

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: P401858

Luminaire Tested: **ENT-SA1F-740-U-SLL-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401858
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-740-U-SLL-HSS
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 4000K, 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: 5854 lumens
Efficiency: N/A
Efficacy: 88.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: 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

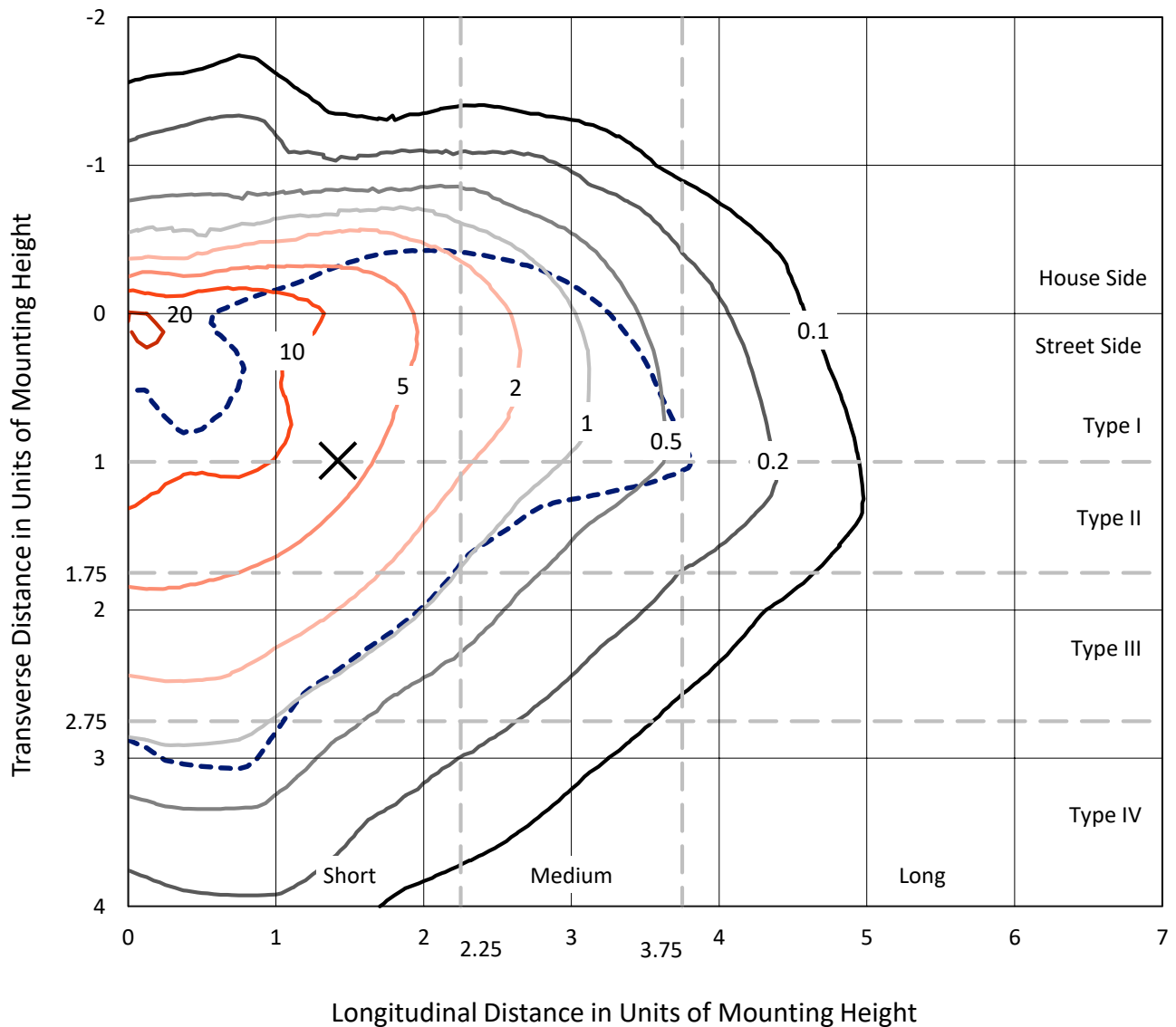


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

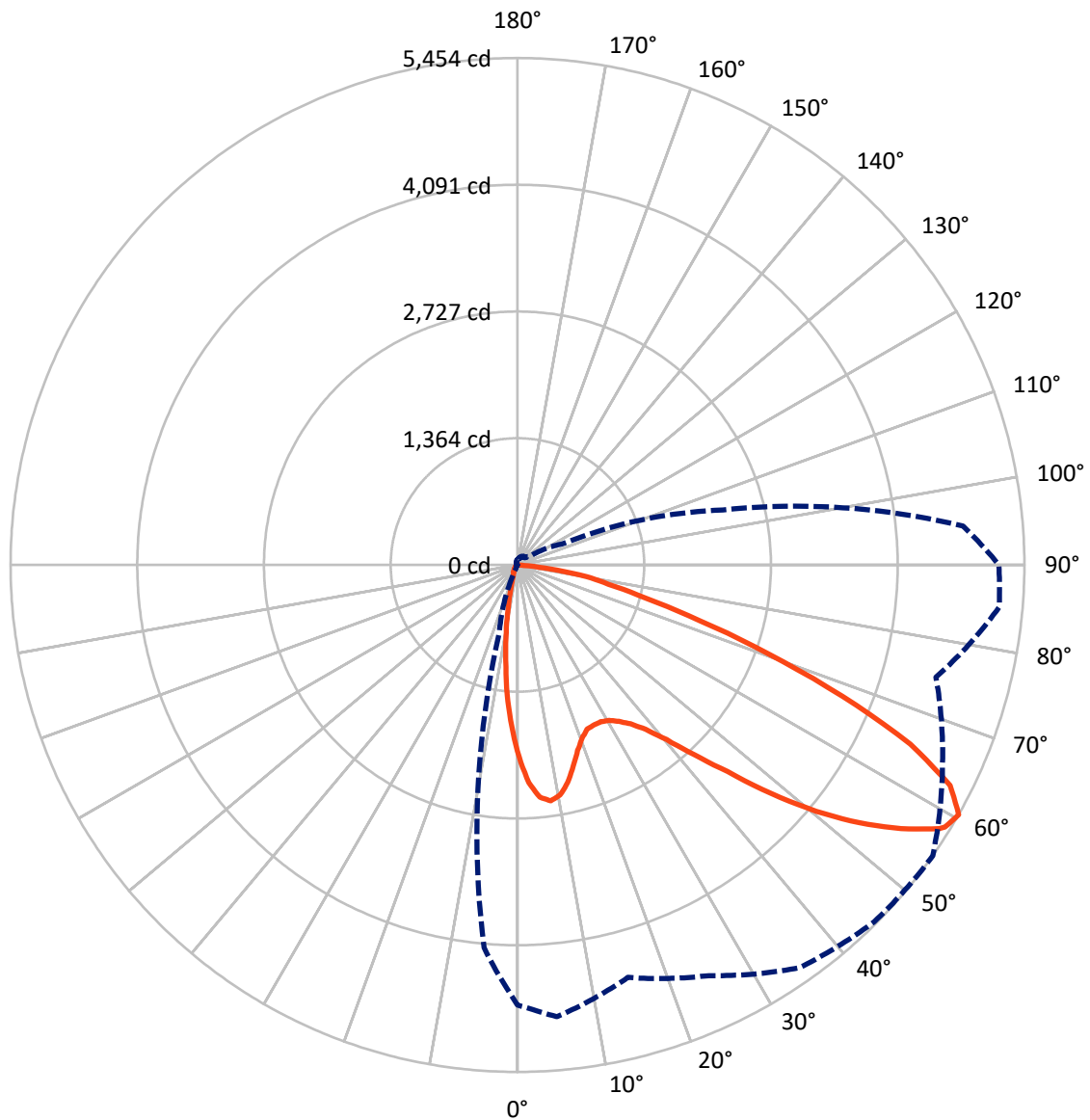


Based on 10 foot mounting height. Maximum calculated value = 24.4 fc
 Type III - Short - Semi-Cutoff

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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	1036.7	0.0	1036.7
	% Fixture	17.7	0.0	17.7
Street Side	Lumens	4817.3	0.0	4817.3
	% Fixture	82.3	0.0	82.3
Total	Lumens	5854.0	0.0	5854.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	155.6	2.7
10°-20°	295.9	5.1
20°-30°	422.1	7.2
30°-40°	619.1	10.6
40°-50°	912.8	15.6
50°-60°	1352.3	23.1
60°-70°	1441.1	24.6
70°-80°	597.7	10.2
80°-90°	57.4	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°	5854.0	100.0
0°-180°	5854.0	100.0



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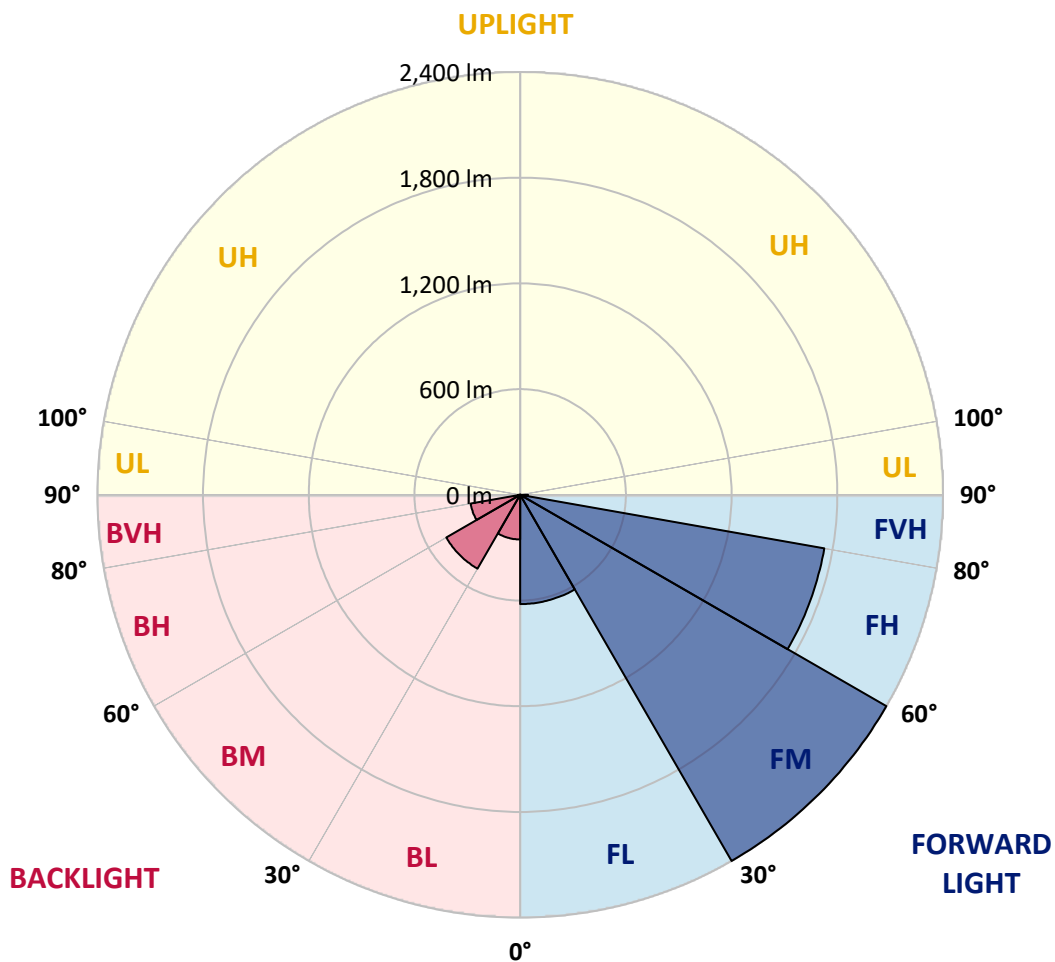
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	620.1	10.6			
FM	(30°-60°)	2400.2	41.0			
