

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: P401836

Luminaire Tested: **ENT-SA1F-735-U-SLR**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401836
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-SA1F-735-U-SLR
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 3500K, 1200mA LIGHTSQUARE WITH 16 LEDS AND SPILL LIGHT ELIMINATOR RIGHT OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6467 lumens
Efficiency: N/A
Efficacy: 97.8 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 - G2

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

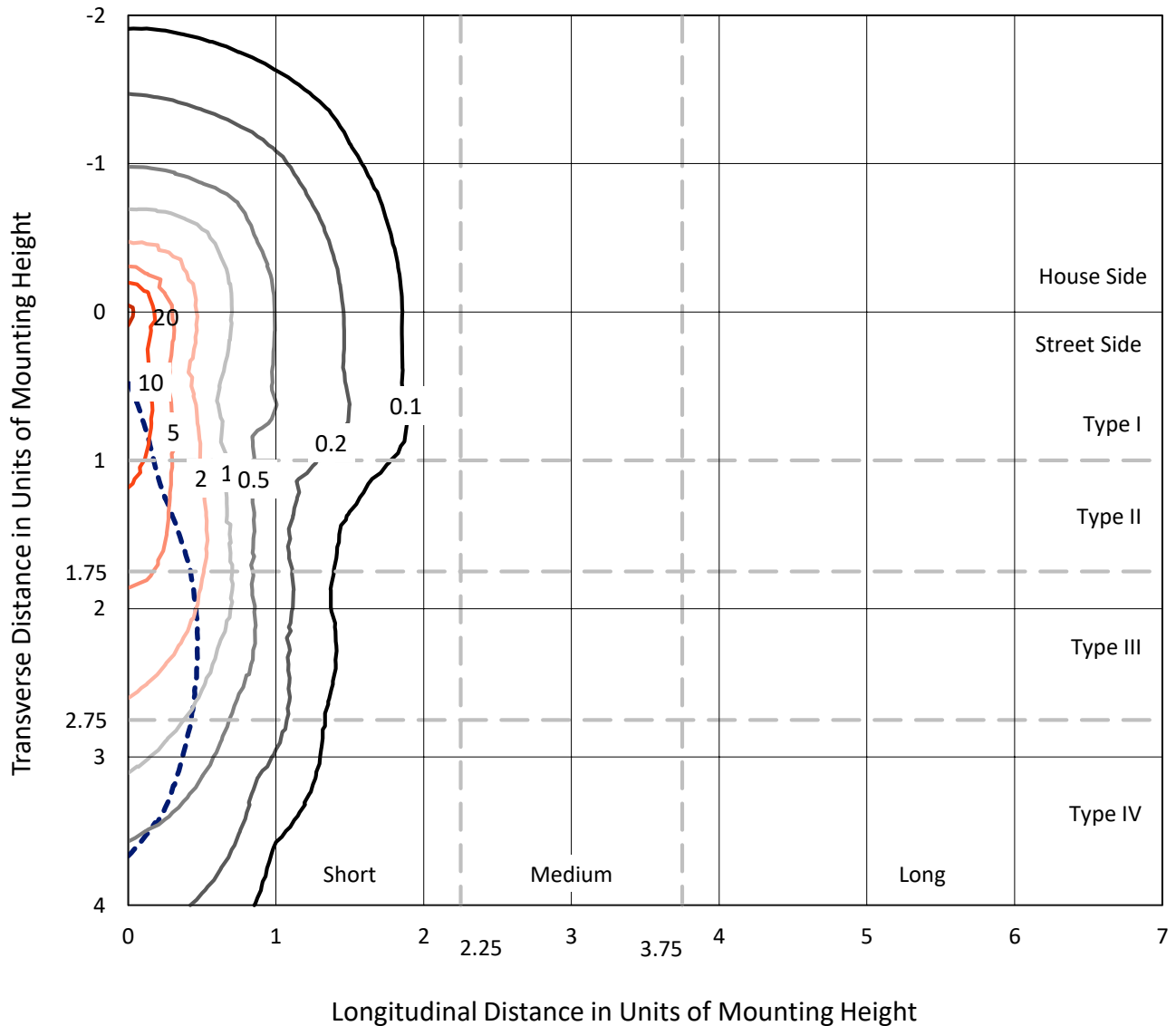


REPORT NUMBER: P401836

CATALOG NUMBER: ENT-SA1F-735-U-SLR

Iso-Footcandle Lines of Horizontal Illumination

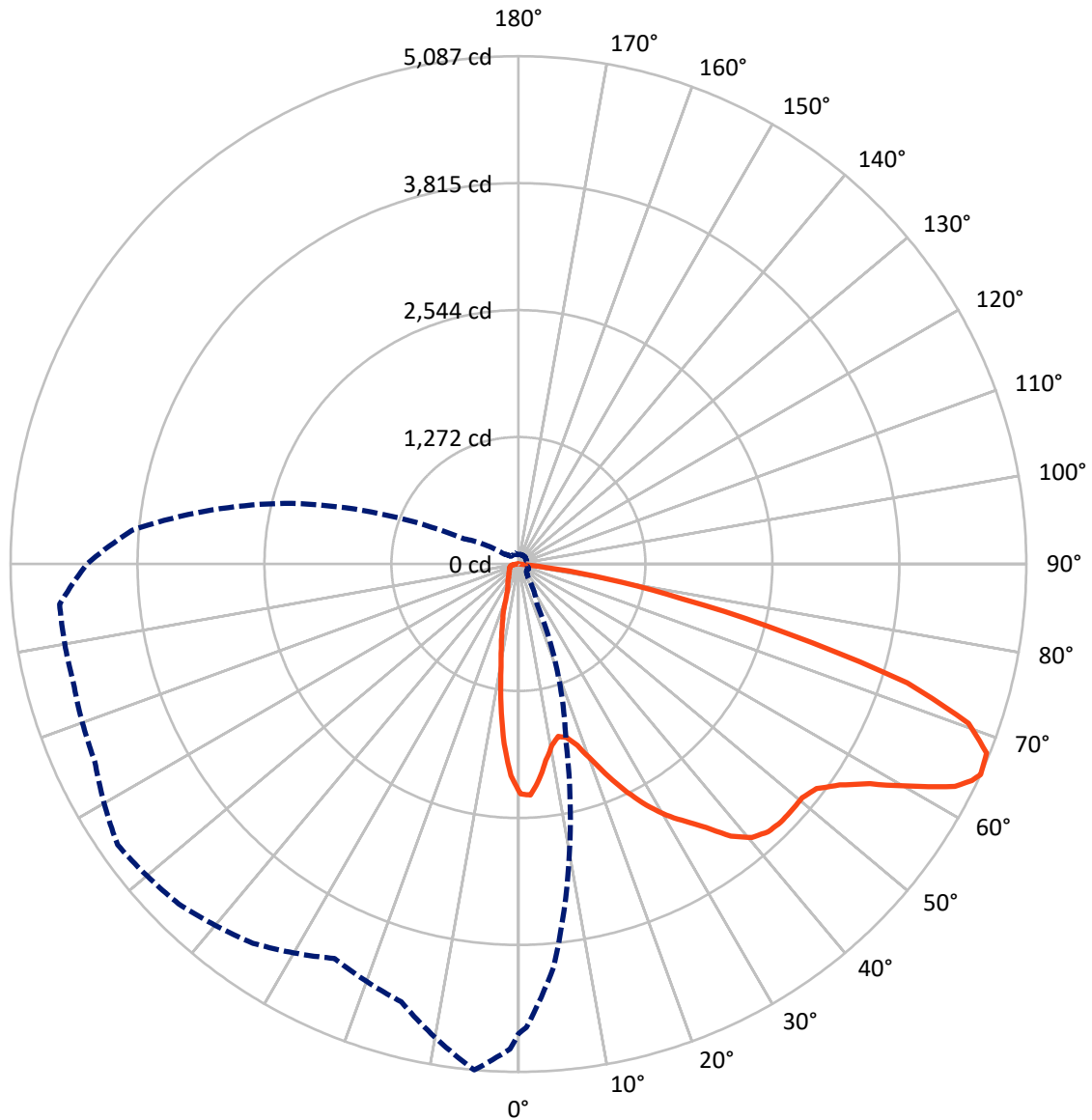
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 23 fc
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P401836
CATALOG NUMBER: ENT-SA1F-735-U-SLR

