

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-T2-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401868 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-T2-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9522.9 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type III - Medium
BUG Rating: B1 - U5 - G2

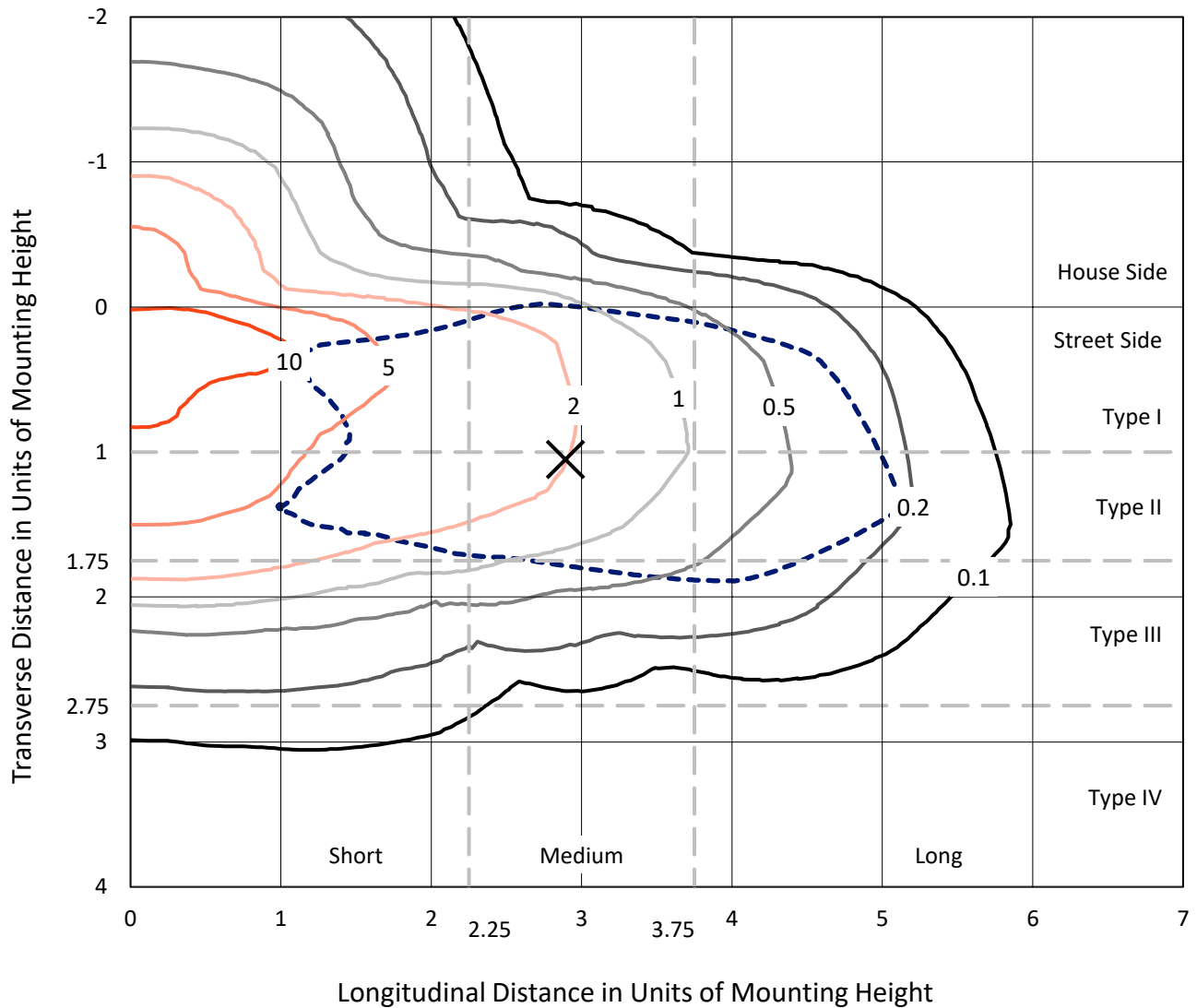
Input Watts (W): 82.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1F-740-U-T2-ULG