FH	(60°-80°)	1753.1	29.9			G1/1800
FVH	(80°-90°)	44.0	0.8			G1/100
BL	(0°-30°)	253.5	4.3	B1/500		
BM	(30°-60°)	484.0	8.3	B1/1000		
BH	(60°-80°)	285.8	4.9	B1/500		G1/500
BVH	(80°-90°)	13.4	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°	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4
2.5°	2159.2	2155.9	2186.9	2251.1	2290.9	2315.3	2319.7	2345.2	2319.7	2306.4	2258.8
5°	2096.1	2095.0	2154.8	2295.4	2410.5	2496.8	2538.8	2510.1	2465.8	2378.4	2272.1
7.5°	1921.3	1921.3	2034.2	2222.3	2414.9	2564.3	2615.2	2562.1	2456.9	2281.0	2090.6
10°	1778.5	1791.8	1900.3	2124.9	2338.5	2502.3	2558.8	2517.8	2380.6	2152.6	1929.0
12.5°	1693.3	1701.0	1821.7	2047.4	2246.7	2379.5	2413.8	2401.6	2302.0	2054.1	1817.2
15°	1701.0	1712.1	1850.4	2035.3	2164.8	2217.9	2230.1	2245.6	2204.6	2014.2	1780.7
17.5°	1822.8	1830.5	1970.0	2089.5	2084.0	2067.4	2071.8	2097.2	2145.9	2047.4	1854.9
20°	2017.6	2037.5	2178.0	2180.3	2041.9	1964.4	1944.5	1986.6	2118.3	2134.9	2013.1
22.5°	2267.7	2275.4	2418.2	2333.0	2046.3	1893.6	1870.4	1918.0	2127.1	2276.5	2232.3
25°	2557.6	2585.3	2662.8	2531.1	2110.5	1883.7	1868.2	1908.0	2159.2	2427.1	2458.0
27.5°	2753.5	2775.7	2849.8	2666.1	2168.1	1889.2	1860.4	1909.1	2198.0	2568.7	2699.3
30°	2928.4	2943.9	2971.6	2736.9	2233.4	1916.9	1870.4	1940.1	2219.0	2598.6	2855.4
32.5°	3093.3	3112.1	3095.5	2822.2	2305.3	1968.9	1889.2	2005.4	2264.4	2658.4	2991.5
35°	3305.8	3306.9	3250.5	2907.4	2387.2	2030.8	1944.5	2098.4	2352.9	2751.3	3137.6
37.5°	3558.1	3560.3	3417.6	2994.8	2480.2	2134.9	2075.1	2242.2	2481.3	2858.7	3346.7
