

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:

Luminaire Tested: **ENT-SA1F-740-U-T4FT-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401874 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1F-740-U-T4FT-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD
THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7287.9 lumens
Efficiency: N/A
Efficacy: 88.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type IV - Short
BUG Rating: B1 - U5 - G2

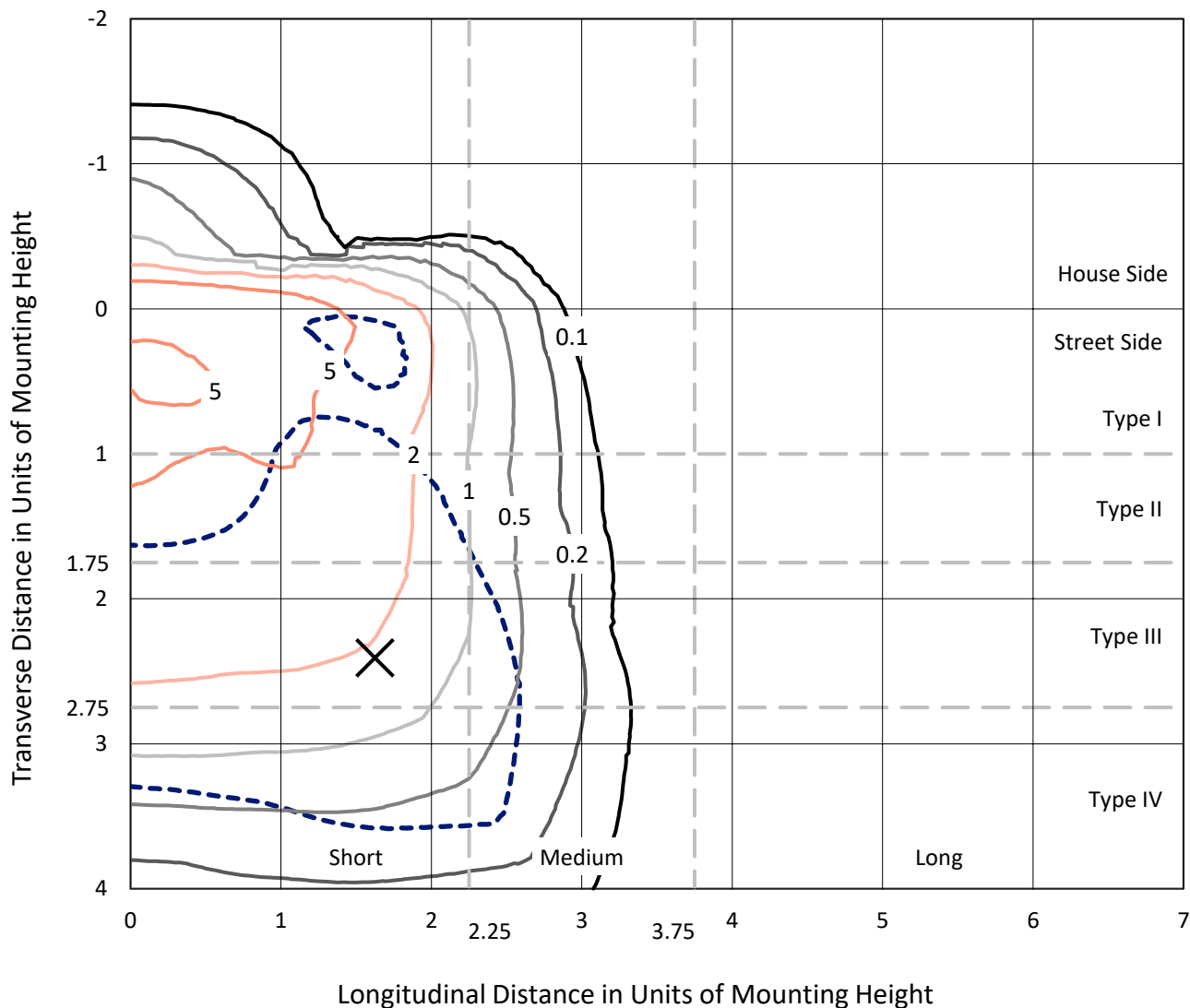
Input Watts (W): 82.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1F-740-U-T4FT-HSS-ULG