Luminous Intensity Polar Plot



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

REPORT NUMBER: P401836

CATALOG NUMBER: ENT-SA1F-735-U-SLR

FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1326.9	0.0	1326.9
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	5140.1	0.0	5140.1
	% Fixture	79.5	0.0	79.5
Total	Lumens	6467.0	0.0	6467.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.6	2.7
10°-20°	349.7	5.4
20°-30°	484.9	7.5
30°-40°	677.8	10.5
40°-50°	922.3	14.3
50°-60°	1261.2	19.5
60°-70°	1542.0	23.8
70°-80°	931.0	14.4
80°-90°	122.8	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°	6467.0	100.0
0°-180°	6467.0	100.0



REPORT NUMBER: P401836

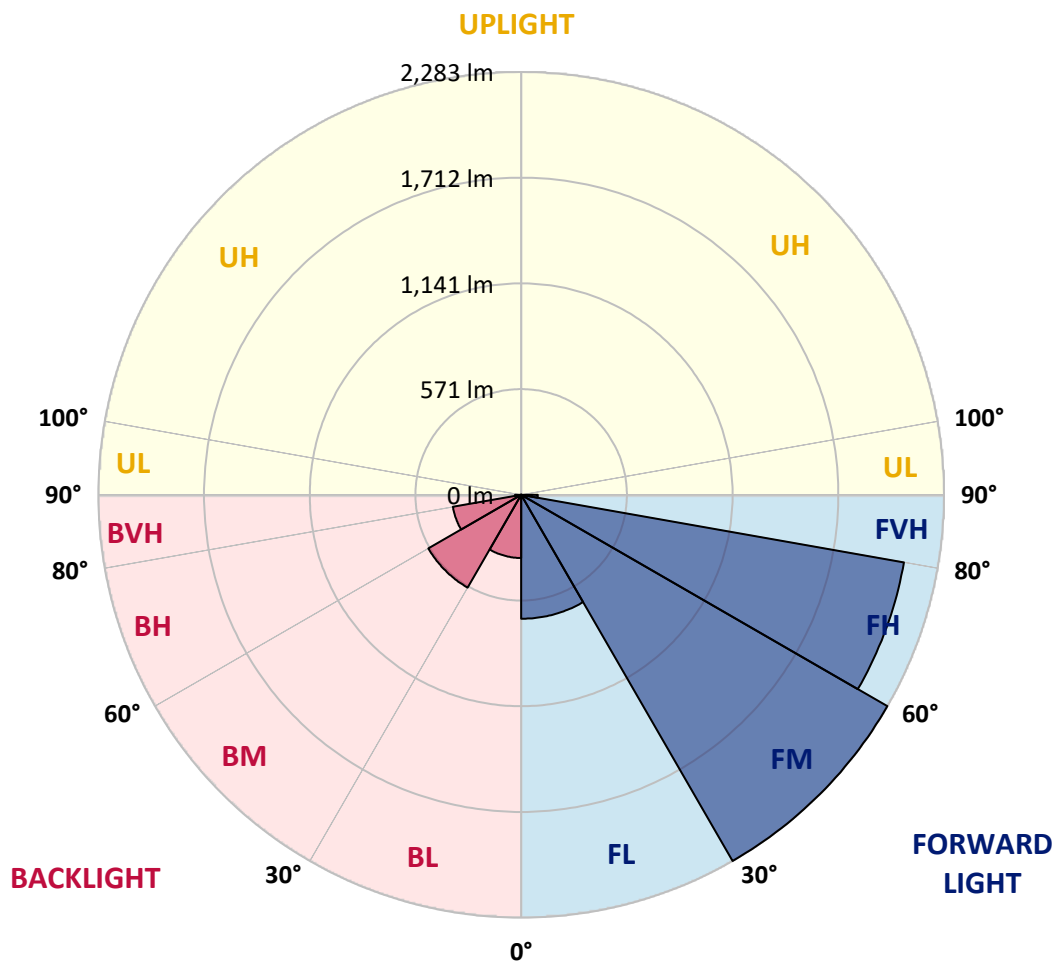
CATALOG NUMBER: ENT-SA1F-735-U-SLR

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	669.1	10.3			
FM	(30°-60°)	2282.8	35.3			
FH	(60°-80°)	2098.5	32.4			G2/5000
FVH	(80°-90°)	89.7	1.4			G1/100
BL	(0°-30°)	341.0	5.3	B1/500		
BM	(30°-60°)	578.4	8.9	B1/1000		
BH	(60°-80°)	374.5	5.8	B1/500		G1/500
BVH	(80°-90°)	33.0	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-G2

Type IV Short





REPORT NUMBER: P401836

CATALOG NUMBER: ENT-SA1F-735-U-SLR

CANDELA DISTRIBUTION (FULL):

	0°	1°	5°	15°	25°	35°	45°	55°	65°	75°	85°
0°	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3