40°	3778.4	3787.2	3598.0	3095.5	2594.2	2337.4	2331.9	2470.2	2646.2	3001.4	3571.4
42.5°	3969.8	3995.3	3764.0	3179.6	2755.8	2648.4	2661.7	2787.8	2846.5	3121.0	3710.9
45°	4163.5	4162.4	3900.1	3263.7	3025.8	3049.0	3175.2	3169.7	3073.4	3185.2	3820.4
47.5°	4284.1	4278.6	3983.1	3401.0	3389.9	3612.4	3746.3	3673.2	3324.6	3253.8	3957.7
50°	4330.6	4328.4	4048.4	3575.8	3760.7	4122.6	4314.0	4167.9	3632.3	3368.9	4121.5
52.5°	4462.3	4451.3	4198.9	3775.0	4096.0	4613.9	4772.2	4609.5	3938.8	3575.8	4311.8
55°	4668.2	4671.5	4457.9	4008.6	4364.9	4960.4	5154.0	5009.1	4252.0	3860.3	4573.0
57.5°	4806.5	4816.5	4744.5	4268.6	4652.7	5202.7	5390.9	5349.9	4669.3	4200.0	4879.6
58°	4819.8	4827.5	4789.9	4318.5	4695.8	5230.4	5423.0	5394.2	4761.1	4308.5	4952.6
60°	4734.6	4757.8	4878.5	4592.9	4874.0	5289.1	5428.5	5454.0	5045.6	4660.4	5202.7
62.5°	4503.3	4511.0	4730.2	4900.6	4995.8	5144.1	5157.4	5223.8	5162.9	5073.2	5426.3
65°	4220.0	4220.0	4456.8	4915.0	4680.4	4656.0	4578.5	4644.9	4820.9	5332.2	5410.8
67.5°	3727.5	3730.8	4032.9	4378.2	3880.2	3796.1	3746.3	3770.6	4145.8	5116.4	5109.8
70°	3012.5	3010.3	3321.3	3544.8	2879.7	2807.8	2867.5	2859.8	3367.8	4546.4	4461.2
72.5°	2130.5	2149.3	2469.1	2738.0	1955.6	1685.5	1948.9	2050.8	2533.3	3832.6	3451.9
75°	1199.7	1225.1	1486.3	1902.5	1234.0	1139.9	1275.0	1419.9	1831.6	3051.2	2318.6
77.5°	602.1	612.0	761.4	915.3	748.1	868.8	861.0	999.4	1256.1	2058.5	1325.9
80°	347.5	367.4	418.3	472.6	418.3	551.2	639.7	752.6	773.6	1064.7	739.3