Iso-Footcandle Lines of Horizontal Illumination

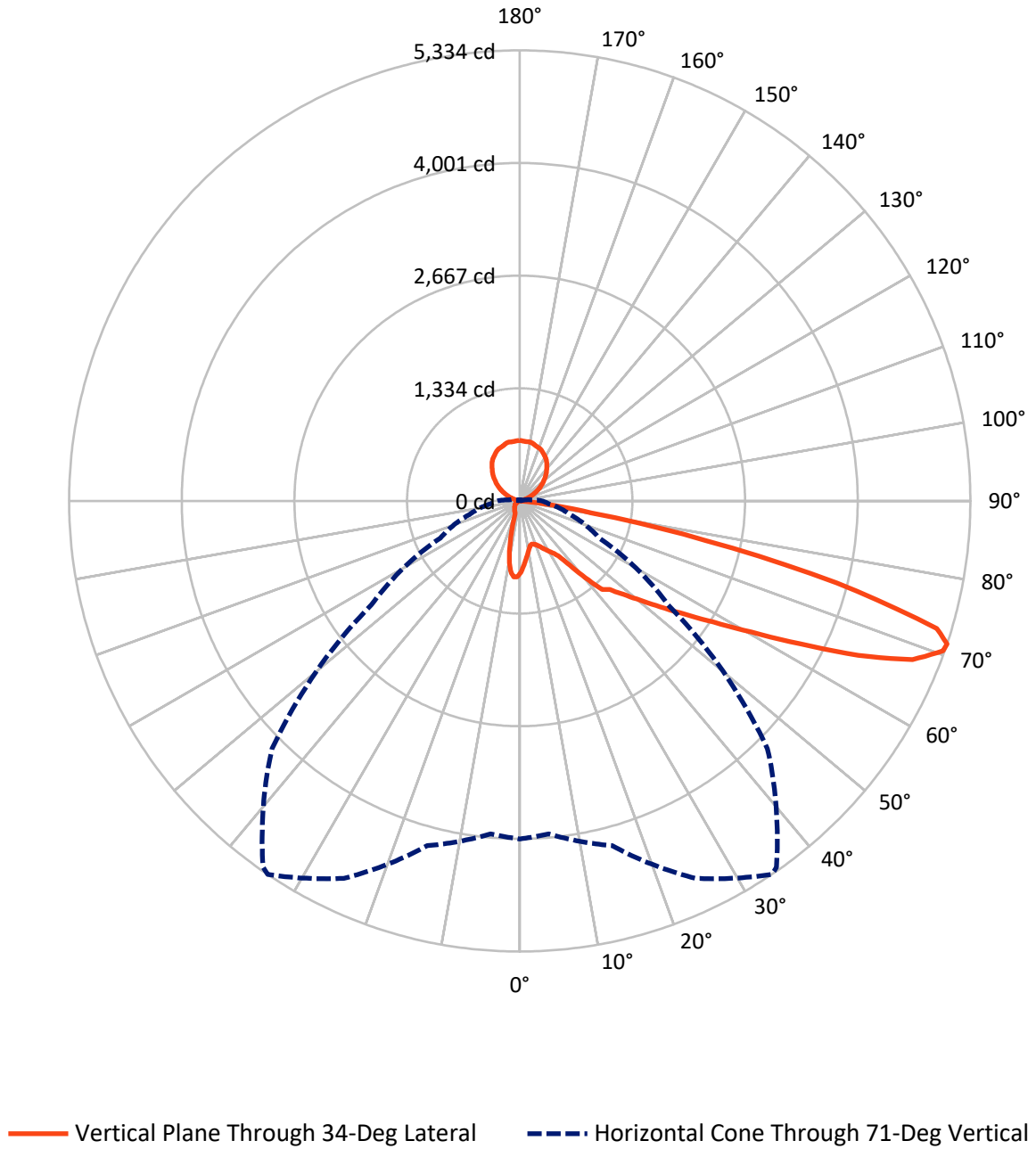
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.5 fc
 Type IV - Short - N/A