2.5°	2295.9	2289.4	2273.2	2229.9	2183.4	2128.3	2118.5	2059.1	2065.5	2048.2	2052.6
5°	2096.9	2088.3	2043.9	1957.4	1839.5	1771.4	1718.4	1687.0	1661.1	1648.1	1664.3
7.5°	1903.3	1891.4	1838.4	1686.0	1555.1	1447.0	1360.4	1307.5	1255.5	1214.5	1195.0
10°	1746.5	1742.2	1671.9	1500.0	1335.6	1203.6	1147.4	1091.2	1046.8	988.4	940.8
12.5°	1667.6	1654.6	1571.3	1371.3	1211.2	1130.1	1077.1	1005.7	945.2	873.8	812.2
15°	1670.8	1655.7	1551.9	1342.1	1167.9	1069.5	988.4	903.0	814.3	741.9	679.1
17.5°	1763.8	1753.0	1626.5	1369.1	1131.2	994.9	868.4	758.1	660.8	569.9	513.7
20°	1920.6	1904.4	1729.2	1401.5	1084.7	909.5	737.5	586.1	481.2	401.2	356.9
22.5°	2125.0	2094.7	1875.2	1441.6	1038.2	812.2	595.9	427.2	334.2	294.2	282.3
25°	2343.5	2319.7	2051.5	1492.4	988.4	706.2	441.2	310.4	277.9	261.7	253.1
27.5°	2544.6	2505.7	2240.7	1548.6	922.5	600.2	335.2	267.1	245.5	237.9	232.5
30°	2688.4	2654.9	2371.6	1613.5	865.1	489.9	286.6	242.2	224.9	213.0	210.9
32.5°	2825.8	2778.2	2466.8	1643.8	817.6	430.4	265.0	224.9	208.7	196.8	192.5
35°	2988.0	2940.4	2576.0	1648.1	781.9	405.5	244.4	212.0	194.7	183.8	178.4
37.5°	3179.4	3114.5	2699.3	1651.4	746.2	395.8	227.1	201.1	183.8	171.9	167.6
40°	3361.1	3311.4	2825.8	1645.9	722.4	381.7	216.3	189.3	173.0	162.2	156.8
42.5°	3498.4	3445.5	2933.9	1629.7	708.3	358.0	220.6	180.6	165.5	153.6	147.1
