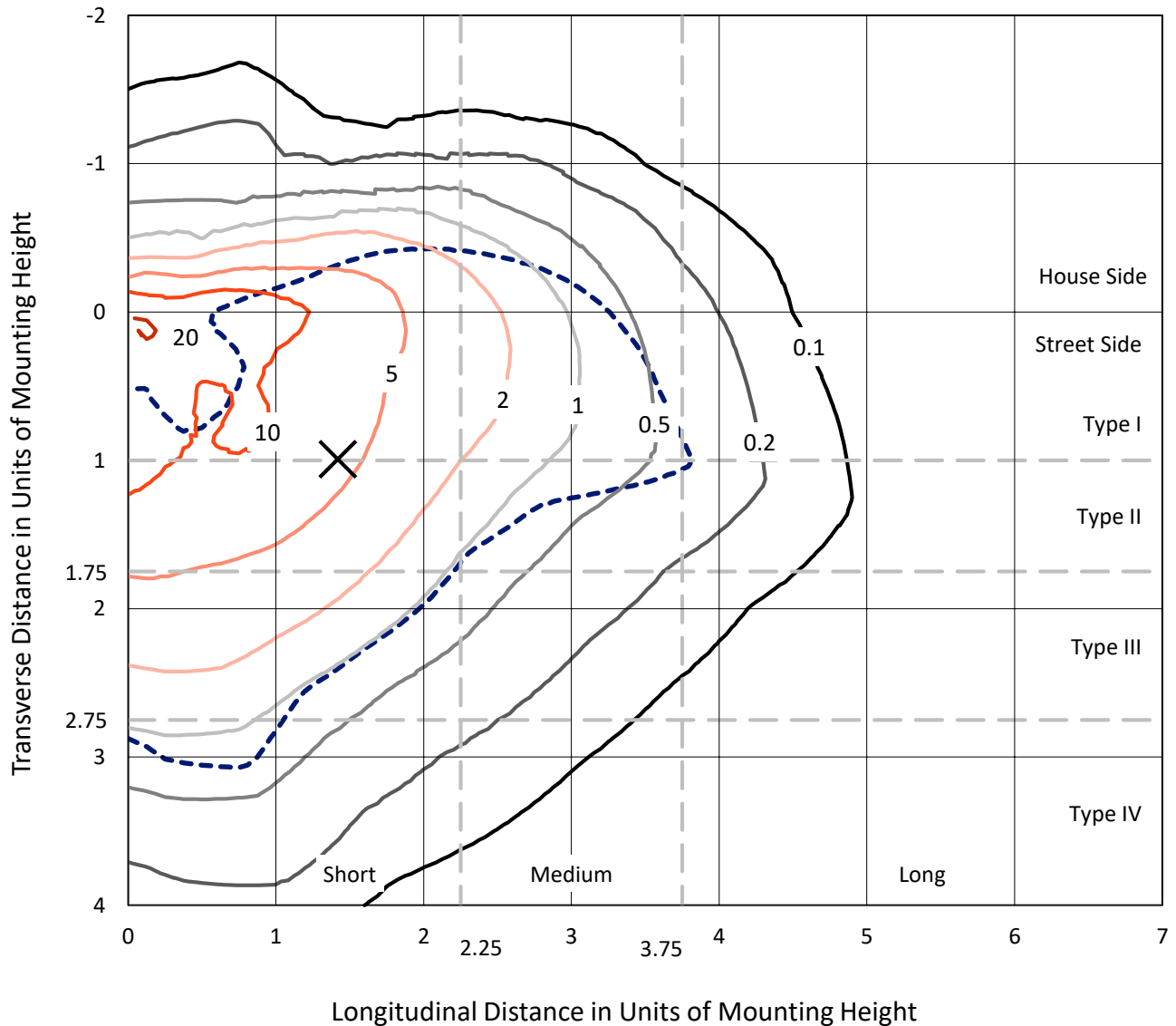


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

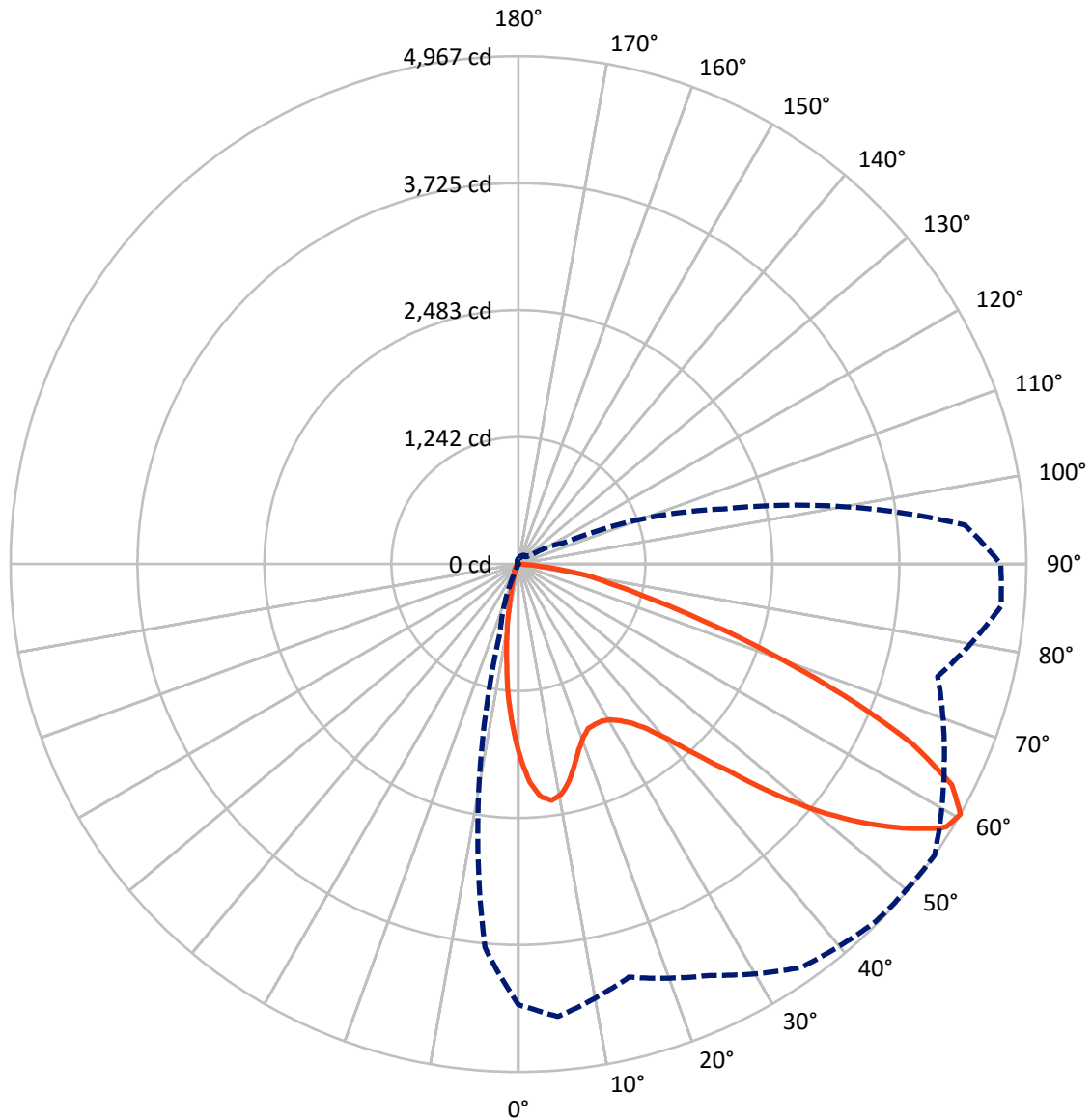


Based on 10 foot mounting height. Maximum calculated value = 22.2 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



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

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	944.1	0.0	944.1
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	4386.9	0.0	4386.9
	% Fixture	82.3	0.0	82.3
Total	Lumens	5331.0	0.0	5331.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	141.7	2.7
10°-20°	269.4	5.1
20°-30°	384.4	7.2
30°-40°	563.8	10.6
40°-50°	831.3	15.6
50°-60°	1231.5	23.1
60°-70°	1312.3	24.6
70°-80°	544.3	10.2
80°-90°	52.3	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°	5331.0	100.0
0°-180°	5331.0	100.0

Coefficient of Utilization



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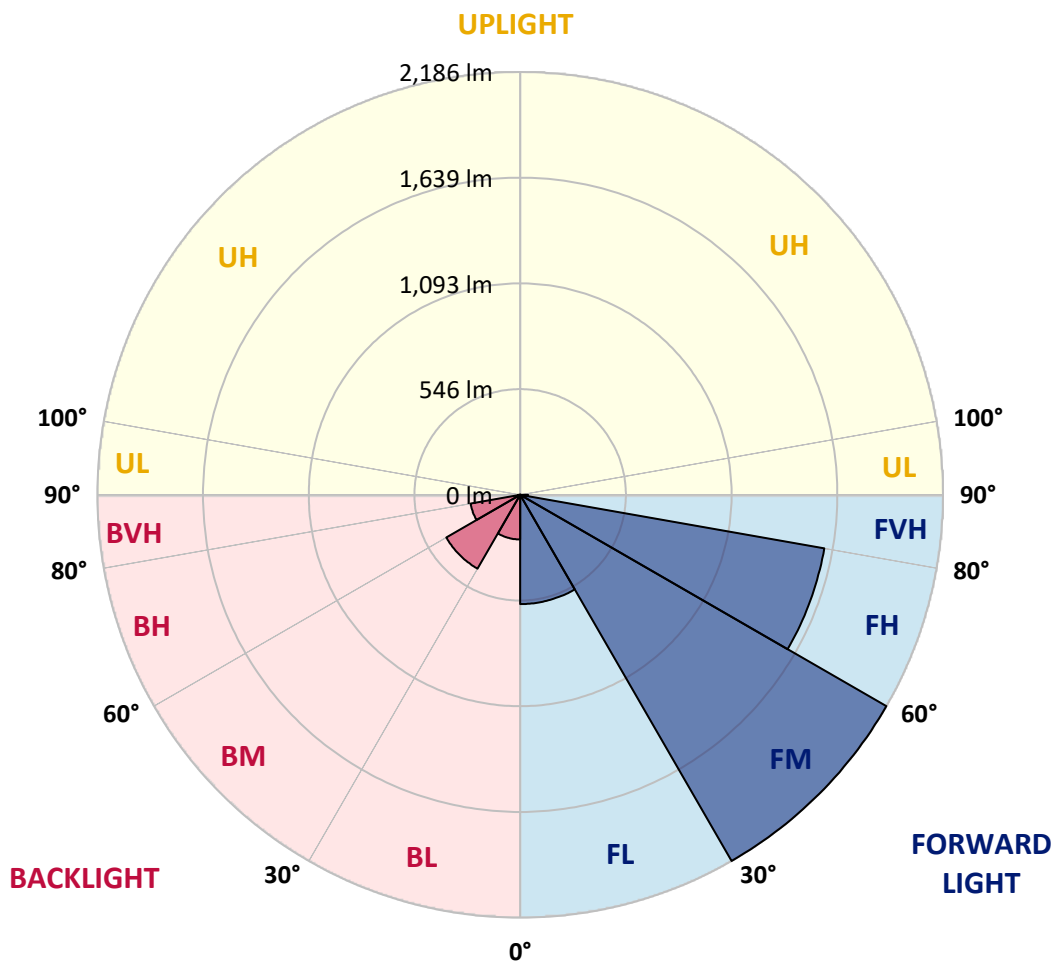
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	564.7	10.6			
FM	(30°-60°)	2185.8	41.0			
FH	(60°-80°)	1596.4	29.9			G1/1800
FVH	(80°-90°)	40.1	0.8			G1/100
BL	(0°-30°)	230.8	4.3	B1/500		
BM	(30°-60°)	440.8	8.3	B1/1000		
BH	(60°-80°)	260.2	4.9	B1/500		G1/500
BVH	(80°-90°)	12.2	0.2			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7
2.5°	1966.3	1963.3	1991.5	2050.0	2086.3	2108.4	2112.5	2135.6	2112.5	2100.4	2057.0
5°	1908.9	1907.9	1962.3	2090.3	2195.1	2273.7	2312.0	2285.8	2245.5	2165.9	2069.1
7.5°	1749.6	1749.6	1852.4	2023.8	2199.1	2335.2	2381.6	2333.2	2237.4	2077.2	1903.8
10°	1619.6	1631.7	1730.5	1935.1	2129.6	2278.8	2330.2	2292.9	2167.9	1960.3	1756.7