REPORT NUMBER:
CATALOG NUMBER: ENT-SA1F-740-U-T4FT-HSS-ULG

Luminous Intensity Polar Plot



REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1F-740-U-T4FT-HSS-ULG

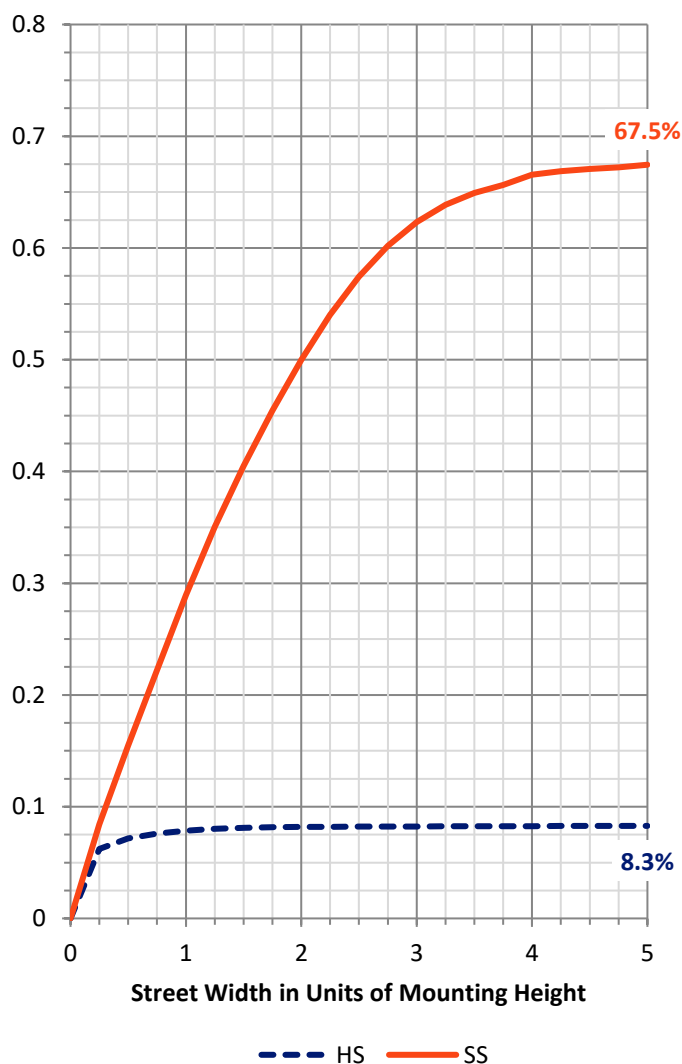
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	609.7	887.0	1496.7
	% Fixture	8.4	12.2	20.5
Street Side	Lumens	4904.3	887.0	5791.2
	% Fixture	67.3	12.2	79.5
Total	Lumens	5514.0	1773.9	7287.9
	% Fixture	75.7	24.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.3	1.0
10°-20°	172.6	2.4
20°-30°	257.6	3.5
30°-40°	430.2	5.9
40°-50°	777.0	10.7
50°-60°	1232.9	16.9
60°-70°	1656.8	22.7
70°-80°	879.1	12.1
80°-90°	32.4	0.4
90°-100°	8.4	0.1
100°-110°	58.7	0.8
110°-120°	169.9	2.3
120°-130°	279.4	3.8
130°-140°	344.6	4.7
140°-150°	352.5	4.8
150°-160°	297.0	4.1
160°-170°	195.5	2.7
170°-180°	67.8	0.9
0°-90°	5514.0	75.7
0°-180°	7287.9	100.0