45°	3568.7	3521.2	3032.3	1614.6	700.8	337.4	216.3	177.4	160.1	146.0	139.5
47.5°	3621.7	3575.2	3132.9	1608.1	687.8	322.3	199.0	189.3	154.6	138.4	131.9
50°	3707.2	3667.1	3269.2	1644.9	667.2	312.5	182.8	202.2	152.5	131.9	124.4
52.5°	3860.7	3834.8	3494.1	1730.3	645.6	296.3	166.5	193.6	154.6	127.6	119.0
55°	4147.3	4131.1	3803.4	1842.8	625.1	275.8	149.2	175.2	153.6	120.0	113.6
57.5°	4456.6	4452.3	4178.7	1941.2	594.8	241.2	138.4	148.2	146.0	113.6	106.0
60°	4664.2	4650.2	4351.7	1996.3	555.9	199.0	129.8	125.4	149.2	107.1	98.4
62.5°	4735.6	4689.1	4299.8	1975.8	497.5	171.9	120.0	114.6	138.4	100.6	90.8
64°	4731.3	4663.1	4164.6	1897.9	459.6	166.5	114.6	107.1	122.2	96.2	87.6
65°	4706.4	4641.5	4052.1	1837.4	439.1	166.5	111.4	103.8	111.4	94.1	85.4
67.5°	4547.4	4462.0	3668.2	1556.2	386.1	168.7	103.8	95.2	93.0	86.5	80.0
70°	4185.2	4073.8	3141.6	1224.2	358.0	169.8	95.2	86.5	83.3	78.9	73.5
72.5°	3361.1	3211.9	2500.3	874.9	328.8	166.5	86.5	78.9	75.7	71.4	66.0
75°	2253.7	2090.4	1842.8	576.4	269.3	149.2	74.6	68.1	67.0	62.7	58.4
77.5°	1270.7	1202.6	1087.9	316.9	186.0	102.7	59.5	55.2	56.2	54.1	49.7
80°	664.0	632.6	581.8	153.6	89.8	49.7	37.9	37.9	43.3	43.3	41.1
82.5°	234.7	235.8	228.2	34.6	18.4	15.1	13.0	18.4	24.9	30.3	30.3
85°	1.1	1.1	0.0	0.0	0.0	0.0	0.0	0.0	2.2	4.3	7.6
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: P401836