82.5°	139.4	156.0	195.9	222.5	173.8	163.8	111.8	351.9	465.9	514.6	283.3
85°	0.0	0.0	1.1	2.2	3.3	3.3	5.5	62.0	114.0	25.5	46.5
87.5°	0.0	0.0	1.1	1.1	2.2	3.3	4.4	7.7	10.0	12.2	42.1
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4
2.5°	2241.1	2228.9	2188.0	2126.0	2087.3	2027.5	2003.2	1946.7	1918.0	1870.4	1870.4
5°	2219.0	2169.2	2066.3	1932.3	1837.2	1737.6	1705.5	1639.1	1591.5	1535.0	1511.8
7.5°	2017.6	1947.8	1787.4	1631.3	1479.7	1379.0	1279.4	1211.9	1147.7	1101.2	1107.8
10°	1832.7	1733.1	1557.2	1359.1	1201.9	1096.8	1007.1	928.5	862.1	796.8	786.9
12.5°	1712.1	1598.1	1387.8	1175.3	1058.0	980.6	897.6	811.2	729.3	657.4	628.6
15°	1661.2	1537.2	1302.6	1102.3	994.9	895.3	799.1	692.8	598.7	512.4	489.2
17.5°	1716.5	1568.2	1294.9	1053.6	904.2	779.1	645.2	529.0	418.3	356.4	337.6
20°	1867.0	1674.5	1320.3	1004.9	803.5	641.9	478.1	346.4	284.4	246.8	234.6
22.5°	2085.1	1850.4	1363.5	957.3	701.7	478.1	329.8	250.1	213.6	193.7	188.1
25°	2321.9	2077.3	1443.2	917.5	599.8	355.3	244.6	204.7	182.6	168.2	162.7
27.5°	2588.6	2302.0	1540.6	887.6	505.8	284.4	210.3	180.4	162.7	152.7	148.3
30°	2755.8	2463.6	1614.7	834.5	441.6	259.0	200.3	170.4	151.6	143.9	140.6
32.5°	2909.6	2590.8	1685.5	773.6	392.9	229.1	194.8	179.3	157.2	141.7	135.0
35°	3078.9	2721.4	1719.9	737.1	360.8	199.2	160.5	139.4	127.3	125.1	121.7
37.5°	3331.3	2876.4	1742.0	717.2	340.9	181.5	149.4	126.2	111.8	98.5	93.0
40°	3570.3	3036.9	1753.1	698.3	330.9	170.4	142.8	119.5	104.0	91.9	86.3
42.5°	3757.3	3182.9	1759.7	685.1	313.2	163.8	137.2	115.1	98.5	86.3	80.8