Coefficient of Utilization

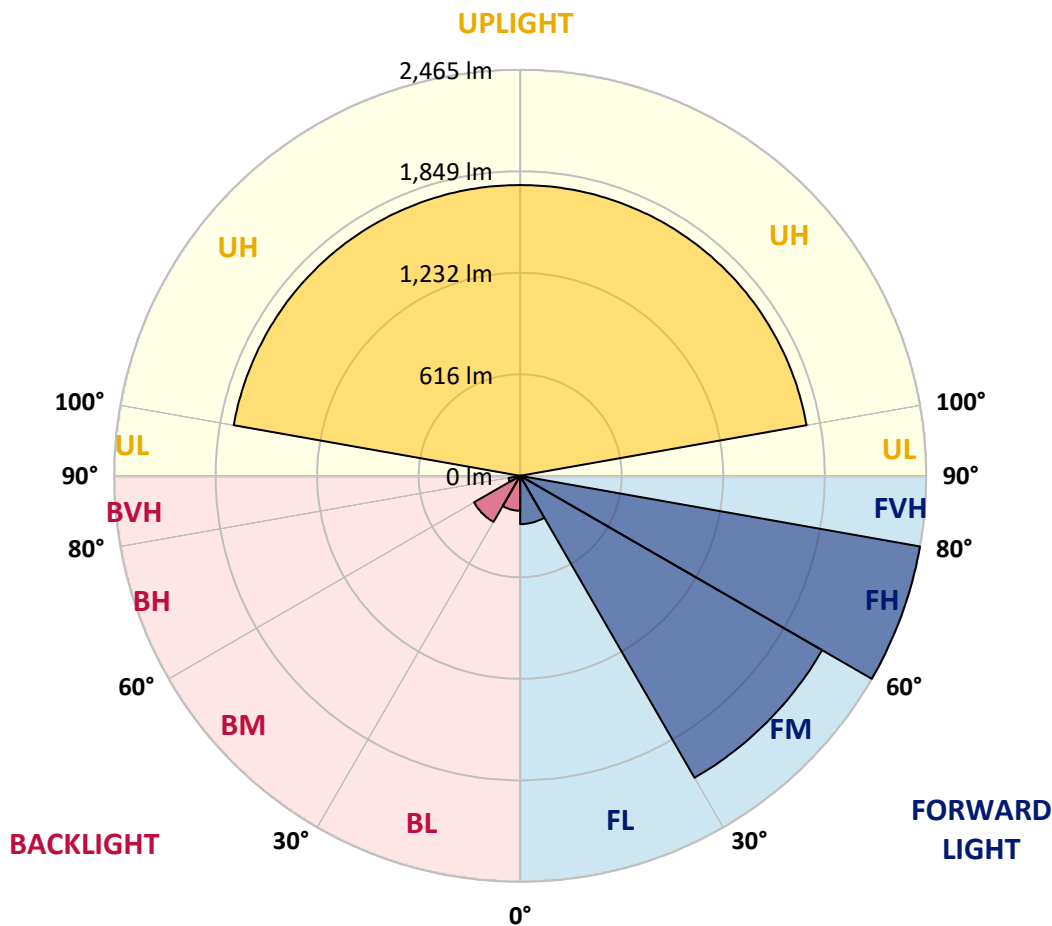


REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1F-740-U-T4FT-HSS-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	293.4	4.0			
FM (30°-60°)	2116.7	29.0			
FH (60°-80°)	2464.7	33.8			G2/5000
FVH (80°-90°)	29.5	0.4			G1/100
BL (0°-30°)	212.1	2.9	B1/500		
BM (30°-60°)	323.5	4.4	B1/1000		
BH (60°-80°)	71.2	1.0	B0/110		G0/110
BVH (80°-90°)	2.9	0.0			G0/10
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	24.2		U5	

