

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-SA1A-740-U-T4W-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P400980 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1A-740-U-T4W-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4506.9 lumens
Efficiency: N/A
Efficacy: 122.5 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 - G1

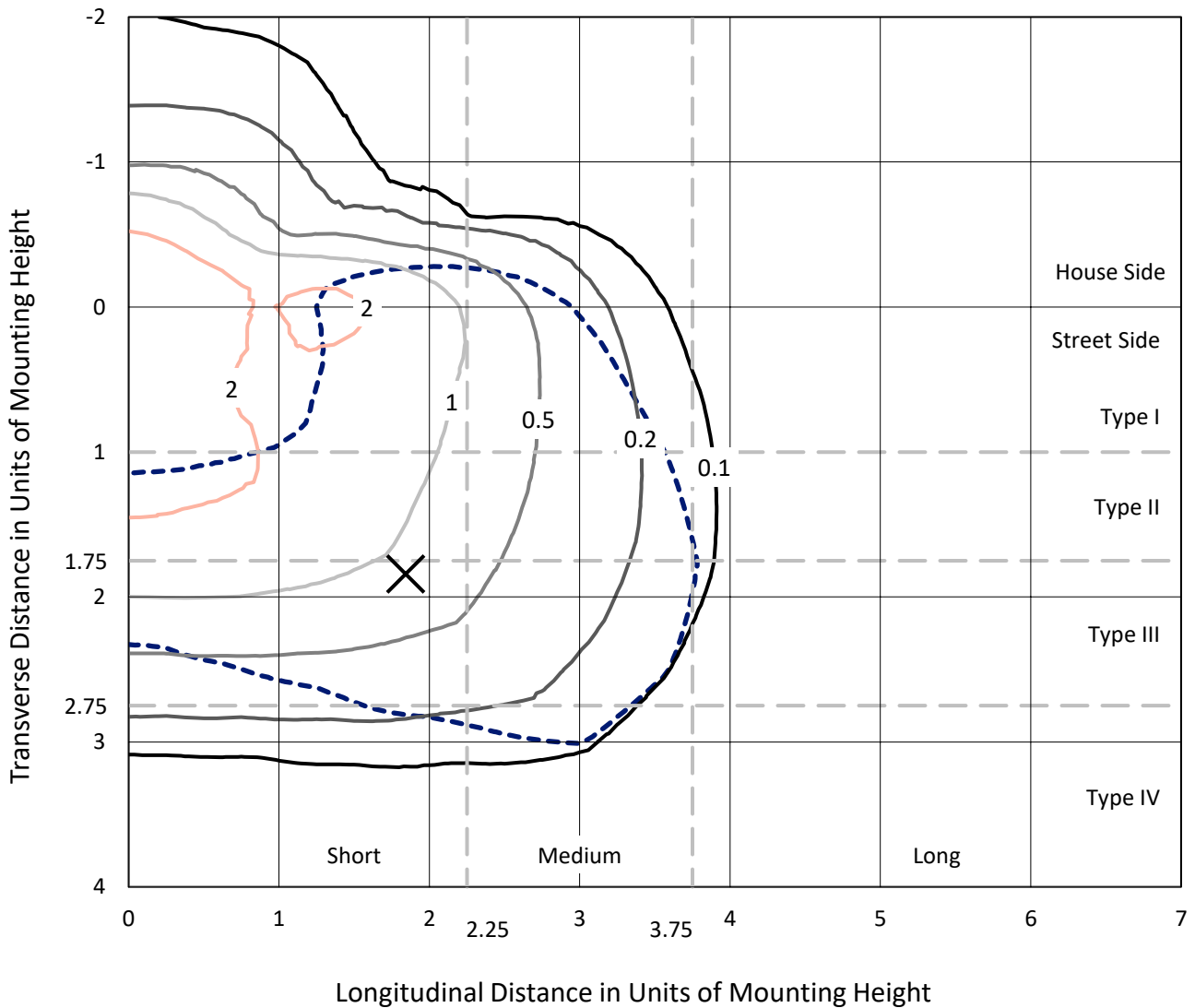
Input Watts (W): 36.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

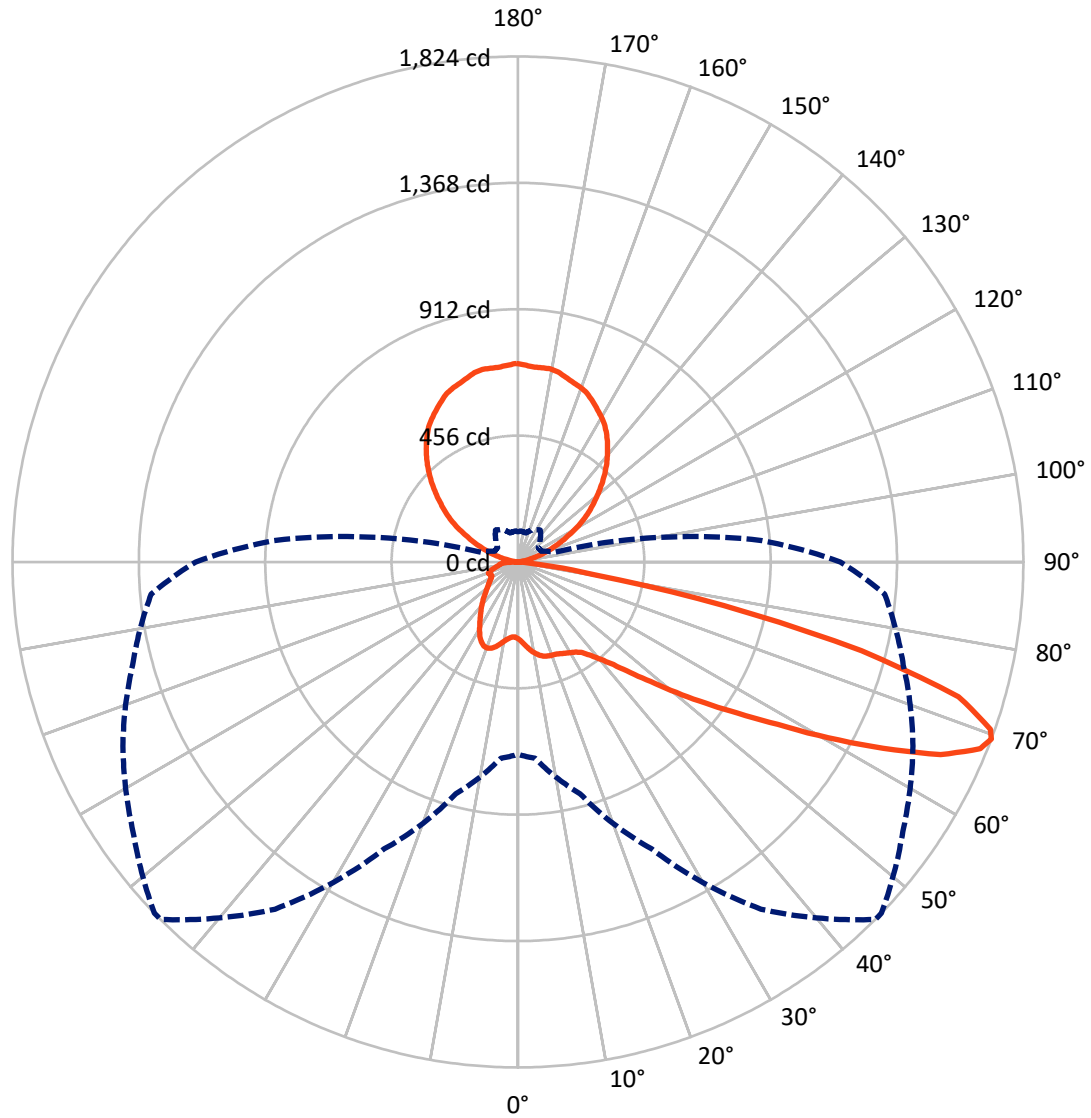
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.4 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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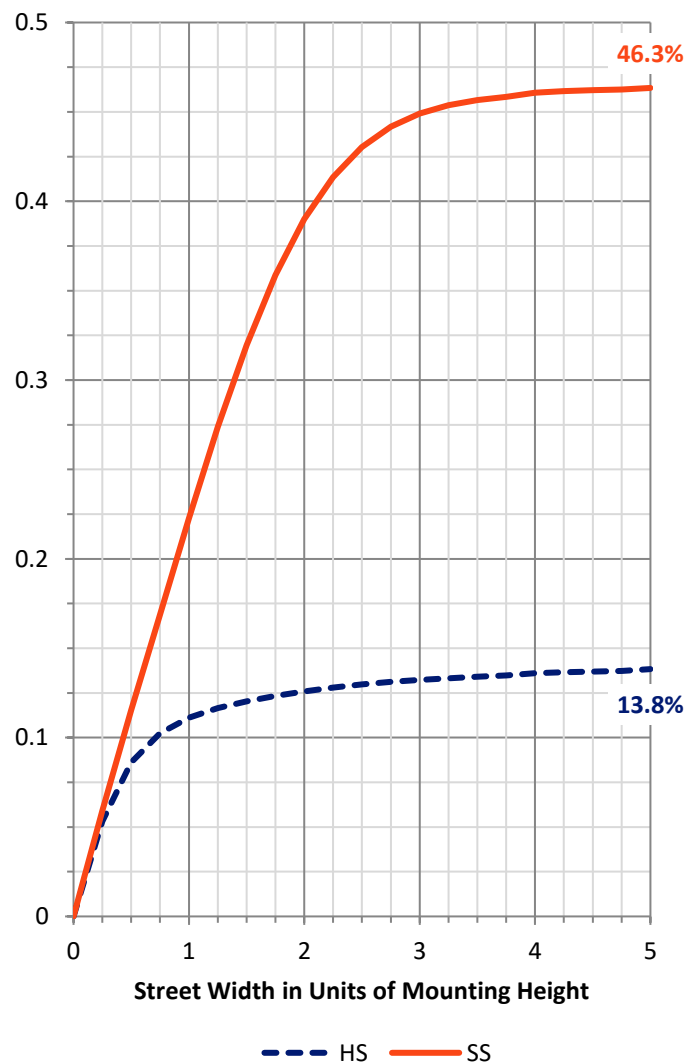
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	643.4	887.0	1530.4
	% Fixture	14.3	19.7	34.0
Street Side	Lumens	2089.6	887.0	2976.5
	% Fixture	46.4	19.7	66.0
Total	Lumens	2733.0	1773.9	4506.9
	% Fixture	60.6	39.4	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.2	0.6
10°-20°	93.7	2.1
20°-30°	158.3	3.5
30°-40°	229.0	5.1
40°-50°	345.8	7.7
50°-60°	583.0	12.9
60°-70°	802.1	17.8
70°-80°	444.5	9.9
80°-90°	48.4	1.1
90°-100°	8.4	0.2
100°-110°	58.7	1.3
110°-120°	169.9	3.8
120°-130°	279.4	6.2
130°-140°	344.6	7.6
140°-150°	352.5	7.8
150°-160°	297.0	6.6
160°-170°	195.5	4.3
170°-180°	67.8	1.5
0°-90°	2733.0	60.6
0°-180°	4506.9	100.0

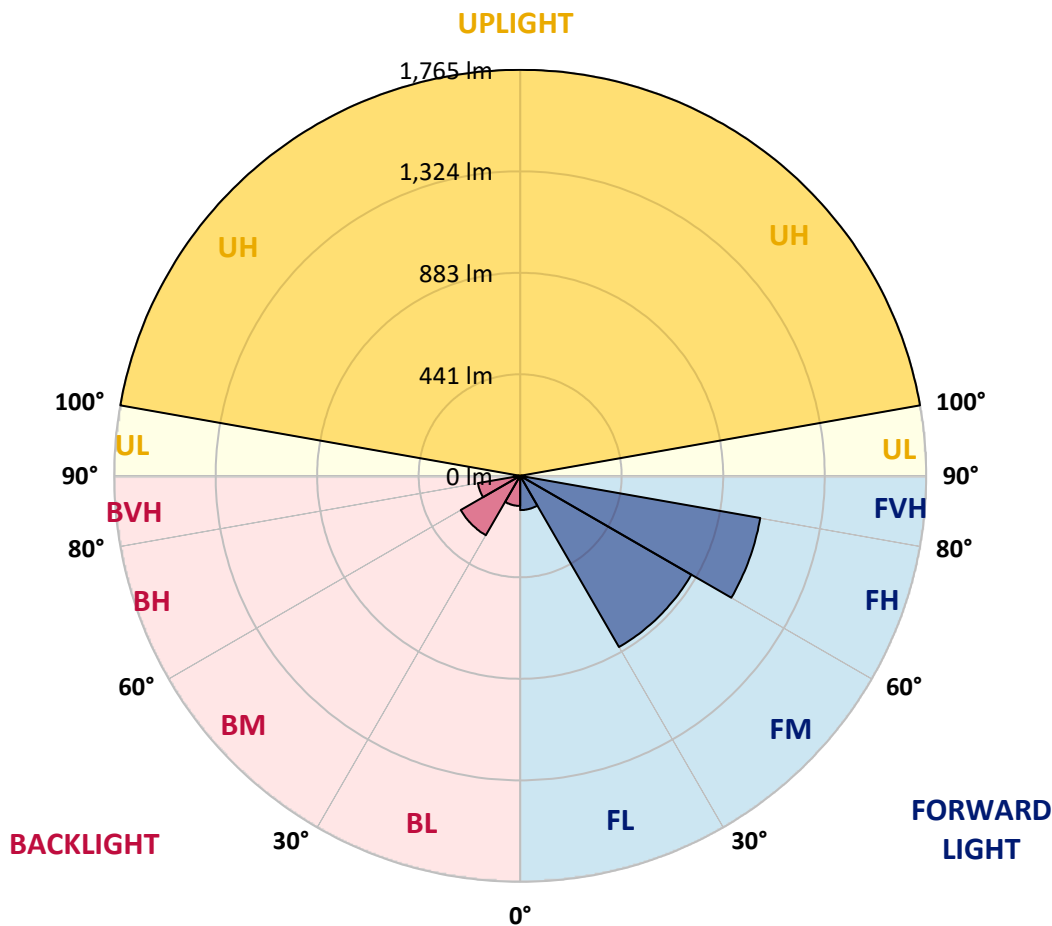


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	149.2	3.3			
FM (30°-60°)	859.6	19.1			
FH (60°-80°)	1060.1	23.5			G1/1800