45°	3910.1	3352.3	1754.2	680.6	298.8	168.2	135.0	111.8	94.1	81.9	76.4
47.5°	4059.5	3536.0	1775.2	675.1	284.4	161.6	136.1	110.7	90.8	78.6	73.0
50°	4255.4	3758.4	1851.6	659.6	274.5	151.6	147.2	111.8	89.6	76.4	71.9
52.5°	4508.8	4066.1	1989.9	643.0	262.3	142.8	153.8	111.8	87.4	74.2	68.6
55°	4816.5	4411.4	2142.6	618.7	241.3	131.7	147.2	111.8	85.2	73.0	66.4
57.5°	5067.7	4719.1	2263.3	589.9	202.5	118.4	135.0	107.4	79.7	68.6	63.1
58°	5089.8	4754.5	2279.9	582.1	198.1	116.2	131.7	106.2	77.5	67.5	62.0
60°	5179.5	4812.1	2286.5	540.1	164.9	110.7	114.0	102.9	73.0	63.1	58.7
62.5°	5148.5	4621.7	2145.9	465.9	147.2	100.7	95.2	105.1	67.5	57.5	53.1
65°	4994.7	4247.6	1880.3	417.2	148.3	89.6	81.9	91.9	62.0	52.0	47.6
67.5°	4628.3	3679.9	1527.3	390.7	154.9	79.7	70.8	68.6	55.3	46.5	43.2
70°	3947.7	3015.8	1157.6	367.4	163.8	70.8	65.3	60.9	50.9	43.2	38.7
72.5°	2907.4	2233.4	842.2	344.2	159.4	63.1	60.9	55.3	46.5	38.7	36.5
75°	1813.9	1297.1	576.6	281.1	142.8	55.3	56.4	52.0	42.1	36.5	33.2
77.5°	1059.1	910.8	284.4	209.2	98.5	48.7	49.8	47.6	43.2	34.3	32.1
80°	634.2	566.6	121.7	89.6	54.2	43.2	42.1	44.3	40.9	32.1	29.9
82.5°	274.5	245.7	58.7	49.8	44.3	37.6	36.5	37.6	35.4	26.6	25.5
85°	15.5	40.9	27.7	36.5	33.2	27.7	27.7	28.8	25.5	21.0	21.0
87.5°	14.4	31.0	17.7	22.1	24.3	21.0	22.1	22.1	21.0	18.8	17.7
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°	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4
2.5°	1844.9	1832.7	1796.2	1782.9	1725.4	1739.8	1744.2	1738.7	1740.9	1745.3	1761.9