12.5°	1542.0	1549.1	1658.9	1864.5	2045.9	2166.9	2198.1	2187.0	2096.3	1870.6	1654.9
15°	1549.1	1559.1	1685.1	1853.4	1971.4	2019.7	2030.8	2044.9	2007.6	1834.3	1621.6
17.5°	1659.9	1667.0	1794.0	1902.8	1897.8	1882.7	1886.7	1909.9	1954.2	1864.5	1689.2
20°	1837.3	1855.5	1983.5	1985.5	1859.5	1788.9	1770.8	1809.1	1929.0	1944.1	1833.3
22.5°	2065.1	2072.1	2202.2	2124.6	1863.5	1724.4	1703.3	1746.6	1937.1	2073.2	2032.8
25°	2329.1	2354.3	2424.9	2305.0	1922.0	1715.4	1701.3	1737.5	1966.3	2210.2	2238.4
27.5°	2507.5	2527.7	2595.2	2427.9	1974.4	1720.4	1694.2	1738.5	2001.6	2339.2	2458.2
30°	2666.8	2680.9	2706.1	2492.4	2033.8	1745.6	1703.3	1766.8	2020.7	2366.4	2600.3
32.5°	2816.9	2834.1	2819.0	2570.0	2099.4	1793.0	1720.4	1826.2	2062.1	2420.9	2724.2
35°	3010.5	3011.5	2960.1	2647.6	2173.9	1849.4	1770.8	1910.9	2142.7	2505.5	2857.3
37.5°	3240.2	3242.3	3112.2	2727.2	2258.6	1944.1	1889.7	2041.9	2259.6	2603.3	3047.7
40°	3440.8	3448.9	3276.5	2819.0	2362.4	2128.6	2123.5	2249.5	2409.8	2733.3	3252.3
42.5°	3615.2	3638.3	3427.7	2895.6	2509.6	2411.8	2423.9	2538.8	2592.2	2842.1	3379.3
45°	3791.5	3790.5	3551.7	2972.2	2755.5	2776.6	2891.5	2886.5	2798.8	2900.6	3479.1
47.5°	3901.4	3896.4	3627.3	3097.1	3087.1	3289.6	3411.6	3345.1	3027.6	2963.1	3604.1
50°	3943.7	3941.7	3686.7	3256.4	3424.7	3754.2	3928.6	3795.6	3307.8	3067.9	3753.2
52.5°	4063.7	4053.6	3823.8	3437.8	3730.1	4201.7	4345.9	4197.7	3586.9	3256.4	3926.6
55°	4251.1	4254.1	4059.6	3650.4	3975.0	4517.2	4693.6	4561.5	3872.2	3515.4	4164.4
57.5°	4377.1	4386.2	4320.7	3887.3	4237.0	4737.9	4909.2	4872.0	4252.1	3824.8	4443.6
58°	4389.2	4396.3	4362.0	3932.6	4276.3	4763.1	4938.5	4912.3	4335.8	3923.6	4510.1