BUG Rating: B1-U5-G2
 Type IV Short





REPORT NUMBER:

CATALOG NUMBER: ENT-SA1F-740-U-T4FT-HSS-ULG

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	854.4	854.4	854.4	854.4	854.4	854.4	854.4	854.4	854.4	854.4	854.4
2.5°	778.0	768.0	776.9	781.3	784.6	789.1	795.7	807.9	821.2	836.7	845.5
5°	678.4	683.9	687.3	699.4	711.6	713.8	734.8	759.2	790.2	821.2	847.7
7.5°	597.6	597.6	607.6	626.4	646.3	648.5	685.0	717.1	761.4	809.0	852.2
10°	533.4	535.6	543.4	562.2	587.7	593.2	634.1	678.4	733.7	795.7	856.6
12.5°	512.4	511.3	510.2	523.5	544.5	550.0	595.4	648.5	713.8	789.1	867.6
15°	525.7	522.4	514.6	516.8	530.1	535.6	575.5	628.6	701.6	788.0	886.5
17.5°	546.7	542.3	527.9	523.5	537.9	543.4	576.6	623.1	697.2	793.5	908.6
20°	572.2	567.7	545.6	540.1	554.5	558.9	593.2	633.0	699.4	804.6	938.5
22.5°	608.7	603.1	571.1	564.4	578.8	583.2	619.7	656.3	712.7	824.5	979.4
25°	652.9	646.3	605.4	596.5	614.2	618.6	655.2	689.5	734.8	851.0	1031.4
27.5°	701.6	693.9	650.7	633.0	652.9	659.6	693.9	731.5	766.9	884.2	1100.1
30°	745.9	737.1	695.0	675.1	695.0	698.3	739.3	781.3	819.0	940.7	1200.8
32.5°	868.8	846.6	781.3	723.8	737.1	743.7	793.5	859.9	916.3	1008.2	1330.2
35°	1052.5	1034.8	955.1	855.5	809.0	811.2	875.4	959.5	985.0	1086.8	1490.7
37.5°	1229.5	1214.0	1144.3	1052.5	963.9	967.2	978.3	1059.1	1089.0	1222.9	1686.6
40°	1423.2	1398.9	1343.5	1256.1	1195.2	1180.8	1126.6	1183.1	1248.3	1394.4	1900.2
42.5°	1512.8	1489.6	1432.1	1437.6	1431.0	1405.5	1298.1	1376.7	1449.8	1643.4	2135.9
45°	1661.1	1615.8	1497.4	1506.2	1497.4	1499.6	1526.1	1640.1	1703.2	1906.8	2402.6
47.5°	1798.4	1746.4	1622.4	1613.6	1652.3	1672.2	1815.0	1953.3	1958.8	2135.9	2611.8
50°	1923.4	1885.8	1771.8	1772.9	1843.7	1865.9	2151.4	2277.6	2165.8	2311.9	2775.6
52.5°	2089.4	2036.3	1934.5	1971.0	2081.7	2101.6	2486.7	2562.0	2315.2	2471.2	2904.0
55°	2243.3	2214.5	2139.2	2193.5	2362.8	2414.8	2827.6	2781.1	2420.3	2612.9	2965.9
57.5°	2495.6	2467.9	2448.0	2475.7	2702.5	2767.8	3172.9	2936.0	2502.2	2707.0	2937.2
60°	2916.1	2888.5	2828.7	2854.2	3149.6	3182.8	3444.0	3093.2	2534.3	2733.5	2824.3
62.5°	3435.2	3400.9	3304.6	3421.9	3718.5	3717.4	3725.1	3176.2	2493.4	2654.9	2526.6
65°	3903.3	3855.7	3805.9	4045.0	4405.7	4355.9	4023.9	3186.2	2363.9	2275.4	1954.4
67.5°	4244.2	4225.3	4253.0	4626.0	5014.4	4964.6	4313.9	3048.9	1967.7	1642.3	1207.4
70°	4230.9	4192.1	4368.1	4963.5	5316.5	5275.6	4301.7	2505.5	1312.5	869.9	505.8
71°	4001.8	3957.5	4225.3	4930.3	5334.2	5295.5	4146.8	2143.7	1038.1	614.2	333.1
72.5°	3092.1	3226.0	3652.1	4575.1	5163.8	5114.0	3725.1	1641.2	657.4	355.2	167.1
75°	1308.1	1381.1	2168.0	3265.8	3873.4	3848.0	2511.1	758.1	302.1	160.5	64.2
77.5°	336.4	332.0	664.0	1401.1	2255.4	2295.3	1157.6	260.1	157.2	114.0	36.5
80°	65.3	70.8	189.2	486.9	861.0	884.2	377.4	114.0	105.1	89.6	18.8
82.5°	6.6	7.7	33.2	150.5	288.8	278.9	83.0	43.2	64.2	60.9	8.9
85°	0.0	0.0	1.1	1.1	1.1	1.1	1.1	4.4	15.5	16.6	2.2
87.5°	0.0	0.0	1.1	1.1	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
92.5°	4.1	4.1	5.1	6.1	6.1	6.1	6.1	7.2	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.2	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.1	9.2	9.2	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.1	12.3	21.5	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	26.7	27.6	40.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	47.9	49.1	64.4	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	73.2	74.7	90.0	97.2	96.2	92.1	89.0