5°	1528.4	1508.5	1460.9	1429.9	1413.3	1402.2	1350.2	1351.3	1359.1	1329.2	1367.9
7.5°	1085.7	1107.8	1112.3	1083.5	1065.8	1028.2	980.6	954.0	908.6	934.1	939.6
10°	776.9	765.9	786.9	776.9	749.3	734.9	684.0	679.5	675.1	671.8	703.9
12.5°	592.1	558.9	534.5	540.1	519.1	483.6	474.8	475.9	480.3	480.3	489.2
15°	469.3	418.3	379.6	356.4	359.7	324.3	314.3	281.1	276.7	266.7	268.9
17.5°	328.7	307.7	284.4	257.9	246.8	214.7	176.0	158.3	145.0	147.2	153.8
20°	226.9	218.0	211.4	198.1	187.0	149.4	125.1	117.3	116.2	118.4	120.6
22.5°	182.6	173.8	167.1	162.7	148.3	120.6	107.4	101.8	101.8	101.8	102.9
25°	157.2	148.3	139.4	139.4	126.2	105.1	95.2	90.8	89.6	88.5	90.8
27.5°	146.1	133.9	125.1	119.5	109.6	93.0	84.1	79.7	78.6	78.6	79.7
30°	135.0	122.8	114.0	106.2	95.2	83.0	74.2	70.8	68.6	68.6	69.7
32.5°	128.4	116.2	105.1	95.2	83.0	73.0	65.3	60.9	58.7	59.8	60.9
35°	114.0	104.0	94.1	84.1	73.0	64.2	56.4	52.0	50.9	50.9	52.0
37.5°	89.6	81.9	79.7	74.2	64.2	55.3	47.6	43.2	42.1	42.1	43.2
40°	80.8	70.8	66.4	64.2	58.7	47.6	38.7	34.3	34.3	33.2	35.4
42.5°	74.2	64.2	56.4	54.2	50.9	40.9	31.0	27.7	26.6	26.6	27.7
45°	69.7	58.7	48.7	43.2	43.2	33.2	25.5	21.0	19.9	19.9	21.0
47.5°	67.5	55.3	43.2	35.4	34.3	27.7	19.9	15.5	14.4	14.4	14.4
50°	65.3	50.9	38.7	29.9	26.6	23.2	15.5	12.2	11.1	11.1	11.1
52.5°	62.0	48.7	35.4	26.6	21.0	17.7	12.2	8.9	7.7	6.6	7.7
55°	59.8	45.4	34.3	24.3	17.7	13.3	8.9	6.6	5.5	5.5	5.5
57.5°	56.4	42.1	31.0	23.2	16.6	10.0	6.6	4.4	3.3	3.3	4.4
58°	55.3	42.1	29.9	22.1	15.5	10.0	6.6	4.4	3.3	3.3	4.4