60°	4311.6	4332.8	4442.6	4182.6	4438.6	4816.5	4943.5	4966.7	4594.8	4244.1	4737.9
62.5°	4101.0	4108.0	4307.6	4462.8	4549.4	4684.5	4696.6	4757.1	4701.6	4620.0	4941.5
65°	3842.9	3842.9	4058.6	4475.9	4262.2	4240.0	4169.5	4230.0	4390.2	4855.8	4927.4
67.5°	3394.4	3397.5	3672.6	3987.1	3533.5	3456.9	3411.6	3433.8	3775.4	4659.3	4653.3
70°	2743.4	2741.4	3024.6	3228.2	2622.4	2556.9	2611.3	2604.3	3066.9	4140.3	4062.7
72.5°	1940.1	1957.2	2248.5	2493.4	1780.9	1535.0	1774.8	1867.5	2307.0	3490.2	3143.5
75°	1092.5	1115.7	1353.5	1732.5	1123.8	1038.1	1161.0	1293.1	1668.0	2778.6	2111.5
77.5°	548.3	557.3	693.4	833.5	681.3	791.2	784.1	910.1	1143.9	1874.6	1207.4
80°	316.5	334.6	381.0	430.4	381.0	501.9	582.5	685.3	704.5	969.6	673.2
82.5°	127.0	142.1	178.4	202.6	158.2	149.2	101.8	320.5	424.3	468.7	258.0
85°	0.0	0.0	1.0	2.0	3.0	3.0	5.0	56.4	103.8	23.2	42.3
87.5°	0.0	0.0	1.0	1.0	2.0	3.0	4.0	7.1	9.1	11.1	38.3
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°	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7
2.5°	2040.9	2029.8	1992.5	1936.1	1900.8	1846.4	1824.2	1772.8	1746.6	1703.3	1703.3
5°	2020.7	1975.4	1881.7	1759.7	1673.0	1582.3	1553.1	1492.6	1449.3	1397.9	1376.7
7.5°	1837.3	1773.8	1627.7	1485.6	1347.5	1255.8	1165.1	1103.6	1045.1	1002.8	1008.9
10°	1669.0	1578.3	1418.0	1237.6	1094.5	998.8	917.1	845.6	785.1	725.7	716.6
12.5°	1559.1	1455.3	1263.8	1070.3	963.5	893.0	817.4	738.8	664.2	598.7	572.5
15°	1512.8	1399.9	1186.2	1003.8	906.1	815.4	727.7	630.9	545.2	466.6	445.5
17.5°	1563.2	1428.1	1179.2	959.5	823.4	709.5	587.6	481.8	381.0	324.5	307.4
20°	1700.2	1524.9	1202.4	915.1	731.7	584.6	435.4	315.5	259.0	224.8	213.7