Iso-Footcandle Lines of Horizontal Illumination

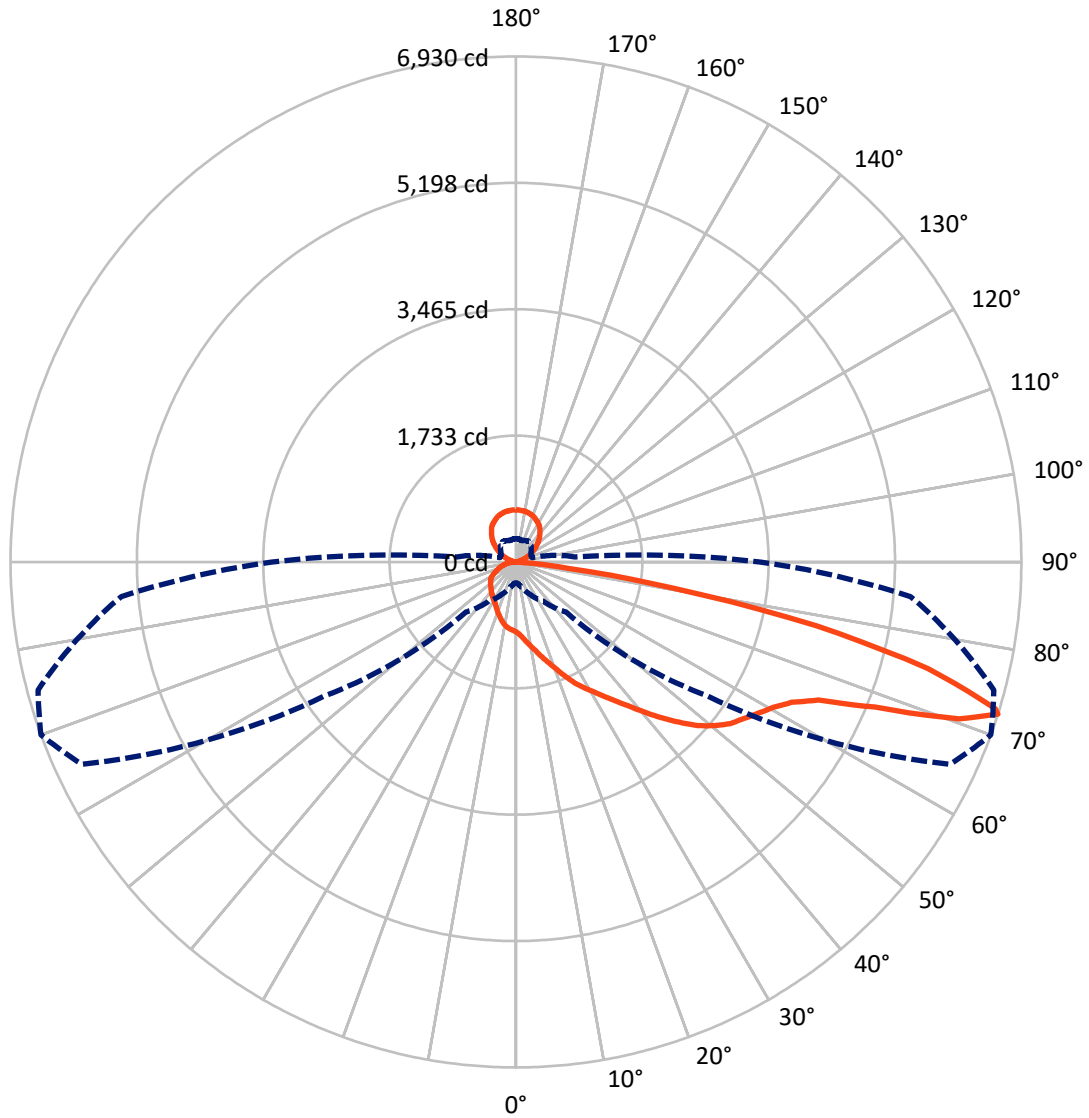
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.4 fc
 Type III - Medium - N/A

REPORT NUMBER:
CATALOG NUMBER: ENT-SA1F-740-U-T2-ULG

Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

REPORT NUMBER:

CATALOG NUMBER: ENT-SA1F-740-U-T2-ULG

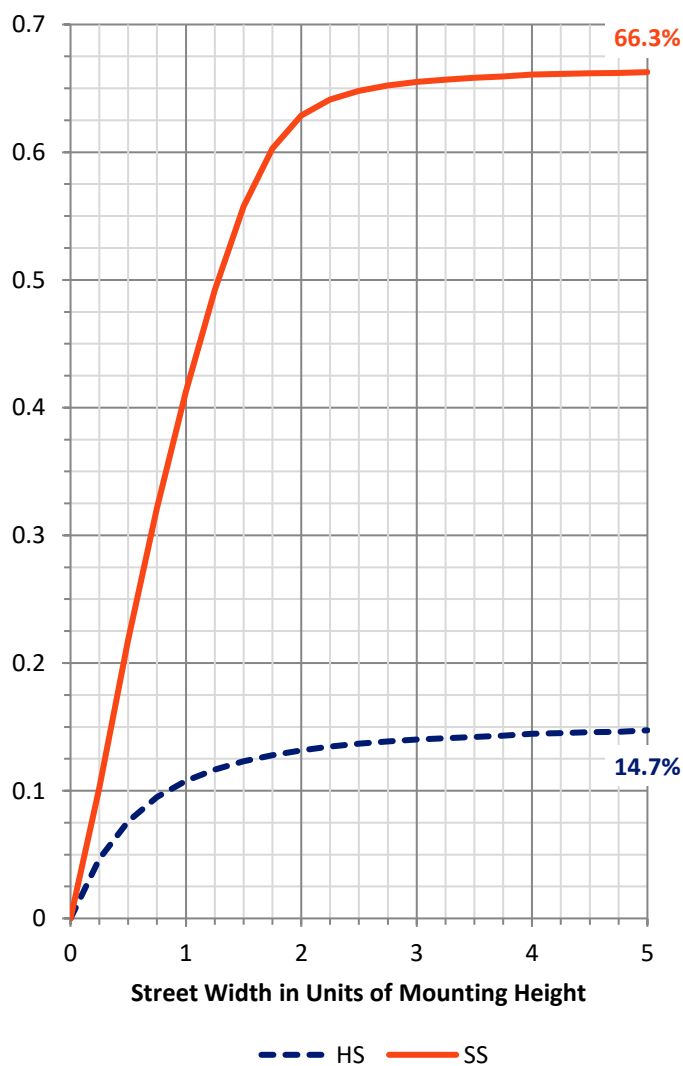
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1439.9	887.0	2326.8
	% Fixture	15.1	9.3	24.4
Street Side	Lumens	6309.1	887.0	7196.1
	% Fixture	66.3	9.3	75.6
Total	Lumens	7749.0	1773.9	9522.9
	% Fixture	81.4	18.6	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.5	1.0
10°-20°	309.5	3.2
20°-30°	548.0	5.8
30°-40°	814.7	8.6
40°-50°	1182.0	12.4
50°-60°	1614.8	17.0
60°-70°	1768.0	18.6
70°-80°	1257.6	13.2
80°-90°	157.9	1.7
90°-100°	8.4	0.1
100°-110°	58.7	0.6
110°-120°	169.9	1.8
120°-130°	279.4	2.9
130°-140°	344.6	3.6
140°-150°	352.5	3.7
150°-160°	297.0	3.1
160°-170°	195.5	2.1
170°-180°	67.8	0.7
0°-90°	7749.0	81.4
0°-180°	9522.9	100.0

