

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-SA1B-740-U-T4W-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401160 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1B-740-U-T4W-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5201.9 lumens
Efficiency: N/A
Efficacy: 123.6 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

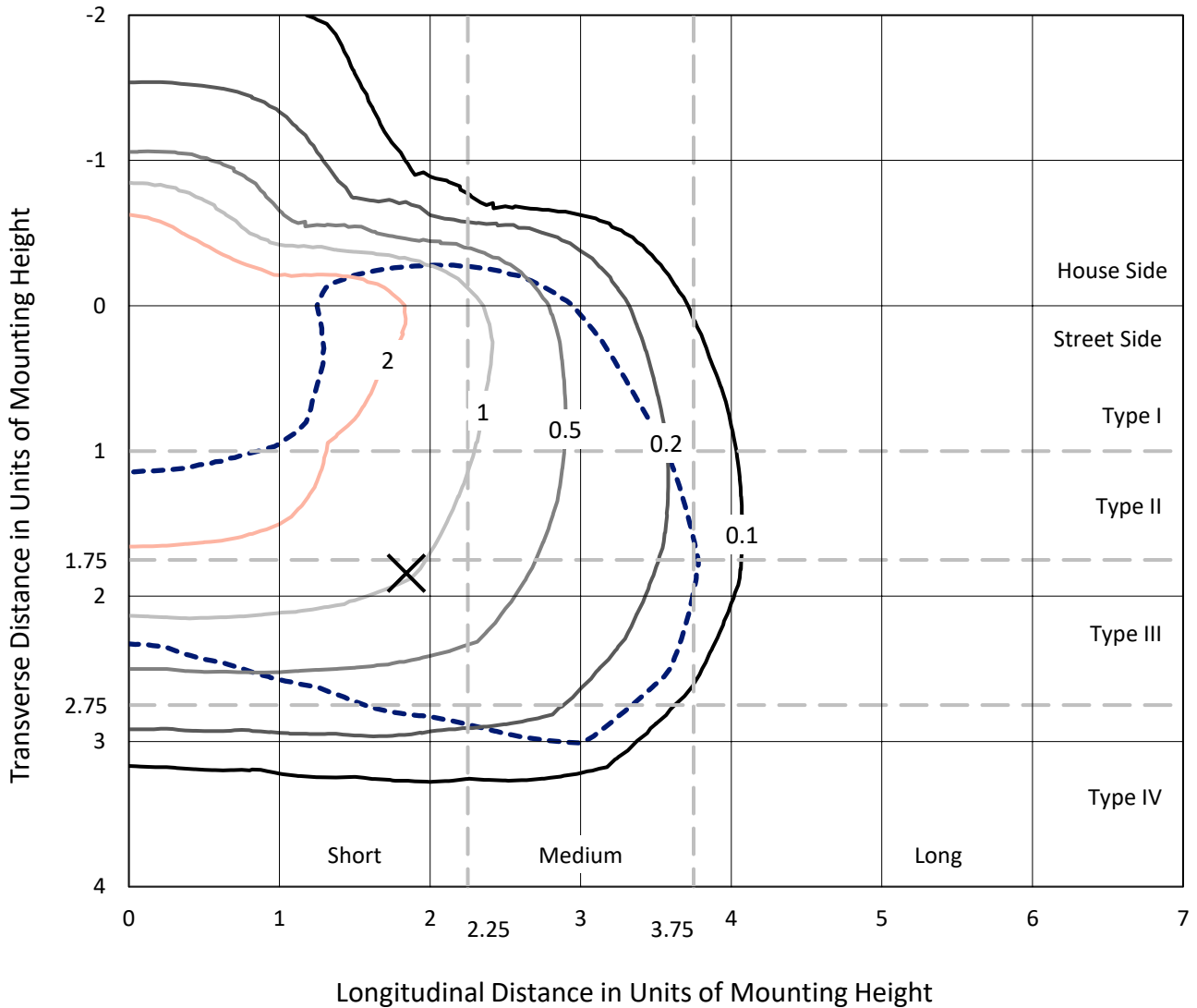
Input Watts (W): 42.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