FVH (80°-90°)	20.7	0.5			G1/100
BL (0°-30°)	131.0	2.9	B1/500		
BM (30°-60°)	298.3	6.6	B1/1000		
BH (60°-80°)	186.5	4.1	B1/500		G1/500
BVH (80°-90°)	27.7	0.6			G1/100
UL (90°-100°)	8.4	0.2		U1/10	
UH (100°-180°)	1765.5	39.2		U5	

BUG Rating: B1-U5-G1
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4
2.5°	294.9	294.5	294.9	293.3	291.8	289.5	288.7	286.0	284.0	281.3	279.0
5°	316.6	317.8	317.4	315.5	309.3	304.6	304.6	298.8	292.6	286.7	281.3
7.5°	340.3	340.3	338.0	334.1	327.9	320.9	320.1	312.4	303.4	295.3	286.7
10°	357.4	358.2	354.7	349.3	341.5	334.1	333.4	324.4	315.9	305.4	294.9
12.5°	369.5	369.5	366.4	361.3	352.0	345.0	344.2	336.1	327.1	316.3	304.2
15°	375.7	374.9	372.2	366.8	358.6	352.8	351.6	344.6	337.2	326.4	313.5
17.5°	374.5	374.5	372.2	366.8	360.9	356.3	355.5	350.4	345.0	334.5	321.7
20°	369.5	369.1	368.3	364.0	360.2	358.2	357.4	355.1	351.6	342.7	330.6
22.5°	364.8	364.4	363.3	360.5	359.0	360.2	360.2	359.8	359.4	352.4	340.7
25°	367.5	367.2	364.8	360.9	360.5	366.0	366.4	367.5	368.3	362.5	350.4
27.5°	386.6	385.4	378.8	368.7	365.2	372.2	373.0	376.5	375.7	369.5	359.0
30°	423.9	424.3	409.5	387.7	376.1	379.2	379.6	383.5	382.3	377.3	368.7
32.5°	480.2	480.2	456.1	423.1	393.6	387.4	386.2	389.7	394.4	387.7	379.2
35°	551.7	549.8	520.6	469.7	423.5	401.3	400.6	399.0	407.2	401.0	388.5
37.5°	623.6	616.6	588.2	532.3	465.5	428.5	425.4	420.8	425.4	412.2	401.3
40°	681.5	680.3	657.0	600.3	515.2	461.6	459.2	438.6	441.8	431.3	427.0
42.5°	745.2	746.0	730.4	673.3	574.6	506.2	500.0	468.2	477.1	473.2	471.3