22.5°	1898.8	1685.1	1241.7	871.8	639.0	435.4	300.3	227.8	194.5	176.4	171.3
25°	2114.5	1891.7	1314.2	835.5	546.3	323.5	222.7	186.5	166.3	153.2	148.2
27.5°	2357.4	2096.3	1402.9	808.3	460.6	259.0	191.5	164.3	148.2	139.1	135.1
30°	2509.6	2243.5	1470.5	759.9	402.1	235.8	182.4	155.2	138.1	131.0	128.0
32.5°	2649.6	2359.4	1535.0	704.5	357.8	208.6	177.4	163.3	143.1	129.0	123.0
35°	2803.8	2478.3	1566.2	671.2	328.6	181.4	146.1	127.0	115.9	113.9	110.9
37.5°	3033.6	2619.4	1586.4	653.1	310.4	165.3	136.1	114.9	101.8	89.7	84.7
40°	3251.3	2765.5	1596.4	636.0	301.3	155.2	130.0	108.8	94.7	83.7	78.6
42.5°	3421.7	2898.6	1602.5	623.9	285.2	149.2	125.0	104.8	89.7	78.6	73.6
45°	3560.7	3052.8	1597.4	619.8	272.1	153.2	123.0	101.8	85.7	74.6	69.5
47.5°	3696.8	3220.1	1616.6	614.8	259.0	147.1	124.0	100.8	82.6	71.6	66.5
50°	3875.2	3422.7	1686.1	600.7	249.9	138.1	134.0	101.8	81.6	69.5	65.5
52.5°	4106.0	3702.8	1812.1	585.6	238.9	130.0	140.1	101.8	79.6	67.5	62.5
55°	4386.2	4017.3	1951.2	563.4	219.7	119.9	134.0	101.8	77.6	66.5	60.5
57.5°	4615.0	4297.5	2061.1	537.2	184.4	107.8	123.0	97.8	72.6	62.5	57.4
58°	4635.1	4329.7	2076.2	530.1	180.4	105.8	119.9	96.8	70.5	61.5	56.4
60°	4716.7	4382.1	2082.2	491.8	150.2	100.8	103.8	93.7	66.5	57.4	53.4
62.5°	4688.5	4208.8	1954.2	424.3	134.0	91.7	86.7	95.7	61.5	52.4	48.4
65°	4548.4	3868.1	1712.3	380.0	135.1	81.6	74.6	83.7	56.4	47.4	43.3
67.5°	4214.8	3351.1	1390.8	355.8	141.1	72.6	64.5	62.5	50.4	42.3	39.3
70°	3595.0	2746.4	1054.2	334.6	149.2	64.5	59.5	55.4	46.4	39.3	35.3
72.5°	2647.6	2033.8	767.0	313.4	145.1	57.4	55.4	50.4	42.3	35.3	33.3
75°	1651.9	1181.2	525.1	256.0	130.0	50.4	51.4	47.4	38.3	33.3	30.2