60°	52.0	38.7	28.8	19.9	14.4	8.9	5.5	3.3	2.2	2.2	3.3
62.5°	48.7	35.4	25.5	17.7	12.2	7.7	4.4	2.2	1.1	1.1	1.1
65°	43.2	32.1	22.1	16.6	10.0	5.5	3.3	1.1	0.0	0.0	0.0
67.5°	38.7	29.9	19.9	14.4	8.9	4.4	2.2	0.0	0.0	0.0	0.0
70°	35.4	27.7	17.7	12.2	7.7	3.3	1.1	0.0	0.0	0.0	0.0
72.5°	33.2	25.5	16.6	11.1	5.5	3.3	1.1	0.0	0.0	0.0	0.0
75°	32.1	24.3	16.6	10.0	5.5	3.3	2.2	1.1	0.0	0.0	1.1
77.5°	31.0	24.3	16.6	10.0	6.6	3.3	3.3	2.2	2.2	1.1	3.3
80°	28.8	22.1	14.4	8.9	5.5	4.4	3.3	2.2	0.0	0.0	0.0
82.5°	24.3	17.7	12.2	8.9	5.5	3.3	1.1	0.0	0.0	0.0	0.0
85°	19.9	14.4	10.0	5.5	3.3	1.1	0.0	0.0	0.0	0.0	0.0
87.5°	17.7	11.1	7.7	4.4	2.2	1.1	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-740-U-SLL-HSS

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4	2067.4
2.5°	1776.3	1827.2	1848.2	1919.1	1950.1	2014.2	2069.6	2117.2	2140.4	2159.2
5°	1377.9	1426.6	1478.6	1583.7	1674.5	1771.9	1893.6	2019.8	2056.3	2096.1
7.5°	961.7	1033.7	1121.1	1215.2	1344.7	1491.9	1666.7	1822.8	1901.4	1921.3
10°	747.0	832.3	925.2	1018.2	1125.5	1282.7	1458.7	1660.1	1744.2	1778.5
12.5°	561.1	675.1	785.8	895.3	988.3	1124.4	1315.9	1556.1	1649.0	1693.3
15°	337.6	465.9	602.1	749.3	878.7	1038.1	1253.9	1533.9	1651.2	1701.0
17.5°	168.2	230.2	355.3	576.6	768.1	966.2	1252.8	1613.6	1758.6	1822.8
20°	125.1	141.7	189.3	359.7	638.6	906.4	1266.1	1749.7	1963.3	2017.6
22.5°	107.4	119.5	136.1	210.3	478.1	851.1	1312.6	1930.1	2195.7	2267.7
25°	94.1	104.0	117.3	145.0	327.6	785.8	1400.0	2184.7	2459.1	2557.6