45°	815.1	814.3	802.7	742.9	647.3	568.4	560.6	521.4	539.7	537.3	548.2
47.5°	868.7	873.0	866.4	824.1	733.5	643.8	638.0	590.2	617.8	636.4	657.0
50°	941.8	941.4	923.5	906.0	833.8	740.1	734.3	681.1	720.7	747.9	785.6
52.5°	1032.3	1029.2	992.3	986.1	955.8	845.4	840.4	784.8	841.5	865.2	941.8
55°	1089.0	1088.6	1069.6	1080.5	1081.3	962.8	956.5	907.2	971.3	998.5	1114.3
57.5°	1136.4	1136.8	1152.7	1190.8	1216.5	1105.3	1103.0	1042.8	1107.7	1145.8	1282.5
60°	1173.0	1180.7	1225.4	1312.4	1355.2	1287.2	1277.1	1213.4	1256.9	1272.0	1411.1
62.5°	1158.2	1168.3	1256.1	1384.3	1494.3	1479.9	1476.4	1384.3	1383.9	1376.2	1507.1
65°	1041.6	1063.4	1201.7	1381.6	1586.0	1675.7	1670.7	1545.5	1502.0	1463.2	1535.8
67.5°	852.4	857.1	1023.8	1275.9	1585.2	1798.9	1793.4	1662.9	1575.5	1480.3	1451.5
69°	693.9	711.0	865.2	1142.3	1529.2	1823.7	1823.7	1695.5	1572.7	1439.5	1328.0
70°	600.3	601.0	749.9	1035.8	1453.1	1809.0	1812.5	1695.5	1550.6	1386.3	1218.4
72.5°	281.3	298.8	392.8	676.0	1173.7	1662.9	1671.4	1583.6	1422.0	1194.3	914.2
75°	84.3	87.4	130.9	320.5	672.5	1281.0	1300.0	1317.5	1158.2	879.2	563.0
77.5°	50.1	49.7	63.3	108.8	311.2	759.6	768.1	842.7	751.4	488.8	255.6
80°	24.5	25.3	33.8	52.8	116.6	275.9	303.4	394.0	333.0	191.2	93.6
82.5°	8.2	8.9	14.0	21.4	49.3	89.0	98.3	123.6	106.5	69.5	40.0
85°	0.0	0.0	0.4	0.8	2.7	6.6	6.6	14.8	22.1	24.5	13.2
87.5°	0.0	0.0	0.4	0.4	0.8	0.8	0.8	0.8	0.8	0.8	1.2