77.5°	964.5	829.5	259.0	190.5	89.7	44.3	45.4	43.3	39.3	31.2	29.2
80°	577.5	516.0	110.9	81.6	49.4	39.3	38.3	40.3	37.3	29.2	27.2
82.5°	249.9	223.7	53.4	45.4	40.3	34.3	33.3	34.3	32.3	24.2	23.2
85°	14.1	37.3	25.2	33.3	30.2	25.2	25.2	26.2	23.2	19.1	19.1
87.5°	13.1	28.2	16.1	20.2	22.2	19.1	20.2	20.2	19.1	17.1	16.1
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°	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7
2.5°	1680.1	1669.0	1635.7	1623.6	1571.2	1584.3	1588.4	1583.3	1585.4	1589.4	1604.5
5°	1391.8	1373.7	1330.4	1302.1	1287.0	1276.9	1229.6	1230.6	1237.6	1210.4	1245.7
7.5°	988.7	1008.9	1012.9	986.7	970.6	936.3	893.0	868.8	827.4	850.6	855.7
10°	707.5	697.4	716.6	707.5	682.3	669.2	622.9	618.8	614.8	611.8	641.0
12.5°	539.2	509.0	486.8	491.8	472.7	440.4	432.4	433.4	437.4	437.4	445.5
15°	427.3	381.0	345.7	324.5	327.6	295.3	286.2	256.0	252.0	242.9	244.9
17.5°	299.3	280.2	259.0	234.8	224.8	195.5	160.2	144.1	132.0	134.0	140.1
20°	206.6	198.5	192.5	180.4	170.3	136.1	113.9	106.8	105.8	107.8	109.9
22.5°	166.3	158.2	152.2	148.2	135.1	109.9	97.8	92.7	92.7	92.7	93.7
25°	143.1	135.1	127.0	127.0	114.9	95.7	86.7	82.6	81.6	80.6	82.6
27.5°	133.0	122.0	113.9	108.8	99.8	84.7	76.6	72.6	71.6	71.6	72.6
30°	123.0	111.9	103.8	96.8	86.7	75.6	67.5	64.5	62.5	62.5	63.5
32.5°	116.9	105.8	95.7	86.7	75.6	66.5	59.5	55.4	53.4	54.4	55.4
35°	103.8	94.7	85.7	76.6	66.5	58.5	51.4	47.4	46.4	46.4	47.4
37.5°	81.6	74.6	72.6	67.5	58.5	50.4	43.3	39.3	38.3	38.3	39.3
40°	73.6	64.5	60.5	58.5	53.4	43.3	35.3	31.2	31.2	30.2	32.3
42.5°	67.5	58.5	51.4	49.4	46.4	37.3	28.2	25.2	24.2	24.2	25.2
45°	63.5	53.4	44.3	39.3	39.3	30.2	23.2	19.1	18.1	18.1	19.1