REPORT NUMBER:

CATALOG NUMBER: ENT-SA1F-740-U-T4FT-HSS-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	102.8	104.3	116.6	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	135.8	137.1	146.3	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.0	171.9	178.0	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.1	206.6	209.7	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.0	242.4	248.6	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	276.8	277.2	283.4	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	311.4	312.0	317.1	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.2	346.8	347.8	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.1	378.5	380.5	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.0	413.3	414.3	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	444.7	445.0	447.0	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.2	474.6	478.7	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.1	502.3	508.4	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	532.7	533.0	537.0	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.3	562.6	563.6	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	587.2	588.2	593.3	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	606.6	610.7	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	623.9	624.0	624.0	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.2	644.5	642.4	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.6	660.8	659.8	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.1	670.0	670.0	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.6	676.2	678.2	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.7	688.4	688.4	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.6	703.8	700.7	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.8	708.9	706.9	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	706.1	705.8	705.8	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	707.3	706.9	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.2	713.0	711.0	709.9	715.0	717.1	714.0
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1



REPORT NUMBER:

CATALOG NUMBER: ENT-SA1F-740-U-T4FT-HSS-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	854.4	854.4	854.4	854.4	854.4	854.4	854.4	854.4	854.4	854.4	854.4
2.5°	852.2	862.1	873.2	880.9	888.7	889.8	900.8	898.6	902.0	903.1	902.0
5°	862.1	875.4	896.4	907.5	911.9	904.2	902.0	889.8	885.4	879.8	874.3
7.5°	873.2	889.8	914.1	919.7	904.2	875.4	852.2	822.3	794.6	776.9	779.1
10°	885.4	906.4	926.3	911.9	872.1	815.6	750.3	683.9	625.3	603.1	610.9