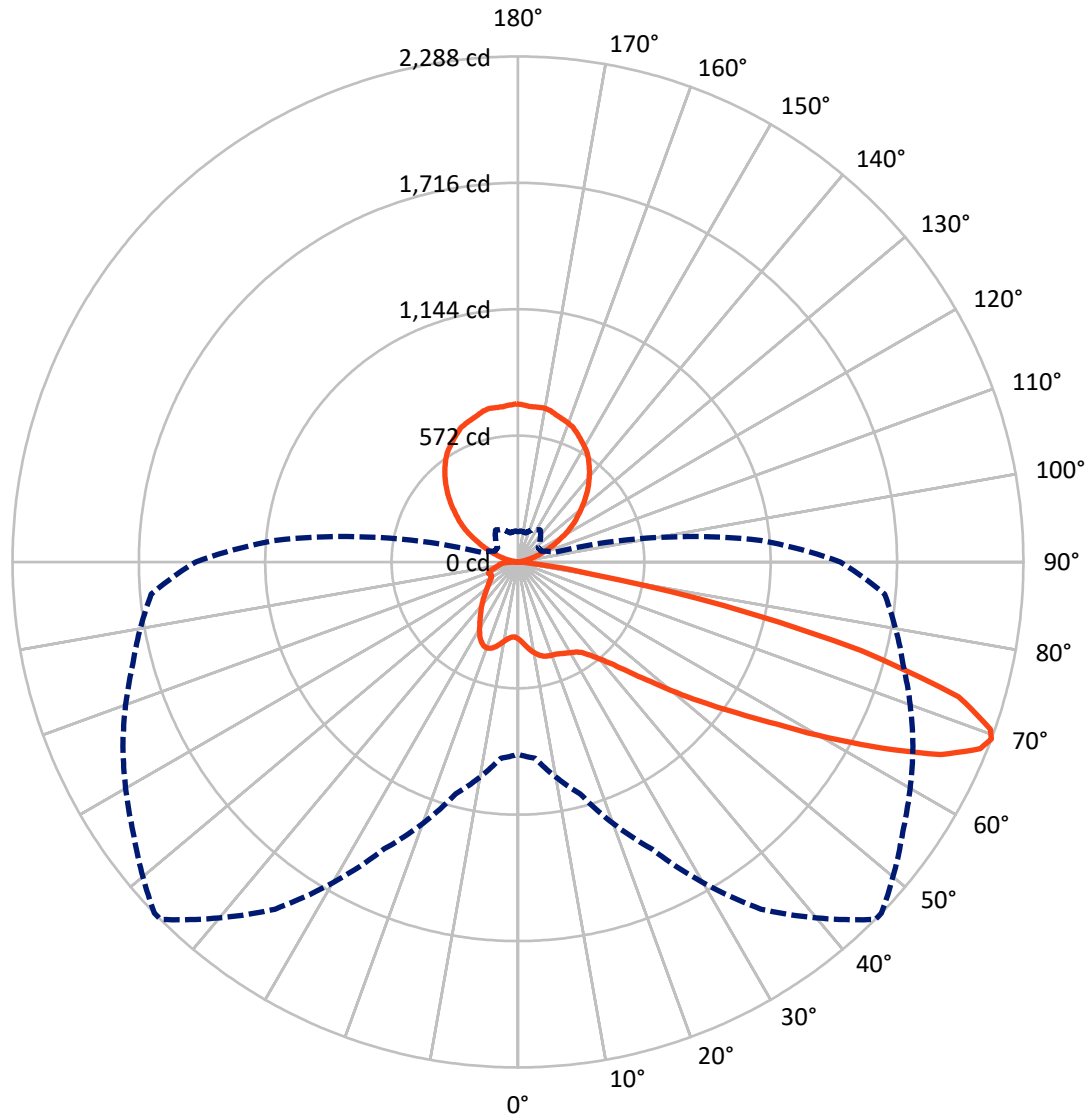
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.3 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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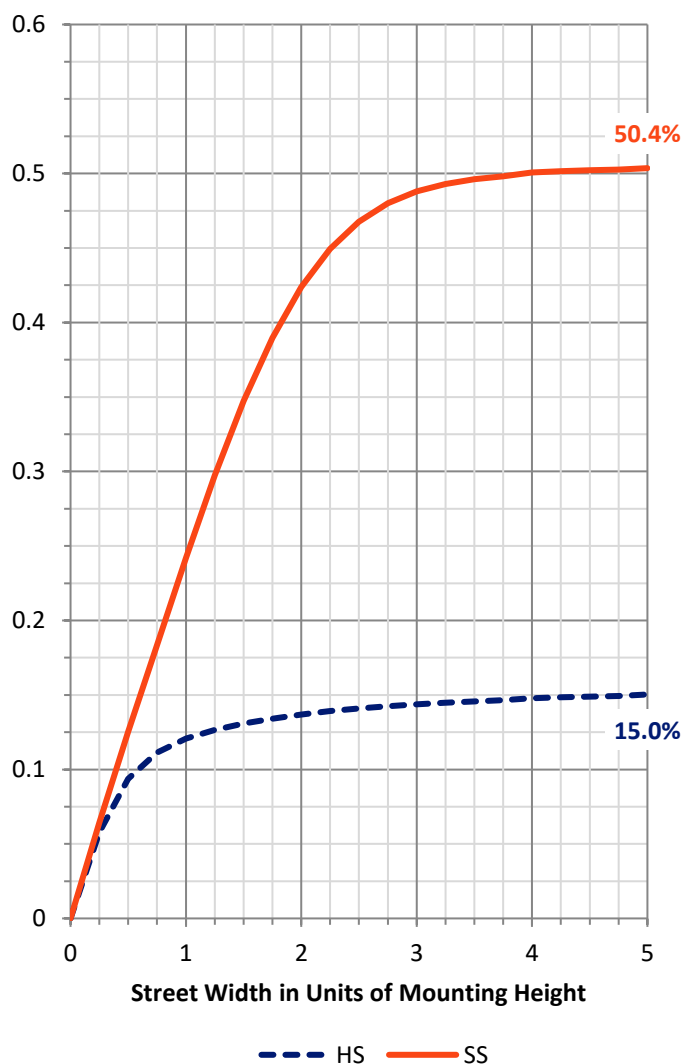
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	807.1	887.0	1694.0
	% Fixture	15.5	17.1	32.6
Street Side	Lumens	2620.9	887.0	3507.9
	% Fixture	50.4	17.1	67.4
Total	Lumens	3428.0	1773.9	5201.9
	% Fixture	65.9	34.1	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	35.4	0.7
10°-20°	117.5	2.3
20°-30°	198.5	3.8
30°-40°	287.2	5.5
40°-50°	433.7	8.3
50°-60°	731.3	14.1
60°-70°	1006.1	19.3
70°-80°	557.5	10.7
80°-90°	60.7	1.2
90°-100°	8.4	0.2
100°-110°	58.7	1.1
110°-120°	169.9	3.3
120°-130°	279.4	5.4
130°-140°	344.6	6.6
140°-150°	352.5	6.8
150°-160°	297.0	5.7
160°-170°	195.5	3.8
170°-180°	67.8	1.3
0°-90°	3428.0	65.9
0°-180°	5201.9	100.0