47.5°	61.5	50.4	39.3	32.3	31.2	25.2	18.1	14.1	13.1	13.1	13.1
50°	59.5	46.4	35.3	27.2	24.2	21.2	14.1	11.1	10.1	10.1	10.1
52.5°	56.4	44.3	32.3	24.2	19.1	16.1	11.1	8.1	7.1	6.0	7.1
55°	54.4	41.3	31.2	22.2	16.1	12.1	8.1	6.0	5.0	5.0	5.0
57.5°	51.4	38.3	28.2	21.2	15.1	9.1	6.0	4.0	3.0	3.0	4.0
58°	50.4	38.3	27.2	20.2	14.1	9.1	6.0	4.0	3.0	3.0	4.0
60°	47.4	35.3	26.2	18.1	13.1	8.1	5.0	3.0	2.0	2.0	3.0
62.5°	44.3	32.3	23.2	16.1	11.1	7.1	4.0	2.0	1.0	1.0	1.0
65°	39.3	29.2	20.2	15.1	9.1	5.0	3.0	1.0	0.0	0.0	0.0
67.5°	35.3	27.2	18.1	13.1	8.1	4.0	2.0	0.0	0.0	0.0	0.0
70°	32.3	25.2	16.1	11.1	7.1	3.0	1.0	0.0	0.0	0.0	0.0
72.5°	30.2	23.2	15.1	10.1	5.0	3.0	1.0	0.0	0.0	0.0	0.0
75°	29.2	22.2	15.1	9.1	5.0	3.0	2.0	1.0	0.0	0.0	1.0
77.5°	28.2	22.2	15.1	9.1	6.0	3.0	3.0	2.0	2.0	1.0	3.0
80°	26.2	20.2	13.1	8.1	5.0	4.0	3.0	2.0	0.0	0.0	0.0
82.5°	22.2	16.1	11.1	8.1	5.0	3.0	1.0	0.0	0.0	0.0	0.0
85°	18.1	13.1	9.1	5.0	3.0	1.0	0.0	0.0	0.0	0.0	0.0
87.5°	16.1	10.1	7.1	4.0	2.0	1.0	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-730-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7	1882.7
2.5°	1617.6	1664.0	1683.1	1747.6	1775.8	1834.3	1884.7	1928.0	1949.2	1966.3
5°	1254.8	1299.1	1346.5	1442.2	1524.9	1613.6	1724.4	1839.3	1872.6	1908.9
7.5°	875.8	941.3	1021.0	1106.6	1224.5	1358.6	1517.8	1659.9	1731.5	1749.6
10°	680.3	757.9	842.6	927.2	1025.0	1168.1	1328.3	1511.8	1588.4	1619.6
12.5°	511.0	614.8	715.6	815.4	900.0	1024.0	1198.3	1417.0	1501.7	1542.0
15°	307.4	424.3	548.3	682.3	800.2	945.4	1141.9	1396.9	1503.7	1549.1
17.5°	153.2	209.6	323.5	525.1	699.4	879.9	1140.9	1469.4	1601.5	1659.9
20°	113.9	129.0	172.3	327.6	581.5	825.4	1153.0	1593.4	1787.9	1837.3