CATALOG NUMBER: ENT-SA1F-735-U-SLR

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3
2.5°	2015.8	2022.3	2039.6	2036.3	2053.6	2046.1	2068.8	2080.7	2087.2	2120.7	2136.9
5°	1651.4	1653.5	1715.2	1728.1	1760.6	1743.3	1783.3	1768.1	1800.6	1804.9	1859.0
7.5°	1213.4	1217.7	1248.0	1319.4	1389.6	1418.8	1430.7	1449.1	1434.0	1428.6	1436.1
10°	922.5	925.7	929.0	979.8	1041.4	1103.1	1103.1	1104.1	1077.1	1050.1	1044.7
12.5°	788.4	767.8	735.4	736.5	779.7	808.9	831.6	807.8	803.5	816.5	830.5
15°	648.9	628.3	606.7	580.7	581.8	602.4	614.3	613.2	634.8	644.5	673.7
17.5°	503.9	474.7	475.8	460.7	440.1	453.1	456.4	475.8	503.9	516.9	522.3
20°	338.5	338.5	347.1	365.5	355.8	364.4	365.5	380.7	393.6	386.1	393.6
22.5°	280.1	279.0	282.3	294.2	303.9	311.5	313.6	312.5	299.6	294.2	305.0
25°	254.1	253.1	254.1	260.6	271.4	281.2	276.8	270.4	255.2	254.1	256.3
27.5°	232.5	233.6	235.8	240.1	246.6	258.5	254.1	241.2	233.6	231.4	231.4
30°	214.1	214.1	218.4	222.8	230.3	241.2	233.6	222.8	215.2	213.0	212.0
32.5°	195.7	199.0	202.2	206.6	213.0	223.9	217.4	207.6	200.1	195.7	192.5
35°	177.4	179.5	186.0	192.5	197.9	206.6	202.2	193.6	186.0	176.3	171.9
37.5°	166.5	166.5	169.8	179.5	183.8	190.3	188.2	180.6	168.7	161.1	160.1
40°	156.8	156.8	157.9	163.3	170.9	178.4	174.1	162.2	154.6	151.4	150.3
42.5°	147.1	147.1	148.2	148.2	157.9	170.9	160.1	148.2	144.9	142.7	141.7
45°	138.4	138.4	138.4	137.3	142.7	159.0	147.1	137.3	135.2	135.2	134.1
47.5°	131.9	130.9	129.8	127.6	130.9	143.8	134.1	128.7	127.6	128.7	127.6
50°	123.3	122.2	121.1	120.0	122.2	127.6	125.4	120.0	121.1	121.1	122.2
52.5°	115.7	114.6	113.6	112.5	114.6	119.0	119.0	114.6	114.6	115.7	116.8
55°	111.4	109.2	108.1	108.1	109.2	114.6	113.6	110.3	110.3	112.5	113.6
57.5°	104.9	102.7	102.7	101.7	103.8	110.3	109.2	106.0	106.0	107.1	109.2
60°	98.4	97.3	96.2	98.4	99.5	106.0	104.9	102.7	101.7	104.9	104.9
62.5°	90.8	90.8	90.8	93.0	94.1	101.7	100.6	99.5	99.5	100.6	99.5
64°	86.5	86.5	87.6	88.7	90.8	97.3	97.3	97.3	97.3	97.3	96.2
65°	84.4	84.4	86.5	87.6	88.7	96.2	95.2	96.2	97.3	96.2	94.1
67.5°	78.9	78.9	82.2	82.2	83.3	91.9	90.8	93.0	95.2	93.0	90.8
70°	72.5	73.5	76.8	75.7	77.9	87.6	84.4	88.7	93.0	89.8	87.6
72.5°	66.0	67.0	71.4	69.2	70.3	82.2	77.9	82.2	88.7	86.5	84.4
75°	59.5	60.6	63.8	62.7	64.9	75.7	71.4	75.7	82.2	82.2	81.1
77.5°	50.8	53.0	55.2	54.1	58.4	68.1	63.8	67.0	72.5	76.8	74.6
80°	41.1	44.3	45.4	46.5	50.8	58.4	55.2	56.2	61.6	64.9	66.0
82.5°	28.1	33.5	35.7	36.8	43.3	45.4	46.5	45.4	48.7	53.0	49.7
85°	8.7	10.8	20.5	26.0	32.4	32.4	37.9	35.7	37.9	33.5	28.1
87.5°	0.0	0.0	0.0	7.6	19.5	19.5	27.0	24.9	26.0	19.5	17.3
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: P401836

CATALOG NUMBER: ENT-SA1F-735-U-SLR

CANDELA DISTRIBUTION (continued):