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	6.2	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	9.2	9.2	9.5	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	22.3	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	41.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	65.3	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	90.7	97.2	96.2	92.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	117.2	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	146.8	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	178.5	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	210.3	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	248.9	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	283.6	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	317.4	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	348.3	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	381.0	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	414.9	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	447.6	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	479.2	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	508.7	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	537.2	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	564.1	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	588.7	593.3	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	607.0	610.7	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	624.1	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	642.2	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	659.7	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	670.3	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	678.6	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	688.3	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	700.0	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	706.4	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	705.7	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	710.9	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4	277.4
2.5°	277.8	277.0	275.5	273.9	273.1	271.2	271.6	270.8	270.4	270.4	270.8
5°	278.6	277.4	275.1	273.5	272.0	271.2	273.1	273.9	274.7	274.7	275.1
7.5°	283.2	280.9	278.2	276.2	276.6	277.8	280.9	283.2	284.4	285.2	286.0
10°	291.0	288.3	284.4	284.0	284.8	287.9	292.2	295.7	298.8	300.7	300.7
12.5°	299.2	295.7	292.6	293.3	296.8	301.5	305.8	309.7	312.4	314.3	314.7
15°	308.1	304.6	301.5	303.4	309.3	314.7	318.6	320.1	321.3	323.3	323.6
17.5°	316.3	313.2	310.4	315.5	320.5	324.8	326.0	325.2	323.6	324.8	325.6
20°	324.8	322.1	320.5	326.0	329.5	329.9	326.7	323.3	319.4	319.4	319.8
22.5°	335.3	331.8	331.0	333.7	332.6	327.9	320.1	314.7	309.3	308.5	309.7
25°	345.4	341.9	341.5	339.6	329.5	317.4	306.9	300.7	296.4	296.8	299.2
27.5°	355.5	353.2	353.6	343.1	320.5	302.3	288.3	283.2	284.4	285.2	287.5
30°	365.6	365.6	367.2	343.1	308.1	280.9	267.7	267.3	270.4	272.7	275.5
32.5°	377.3	380.8	378.0	338.8	291.4	259.1	248.7	249.4	252.9	256.8	259.1
35°	388.5	396.7	388.9	329.1	268.5	239.3	230.8	229.6	232.3	235.8	237.0
37.5°	406.4	419.6	398.2	313.9	244.8	221.8	213.3	210.2	207.5	210.2	209.8
40°	437.5	453.4	405.2	288.7	221.8	205.5	196.6	190.8	184.2	178.3	178.3