22.5°	97.8	108.8	124.0	191.5	435.4	775.0	1195.3	1757.7	1999.6	2065.1
25°	85.7	94.7	106.8	132.0	298.3	715.6	1274.9	1989.5	2239.4	2329.1
27.5°	75.6	83.7	93.7	110.9	199.6	603.7	1320.3	2184.0	2433.0	2507.5
30°	66.5	72.6	82.6	94.7	147.1	466.6	1362.6	2355.4	2608.3	2666.8
32.5°	58.5	63.5	71.6	80.6	111.9	353.8	1364.6	2502.5	2761.5	2816.9
35°	49.4	55.4	61.5	69.5	88.7	276.2	1323.3	2648.6	2942.9	3010.5
37.5°	41.3	46.4	53.4	60.5	80.6	213.7	1237.6	2820.0	3163.6	3240.2
40°	35.3	40.3	46.4	54.4	71.6	155.2	1100.6	2975.2	3370.3	3440.8
42.5°	28.2	33.3	40.3	53.4	59.5	111.9	962.5	3124.3	3549.7	3615.2
45°	22.2	28.2	37.3	51.4	49.4	78.6	843.6	3256.4	3703.9	3791.5
47.5°	16.1	23.2	37.3	46.4	40.3	56.4	783.1	3383.4	3841.9	3901.4
50°	12.1	19.1	40.3	39.3	34.3	48.4	792.2	3524.5	3905.4	3943.7
52.5°	9.1	16.1	31.2	28.2	29.2	42.3	827.4	3710.9	4036.4	4063.7
55°	8.1	12.1	19.1	21.2	26.2	40.3	818.4	3887.3	4203.8	4251.1
57.5°	7.1	10.1	15.1	17.1	23.2	38.3	767.0	3964.9	4311.6	4377.1
58°	6.0	10.1	14.1	17.1	23.2	37.3	753.9	3943.7	4306.6	4389.2
60°	5.0	9.1	13.1	15.1	20.2	33.3	690.4	3764.3	4195.7	4311.6
62.5°	4.0	6.0	10.1	11.1	16.1	27.2	568.4	3474.1	3957.8	4101.0
65°	2.0	4.0	6.0	8.1	11.1	20.2	404.1	3130.4	3702.8	3842.9
67.5°	0.0	2.0	4.0	5.0	7.1	15.1	232.8	2656.7	3283.6	3394.4
70°	0.0	1.0	2.0	3.0	4.0	10.1	123.0	1950.2	2543.8	2743.4
72.5°	1.0	1.0	1.0	0.0	2.0	8.1	54.4	1157.0	1734.5	1940.1
75°	1.0	1.0	0.0	0.0	0.0	4.0	23.2	609.8	994.7	1092.5
77.5°	4.0	2.0	0.0	0.0	0.0	1.0	11.1	328.6	516.0	548.3
80°	1.0	0.0	0.0	0.0	0.0	0.0	4.0	109.9	309.4	316.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0	133.0	127.0
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)