Coefficient of Utilization

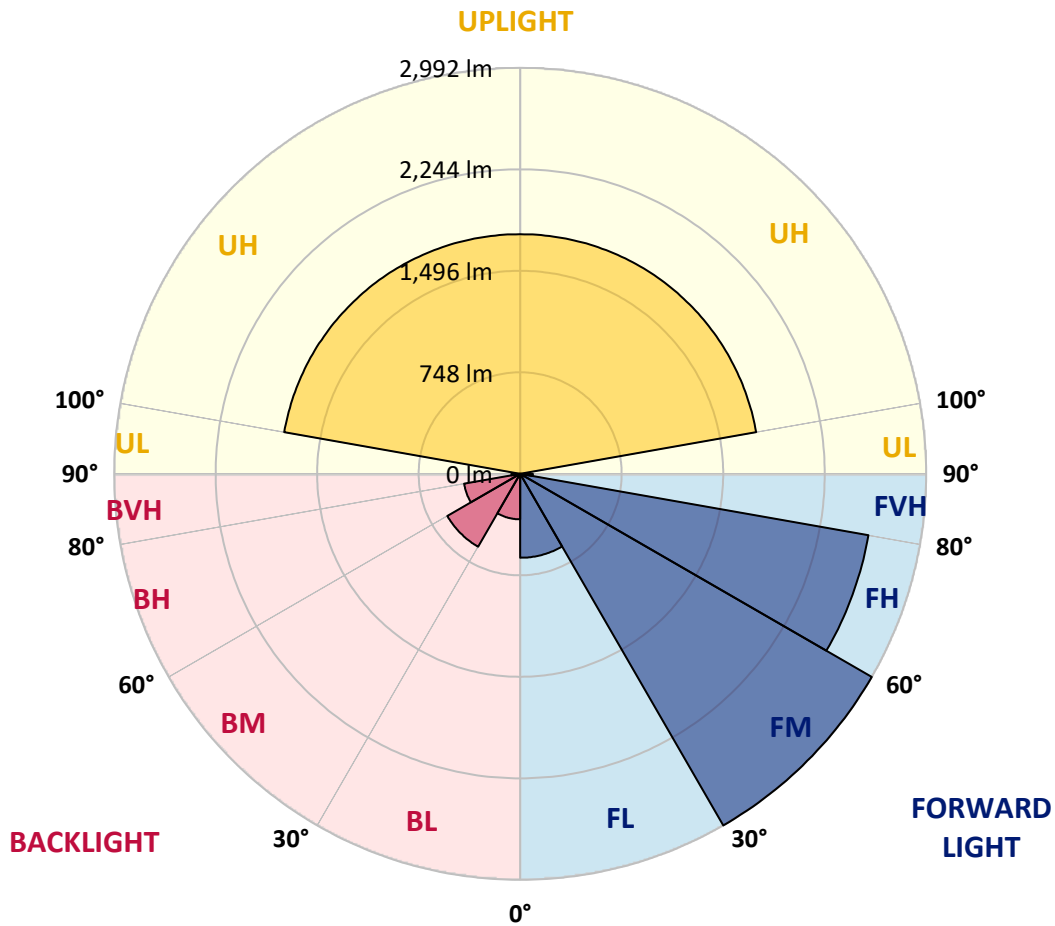


REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1F-740-U-T2-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	618.5	6.5			
FM (30°-60°)	2991.6	31.4			
FH (60°-80°)	2605.8	27.4			G2/5000
FVH (80°-90°)	93.3	1.0			G1/100
BL (0°-30°)	335.5	3.5	B1/500		
BM (30°-60°)	620.0	6.5	B1/1000		
BH (60°-80°)	419.8	4.4	B1/500		G1/500
BVH (80°-90°)	64.6	0.7			G1/100
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	18.5		U5	

BUG Rating: B1-U5-G2
 Type III Medium





REPORT NUMBER:

CATALOG NUMBER: ENT-SA1F-740-U-T2-ULG

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	959.7	959.7	959.7	959.7	959.7	959.7	959.7	959.7	959.7	959.7	959.7
2.5°	1067.0	1061.5	1062.6	1052.6	1047.1	1033.8	1019.4	1003.9	996.2	990.7	971.8
5°	1171.1	1171.1	1175.5	1167.8	1146.7	1124.6	1099.1	1064.8	1050.4	1030.5	992.9
7.5°	1257.4	1259.6	1259.6	1257.4	1238.6	1214.2	1181.0	1139.0	1115.7	1086.9	1028.3
10°	1301.7	1307.2	1311.6	1315.0	1312.8	1298.4	1260.7	1217.6	1185.5	1147.8	1069.2
12.5°	1323.8	1326.0	1333.8	1350.4	1363.7	1374.7	1347.1	1296.1	1264.0	1218.7	1113.5
15°	1348.2	1348.2	1355.9	1376.9	1402.4	1432.3	1429.0	1389.1	1354.8	1298.4	1170.0
17.5°	1363.7	1368.1	1382.5	1404.6	1440.0	1489.9	1515.3	1493.2	1448.9	1389.1	1230.8
20°	1354.8	1358.1	1386.9	1430.1	1475.5	1539.7	1603.9	1603.9	1561.8	1493.2	1298.4
22.5°	1371.4	1376.9	1396.9	1437.8	1499.8	1582.8	1688.0	1724.5	1688.0	1612.7	1376.9
25°	1435.6	1433.4	1450.0	1466.6	1519.7	1622.7	1759.9	1854.0	1820.8	1737.8	1453.3
27.5°	1528.6	1528.6	1537.4	1536.3	1555.2	1655.9	1823.0	1968.0	1940.3	1840.7	1516.4
30°	1636.0	1638.2	1636.0	1634.9	1631.5	1701.3	1879.5	2069.9	2055.5	1957.0	1574.0
32.5°	1766.6	1772.1	1763.2	1741.1	1727.8	1766.6	1927.1	2183.9	2188.3	2072.1	1630.4
35°	1930.4	1939.2	1906.0	1873.9	1840.7	1858.4	1982.4	2291.2	2335.5	2202.7	1699.0
37.5°	2094.2	2108.6	2103.1	2016.7	1970.2	1969.1	2064.3	2425.2	2499.3	2373.1	1796.5
40°	2232.6	2244.7	2251.4	2172.8	2108.6	2106.4	2185.0	2564.6	2700.8	2569.1	1911.6
42.5°	2324.4	2335.5	2355.4	2308.9	2249.2	2276.8	2317.8	2703.0	2917.7	2808.1	2053.2
45°	2424.1	2432.9	2445.1	2418.5	2387.5	2467.2	2486.0	2856.8	3134.7	3064.9	2219.3
47.5°	2530.3	2539.2	2545.8	2525.9	2514.8	2626.6	2651.0	3014.0	3353.8	3330.6	2380.9
50°	2647.6	2651.0	2657.6	2647.6	2651.0	2771.6	2787.1	3152.4	3527.6	3607.3	2549.1
52.5°	2849.1	2853.5	2855.7	2808.1	2791.5	2863.5	2896.7	3299.6	3680.4	3837.5	2697.4
55°	3008.5	3024.0	3093.7	3062.7	3022.9	2928.8	2987.4	3418.0	3788.8	4052.3	2852.4
57.5°	2877.9	2913.3	3087.1	3233.2	3345.0	3120.3	3094.8	3539.8	3913.9	4237.1	3032.8
60°	2498.2	2550.2	2802.6	3107.0	3468.9	3559.7	3315.1	3691.4	4050.0	4429.7	3226.5
62.5°	1732.3	1785.4	2134.0	2620.0	3259.7	3811.0	3918.3	3960.4	4239.3	4626.7	3478.9
65°	830.2	884.4	1172.2	1684.7	2574.6	3649.4	4621.2	4518.3	4558.1	4876.9	3850.8
67.5°	528.0	556.8	669.7	917.6	1497.6	2842.4	4873.6	5629.6	5313.0	5453.6	4591.3
70°	386.3	392.9	490.3	635.3	888.8	1660.3	4303.5	6693.3	6445.3	6429.8	5484.6
72°	285.6	296.6	371.9	506.9	657.5	970.7	3202.2	6563.8	6930.1	6782.9	5431.4
72.5°	269.0	277.8	343.1	479.3	621.0	852.3	2869.0	6413.2	6870.4	6792.9	5329.6
75°	195.9	202.6	234.7	340.9	480.4	493.7	1531.9	4922.3	5834.3	6485.2	4831.5
77.5°	135.0	139.5	156.1	209.2	328.7	334.3	649.7	3360.5	4210.5	5185.7	3715.8
80°	81.9	84.1	94.1	114.0	209.2	198.1	267.9	1756.6	2197.1	2819.2	1723.4
82.5°	34.3	35.4	41.0	45.4	88.5	94.1	108.5	573.4	727.2	881.1	497.0
85°	0.0	0.0	1.1	1.1	2.2	10.0	15.5	70.8	107.4	128.4	89.7
87.5°	0.0	0.0	1.1	1.1	1.1	2.2	2.2	3.3	4.4	4.4	6.6
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	7.2	7.2	6.6	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	8.2	7.7	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	10.2	9.7	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	26.6	25.1	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	48.1	45.5	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	71.6	69.0	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.2	94.1	92.1	89.0



REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1F-740-U-T2-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.8	122.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	153.4	152.9	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	186.2	184.6	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	219.9	217.4	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	255.7	253.2	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	289.5	286.9	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	322.2	319.7	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	389.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	425.5	424.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	458.3	457.8	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	485.9	486.4	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	513.5	514.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	545.2	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	574.9	574.4	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	598.4	598.9	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	613.8	615.3	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	628.1	630.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	645.5	648.0	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	662.9	663.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	679.2	677.7	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	686.4	685.9	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	692.5	694.1	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	699.7	701.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	704.8	707.4	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	707.9	708.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	711.0	711.5	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	715.0	716.1	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-T2-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	959.7	959.7	959.7	959.7	959.7	959.7	959.7	959.7	959.7	959.7	959.7
2.5°	963.0	958.6	945.3	934.2	925.3	911.0	909.8	898.8	898.8	895.5	893.2
5°	978.5	964.1	937.5	913.2	895.5	874.4	864.5	852.3	844.5	840.1	841.2
7.5°	998.4	974.0	928.7	887.7	854.5	827.9	812.4	802.5	796.9	794.7	794.7
10°	1026.1	988.4	914.3	852.3	810.2	790.3	782.6	781.5	782.6	783.7	784.8
12.5°	1057.1	998.4	887.7	810.2	777.0	769.3	773.7	783.7	792.5	795.8	795.8
15°	1089.2	1005.0	851.2	771.5	751.6	759.3	774.8	793.6	808.0	816.9	819.1
17.5°	1122.4	1006.1	812.4	736.1	729.4	749.4	777.0	806.9	830.2	844.5	846.8
20°	1157.8	1003.9	767.1	704.0	707.3	740.5	779.2	820.2	851.2	870.0	872.2
22.5°	1196.5	995.1	722.8	673.0	688.5	731.6	777.0	824.6	857.8	880.0	884.4
25°	1234.2	977.4	678.5	645.3	675.2	722.8	766.0	806.9	839.0	860.0	865.6
27.5°	1254.1	939.7	636.5	624.3	665.2	709.5	740.5	768.2	785.9	799.2	804.7
30°	1257.4	886.6	602.1	609.9	654.2	690.7	708.4	712.8	709.5	713.9	708.4
32.5°	1250.8	829.0	574.5	598.8	636.5	664.1	668.6	655.3	635.3	607.7	608.8
35°	1246.3	766.0	552.3	583.3	613.2	630.9	623.2	602.1	564.5	531.3	529.1
37.5°	1254.1	708.4	533.5	563.4	583.3	591.1	580.0	552.3	519.1	490.3	487.0
40°	1276.2	666.3	515.8	541.3	551.2	556.8	543.5	519.1	505.8	484.8	481.5
42.5°	1319.4	637.6	499.2	516.9	521.3	526.9	513.6	497.0	509.2	504.7	504.7
45°	1379.2	624.3	484.8	493.7	498.1	506.9	499.2	484.8	498.1	472.6	468.2
47.5°	1456.6	628.7	474.8	470.4	483.7	499.2	490.3	472.6	468.2	422.8	415.1
50°	1538.6	651.9	464.9	451.6	468.2	489.2	478.2	450.5	423.9	400.7	396.3
52.5°	1634.9	690.7	456.0	430.6	450.5	478.2	470.4	440.5	412.9	396.3	392.9
55°	1741.1	728.3	445.0	406.2	427.3	474.8	472.6	433.9	397.4	389.6	387.4
57.5°	1860.7	759.3	431.7	378.6	404.0	464.9	462.7	418.4	392.9	386.3	385.2
60°	2010.1	795.8	408.4	346.5	380.8	446.1	443.9	410.6	383.0	377.4	375.2
62.5°	2213.7	863.4	368.6	316.6	356.4	412.9	426.1	395.2	368.6	367.5	367.5
65°	2549.1	994.0	327.6	291.1	328.7	380.8	402.9	377.4	355.3	360.8	360.8
67.5°	3183.4	1170.0	285.6	266.8	302.2	349.8	383.0	359.7	340.9	352.0	352.0
70°	3672.6	1104.7	252.4	243.5	275.6	322.1	357.5	340.9	323.2	342.0	339.8
72°	3350.5	809.1	230.2	224.7	253.5	298.9	335.4	323.2	304.4	319.9	315.5
72.5°	3216.6	735.0	223.6	219.2	246.8	294.4	331.0	318.8	298.9	314.4	307.7
75°	2805.9	619.8	194.8	192.6	219.2	264.5	302.2	295.5	275.6	284.5	277.8
77.5°	2322.2	522.4	163.8	168.2	187.1	235.8	272.3	265.6	246.8	245.7	244.6
80°	1089.2	291.1	135.0	138.4	157.2	201.5	234.7	230.2	212.5	210.3	207.0
82.5°	315.5	139.5	104.0	106.3	126.2	164.9	201.5	199.2	186.0	182.6	174.9
85°	58.7	45.4	56.5	66.4	91.9	137.3	183.7	179.3	159.4	145.0	133.9
87.5°	3.3	8.9	18.8	32.1	58.7	102.9	148.3	145.0	127.3	109.6	110.7
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-T2-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)