42.5°	487.2	497.7	409.1	258.0	198.9	189.2	180.3	171.7	161.6	151.1	151.1
45°	568.4	570.7	410.7	225.3	177.9	172.9	163.6	155.4	142.2	131.7	129.4
47.5°	676.8	666.7	414.6	193.9	159.7	158.5	150.7	141.4	127.0	117.3	116.2
50°	822.5	779.0	431.6	168.6	144.9	146.1	140.3	129.4	115.8	108.8	107.2
52.5°	986.5	920.8	444.9	148.4	132.1	135.6	131.3	120.8	109.2	103.3	102.2
55°	1165.6	1057.2	441.8	134.8	122.4	126.3	124.7	115.8	105.3	100.2	99.1
57.5°	1311.7	1153.1	414.6	122.8	112.7	118.1	119.7	112.7	103.0	98.3	97.1
60°	1421.2	1205.6	358.6	112.7	104.9	111.5	115.8	110.7	102.6	99.9	98.7
62.5°	1471.0	1200.9	286.0	104.9	99.1	106.8	116.2	113.8	108.4	110.3	110.7
65°	1443.0	1142.3	214.5	99.1	95.6	107.6	122.8	122.8	114.6	118.1	118.5
67.5°	1299.6	988.8	156.2	94.8	92.1	111.5	135.2	127.4	111.9	114.6	113.4
69°	1163.2	884.7	134.0	92.5	89.4	113.4	140.6	128.2	108.8	111.9	108.8
70°	1063.0	790.6	120.4	90.5	88.2	113.4	142.2	127.4	107.2	109.6	106.1
72.5°	756.5	549.0	99.1	86.6	83.9	104.9	139.5	123.2	103.0	100.2	93.6
75°	439.8	303.4	84.3	82.4	74.2	92.1	132.5	118.5	98.7	93.6	89.0
77.5°	184.5	135.6	71.9	75.0	65.7	82.0	123.9	113.8	93.6	86.6	84.3
80°	75.0	67.6	59.8	64.9	57.1	72.3	114.2	106.1	86.3	79.3	75.8
82.5°	39.2	37.3	45.8	52.5	47.4	66.4	107.6	100.6	80.0	73.0	68.8
85°	11.7	15.5	26.0	35.7	36.1	59.8	104.5	93.2	69.5	60.2	59.4
87.5°	0.8	3.1	8.9	18.6	23.7	45.8	84.7	76.5	56.3	47.4	47.8
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-SA1A-740-U-T4W-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)