	185°	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°
0°	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3
2.5°	2140.2	2158.5	2199.6	2247.2	2273.2	2329.4	2364.0	2400.8	2437.6	2445.1	2457.0
5°	1869.8	1891.4	1937.9	2001.7	2065.5	2140.2	2226.7	2318.6	2420.3	2463.5	2505.7
7.5°	1456.7	1461.0	1527.0	1642.7	1698.9	1804.9	1928.2	2069.9	2226.7	2307.8	2394.3
10°	1076.0	1120.4	1170.1	1266.4	1408.0	1530.2	1682.7	1848.2	2011.5	2129.3	2219.1
12.5°	845.7	901.9	984.1	1090.1	1197.1	1312.9	1489.1	1666.5	1867.6	1973.6	2083.9
15°	696.4	767.8	874.9	986.3	1085.8	1188.5	1345.3	1562.7	1820.1	1928.2	2026.6
17.5°	551.5	630.5	745.1	861.9	980.9	1106.3	1288.0	1557.3	1870.9	1996.3	2098.0
20°	422.8	484.5	580.7	698.6	838.1	1010.1	1242.6	1598.4	2021.2	2178.0	2245.1
22.5°	313.6	349.3	425.0	548.3	712.7	924.6	1197.1	1656.8	2207.2	2391.1	2441.9
25°	259.5	269.3	303.9	410.9	580.7	828.4	1162.5	1732.5	2393.2	2599.8	2636.5
27.5°	233.6	239.0	255.2	295.2	454.2	749.4	1117.1	1820.1	2589.0	2806.3	2803.1
30°	210.9	212.0	221.7	249.8	368.8	679.1	1064.1	1917.4	2763.1	2954.5	2944.7
32.5°	190.3	190.3	203.3	224.9	314.7	615.3	1000.3	1987.7	2914.5	3075.6	3044.2
35°	171.9	175.2	187.1	208.7	279.0	544.0	940.8	2013.6	3044.2	3221.6	3132.9
37.5°	159.0	163.3	175.2	195.7	248.7	491.0	892.2	2043.9	3204.3	3397.9	3232.4
40°	150.3	153.6	164.4	181.7	224.9	446.6	839.2	2064.5	3363.3	3586.0	3337.3
42.5°	141.7	144.9	155.7	171.9	214.1	394.7	788.4	2076.4	3528.7	3749.3	3424.9
45°	134.1	138.4	149.2	164.4	215.2	348.2	746.2	2072.0	3628.2	3867.2	3493.0
47.5°	128.7	133.0	144.9	164.4	208.7	321.2	710.5	2056.9	3701.8	3944.0	3524.4
50°	123.3	127.6	141.7	181.7	197.9	313.6	683.5	2054.7	3778.5	3959.1	3524.4
52.5°	117.9	125.4	142.7	182.8	181.7	310.4	661.8	2112.0	3884.5	3985.1	3555.8
55°	114.6	121.1	147.1	168.7	159.0	299.6	648.9	2191.0	4063.0	4127.8	3713.6
57.5°	110.3	115.7	144.9	157.9	141.7	274.7	638.0	2266.7	4297.6	4392.8	4028.3
60°	104.9	111.4	140.6	135.2	128.7	233.6	631.6	2329.4	4385.2	4563.7	4366.8
62.5°	99.5	107.1	153.6	117.9	119.0	194.7	619.7	2390.0	4200.3	4522.6	4584.2
64°	96.2	103.8	142.7	110.3	113.6	177.4	607.8	2393.2	4037.0	4425.2	4625.3
65°	94.1	100.6	133.0	106.0	109.2	173.0	597.0	2347.8	3883.4	4321.4	4613.4
67.5°	90.8	95.2	102.7	98.4	101.7	165.5	523.4	2147.7	3556.8	4054.3	4428.5
70°	86.5	89.8	90.8	89.8	95.2	160.1	442.3	1863.3	3200.0	3774.2	4140.8
72.5°	82.2	82.2	82.2	81.1	87.6	152.5	398.0	1505.4	2765.2	3406.5	3782.9
75°	78.9	75.7	74.6	72.5	80.0	148.2	359.0	1130.1	2136.9	2837.7	3169.7
77.5°	72.5	69.2	66.0	63.8	71.4	131.9	299.6	798.1	1575.7	2064.5	2446.2
80°	62.7	60.6	56.2	53.0	59.5	103.8	227.1	493.1	1152.8	1394.0	1604.8
82.5°	50.8	49.7	45.4	41.1	43.3	74.6	154.6	250.9	768.9	757.0	896.5
85°	31.4	38.9	33.5	27.0	29.2	43.3	62.7	80.0	235.8	141.7	219.5
87.5°	18.4	24.9	20.5	14.1	10.8	19.5	17.3	16.2	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: P401836
 CATALOG NUMBER: ENT-SA1F-735-U-SLR

CANDELA DISTRIBUTION (continued):