12.5°	900.8	926.3	935.2	895.3	817.8	703.9	585.4	484.7	423.9	387.3	382.9
15°	924.1	949.5	939.6	868.8	731.5	553.3	406.2	304.3	245.7	226.9	216.9
17.5°	952.9	977.2	939.6	821.2	608.7	396.2	246.8	184.8	166.0	161.6	162.7
20°	988.3	1011.5	935.2	749.2	469.2	243.5	164.9	152.7	152.7	152.7	151.6
22.5°	1035.9	1048.0	928.5	654.1	323.2	164.9	146.1	145.0	146.1	146.1	146.1
25°	1093.4	1091.2	916.3	540.1	203.6	140.5	139.4	139.4	140.5	141.7	141.7
27.5°	1169.8	1146.5	895.3	403.9	143.9	130.6	132.8	135.0	137.2	139.4	139.4
30°	1276.0	1219.6	861.0	273.4	121.7	120.6	125.1	131.7	135.0	137.2	137.2
32.5°	1390.0	1294.8	802.4	174.9	111.8	110.7	115.1	125.1	133.9	136.1	136.1
35°	1533.9	1375.6	714.9	126.2	105.1	102.9	107.3	116.2	129.5	136.1	136.1
37.5°	1685.5	1461.9	587.7	106.2	98.5	96.3	99.6	106.2	121.7	133.9	135.0
40°	1847.1	1538.3	441.6	98.5	91.9	90.7	91.9	98.5	110.7	127.3	130.6
42.5°	2009.7	1602.5	308.8	90.7	86.3	84.1	86.3	90.7	101.8	116.2	118.4
45°	2189.0	1673.3	205.8	84.1	81.9	79.7	81.9	85.2	93.0	100.7	101.8
47.5°	2319.6	1698.8	141.7	76.4	75.3	76.4	77.5	79.7	84.1	85.2	84.1
50°	2405.9	1685.5	101.8	68.6	69.7	73.0	73.0	74.1	74.1	70.8	69.7
52.5°	2469.0	1636.8	78.6	58.7	65.3	68.6	68.6	66.4	64.2	59.8	58.7
55°	2475.7	1527.2	62.0	50.9	58.7	64.2	63.1	58.7	54.2	49.8	49.8
57.5°	2391.6	1361.2	50.9	43.2	50.9	56.4	54.2	49.8	44.3	40.9	40.9
60°	2255.4	1190.8	43.2	36.5	42.1	47.6	44.3	40.9	35.4	32.1	32.1
62.5°	2004.2	1022.6	35.4	29.9	34.3	37.6	36.5	33.2	27.7	25.5	24.3
65°	1536.1	778.0	26.6	23.2	26.6	31.0	28.8	25.5	22.1	18.8	17.7
67.5°	923.0	468.1	21.0	17.7	21.0	24.3	22.1	18.8	15.5	13.3	13.3
70°	390.7	200.3	16.6	13.3	15.5	18.8	17.7	15.5	12.2	11.1	11.1
71°	265.6	142.8	14.4	12.2	14.4	17.7	16.6	14.4	12.2	11.1	11.1
72.5°	136.1	73.0	12.2	10.0	13.3	15.5	15.5	13.3	11.1	11.1	11.1
75°	48.7	31.0	10.0	8.9	11.1	11.1	12.2	12.2	12.2	12.2	11.1
77.5°	27.7	18.8	8.9	8.9	8.9	10.0	12.2	13.3	14.4	14.4	13.3
80°	15.5	10.0	5.5	6.6	8.9	10.0	12.2	13.3	15.5	15.5	14.4
82.5°	7.7	3.3	1.1	3.3	5.5	8.9	10.0	11.1	13.3	12.2	12.2
85°	1.1	0.0	0.0	1.1	3.3	4.4	6.6	8.9	11.1	11.1	10.0
87.5°	0.0	0.0	0.0	0.0	1.1	2.2	3.3	5.5	7.7	8.9	7.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	6.1	6.1	6.1	7.2	7.2	6.1	6.1	6.1	5.1	4.1	4.1
95°	7.2	7.2	7.2	8.2	7.2	7.2	7.2	7.2	6.1	5.1	5.1
97.5°	8.2	8.2	9.2	10.2	12.3	9.2	9.2	8.2	8.2	7.2	7.2
100°	19.4	19.4	23.5	26.6	29.7	21.5	12.3	10.2	9.2	8.2	8.2
102.5°	38.9	39.9	43.0	48.1	51.1	40.9	27.6	18.4	13.3	11.3	11.3
105°	62.4	62.4	66.5	71.6	73.7	64.4	49.1	36.8	27.6	22.5	21.5
107.5°	88.0	89.0	92.1	96.2	97.2	90.0	74.7	59.3	50.1	43.0	41.9



REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1F-740-U-T4FT-HSS-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
110°	119.7	118.7	121.7	123.8	122.8	116.6	104.3	89.0	75.7	69.6	67.5
112.5°	150.4	150.4	152.4	153.4	151.4	146.3	137.1	123.8	108.4	101.3	101.3
115°	182.1	181.1	183.1	186.2	183.1	178.0	171.9	162.6	150.4	142.2	143.2
117.5°	213.8	212.8	214.8	219.9	215.8	209.7	206.6	201.5	193.3	188.2	188.2
120°	248.6	248.6	250.6	255.7	251.6	248.6	242.4	238.3	231.2	228.1	230.2
122.5°	283.4	282.3	284.4	289.5	285.4	283.4	277.2	273.1	267.0	266.0	269.0
125°	317.1	317.1	317.1	322.2	320.2	317.1	312.0	305.9	302.8	300.7	304.8
127.5°	355.0	352.9	353.9	353.9	352.9	347.8	346.8	340.6	336.6	336.6	337.6
130°	388.7	387.7	389.7	389.7	385.7	380.5	378.5	374.4	370.3	369.3	371.3
132.5°	424.5	423.5	423.5	425.5	420.4	414.3	413.3	410.2	402.0	403.0	405.1
135°	461.4	460.3	457.3	458.3	453.2	447.0	445.0	441.9	435.8	435.8	438.8
137.5°	493.1	492.0	486.9	485.9	483.9	478.7	474.6	470.6	469.5	467.5	470.6
140°	522.7	520.7	515.6	513.5	511.5	508.4	502.3	500.2	498.2	496.1	499.2
142.5°	548.3	546.3	545.2	545.2	539.1	537.0	533.0	529.9	528.9	526.8	529.9
145°	572.9	570.8	573.9	574.9	568.8	563.6	562.6	559.6	556.5	558.5	562.6
147.5°	598.4	596.4	599.4	598.4	593.3	588.2	587.2	587.2	584.1	585.1	588.2
150°	624.0	619.9	616.8	613.8	610.7	606.6	606.6	606.6	606.6	605.6	608.7
152.5°	642.4	637.3	632.2	628.1	625.0	624.0	624.0	623.0	622.0	622.0	625.0
155°	655.7	652.6	650.6	645.5	640.4	642.4	644.5	641.4	639.3	639.3	643.4
157.5°	670.0	664.9	664.9	662.9	658.8	659.8	660.8	658.8	657.8	657.8	660.8
160°	681.3	675.1	676.2	679.2	673.1	670.0	670.0	671.1	674.1	675.1	678.2
162.5°	689.5	683.3	685.4	686.4	682.3	678.2	676.2	680.3	684.4	684.4	688.4
165°	697.7	693.6	695.6	692.5	687.4	688.4	688.4	691.5	691.5	693.6	696.6
167.5°	709.9	703.8	703.8	699.7	693.6	700.7	703.8	701.7	699.7	702.8	705.8
170°	717.1	712.0	709.9	704.8	701.7	706.9	708.9	707.9	707.9	711.0	714.0
172.5°	717.1	712.0	709.9	707.9	704.8	705.8	705.8	708.9	711.0	713.0	715.0
175°	715.0	709.9	712.0	711.0	705.8	705.8	706.9	711.0	713.0	714.0	716.1
177.5°	718.1	714.0	717.1	715.0	709.9	711.0	713.0	715.0	716.1	721.2	723.2
180°	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1	716.1

(END OF REPORT)