27.5°	83.0	91.9	102.9	121.7	219.1	662.9	1449.8	2398.3	2671.6	2753.5
30°	73.0	79.7	90.8	104.0	161.6	512.4	1496.3	2586.4	2864.2	2928.4
32.5°	64.2	69.7	78.6	88.5	122.8	388.5	1498.5	2748.0	3032.4	3093.3
35°	54.2	60.9	67.5	76.4	97.4	303.2	1453.1	2908.5	3231.6	3305.8
37.5°	45.4	50.9	58.7	66.4	88.5	234.6	1359.1	3096.6	3474.0	3558.1
40°	38.7	44.3	50.9	59.8	78.6	170.4	1208.5	3267.1	3700.9	3778.4
42.5°	31.0	36.5	44.3	58.7	65.3	122.8	1056.9	3430.9	3897.9	3969.8
45°	24.3	31.0	40.9	56.4	54.2	86.3	926.3	3575.8	4067.2	4163.5
47.5°	17.7	25.5	40.9	50.9	44.3	62.0	859.9	3715.3	4218.8	4284.1
50°	13.3	21.0	44.3	43.2	37.6	53.1	869.9	3870.2	4288.6	4330.6
52.5°	10.0	17.7	34.3	31.0	32.1	46.5	908.6	4075.0	4432.4	4462.3
55°	8.9	13.3	21.0	23.2	28.8	44.3	898.7	4268.6	4616.2	4668.2
57.5°	7.7	11.1	16.6	18.8	25.5	42.1	842.2	4353.9	4734.6	4806.5
58°	6.6	11.1	15.5	18.8	25.5	40.9	827.8	4330.6	4729.0	4819.8
60°	5.5	10.0	14.4	16.6	22.1	36.5	758.1	4133.6	4607.3	4734.6
62.5°	4.4	6.6	11.1	12.2	17.7	29.9	624.2	3814.9	4346.1	4503.3
65°	2.2	4.4	6.6	8.9	12.2	22.1	443.8	3437.5	4066.1	4220.0
67.5°	0.0	2.2	4.4	5.5	7.7	16.6	255.7	2917.3	3605.7	3727.5
70°	0.0	1.1	2.2	3.3	4.4	11.1	135.0	2141.5	2793.4	3012.5
72.5°	1.1	1.1	1.1	0.0	2.2	8.9	59.8	1270.5	1904.7	2130.5
75°	1.1	1.1	0.0	0.0	0.0	4.4	25.5	669.6	1092.3	1199.7
77.5°	4.4	2.2	0.0	0.0	0.0	1.1	12.2	360.8	566.6	602.1
80°	1.1	0.0	0.0	0.0	0.0	0.0	4.4	120.6	339.8	347.5
82.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.2	146.1	139.4
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)