	285°	295°	305°	315°	325°	335°	345°	355°	359°	360°
0°	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3	2301.3
2.5°	2485.1	2499.2	2506.8	2478.6	2448.4	2421.3	2369.4	2317.5	2290.5	2295.9
5°	2586.8	2610.6	2617.1	2576.0	2490.5	2402.9	2276.4	2167.2	2101.2	2096.9
7.5°	2547.9	2625.7	2638.7	2594.4	2472.2	2308.9	2136.9	1984.4	1918.5	1903.3
10°	2409.4	2528.4	2567.3	2552.2	2433.2	2246.1	2037.4	1843.8	1777.9	1746.5
12.5°	2267.8	2392.1	2415.9	2431.1	2358.6	2200.7	1971.5	1772.5	1693.5	1667.6
15°	2174.8	2260.2	2266.7	2280.7	2265.6	2179.1	2001.7	1801.7	1706.5	1670.8
17.5°	2161.8	2131.5	2111.0	2140.2	2158.5	2180.2	2080.7	1910.9	1809.2	1763.8
20°	2164.0	2069.9	2011.5	2009.3	2088.3	2208.3	2240.7	2094.7	1962.8	1920.6
22.5°	2242.9	2037.4	1940.1	1928.2	2024.4	2255.9	2404.0	2313.2	2181.3	2125.0
25°	2360.8	2018.0	1889.3	1892.5	1988.8	2287.2	2543.5	2531.6	2415.9	2343.5
27.5°	2474.3	2050.4	1882.8	1891.4	2000.7	2307.8	2659.2	2737.1	2607.3	2544.6
30°	2565.2	2122.9	1902.2	1909.8	2037.4	2335.9	2716.6	2919.9	2763.1	2688.4
32.5°	2644.1	2191.0	1931.4	1936.8	2095.8	2375.9	2770.6	3073.4	2914.5	2825.8
35°	2715.5	2249.4	1975.8	1994.2	2170.4	2433.2	2825.8	3240.0	3099.4	2988.0
37.5°	2778.2	2320.8	2063.4	2093.7	2279.7	2516.5	2897.2	3459.5	3305.9	3179.4
40°	2813.9	2384.6	2193.1	2238.6	2421.3	2624.6	2988.0	3602.3	3503.8	3361.1
42.5°	2840.9	2472.2	2401.9	2484.1	2640.9	2726.3	3031.3	3666.1	3620.6	3498.4
45°	2855.0	2645.2	2715.5	2792.3	2888.5	2837.7	3007.5	3687.7	3673.6	3568.7
47.5°	2918.8	2905.8	3078.8	3184.8	3179.4	3005.3	2962.0	3685.5	3708.2	3621.7
50°	3048.6	3209.7	3451.9	3555.8	3515.7	3162.1	2953.4	3682.3	3777.5	3707.2
52.5°	3203.2	3513.6	3855.3	3898.6	3814.2	3321.1	3018.3	3738.5	3907.2	3860.7
55°	3406.5	3799.1	4172.2	4186.2	4067.3	3475.7	3156.7	3904.0	4149.5	4147.3
57.5°	3689.9	4055.4	4438.2	4420.9	4253.3	3689.9	3379.5	4151.6	4418.7	4456.6
60°	3998.1	4325.7	4653.4	4643.7	4465.2	3936.4	3685.5	4518.2	4654.5	4664.2
62.5°	4293.3	4576.6	4861.0	4814.5	4613.4	4191.6	4109.5	4907.6	4808.1	4735.6
64°	4485.8	4661.0	4914.0	4840.5	4649.1	4313.8	4353.9	5034.1	4851.3	4731.3
65°	4613.4	4681.5	4902.1	4813.5	4637.2	4359.3	4538.8	5087.1	4858.9	4706.4
67.5°	4842.7	4563.7	4579.9	4509.6	4351.7	4317.1	4841.6	5057.9	4775.6	4547.4
70°	4778.9	4088.9	3866.1	3821.8	3632.5	3827.2	4803.7	4783.2	4463.1	4185.2
72.5°	4233.8	3283.2	2963.1	2923.1	2660.3	2900.4	4145.1	4073.8	3591.4	3361.1
75°	3488.7	2488.4	2116.4	2149.9	1949.8	2171.5	3297.3	2791.2	2391.1	2253.7
77.5°	2707.9	1758.4	1462.1	1422.1	1382.1	1405.9	2266.7	1676.2	1397.2	1270.7
80°	1726.0	1105.2	1096.6	1002.5	970.0	817.6	1164.7	892.2	701.9	664.0
82.5°	917.1	637.0	723.5	579.6	466.1	335.2	394.7	265.0	223.9	234.7
85°	250.9	131.9	36.8	0.0	0.0	0.0	0.0	1.1	1.1	1.1
87.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

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