Coefficient of Utilization

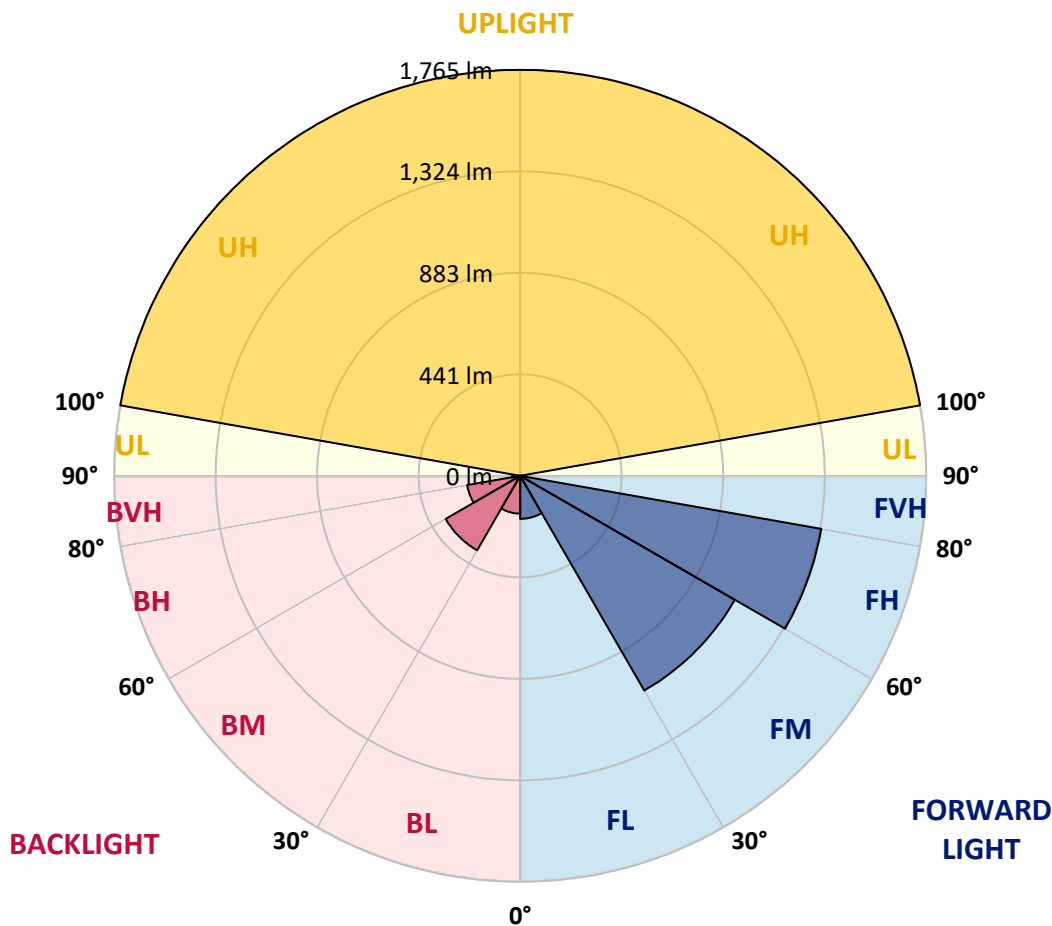


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	187.1	3.6			
FM (30°-60°)	1078.1	20.7			
FH (60°-80°)	1329.7	25.6			G1/1800
FVH (80°-90°)	26.0	0.5			G1/100
BL (0°-30°)	164.3	3.2	B1/500		
BM (30°-60°)	374.1	7.2	B1/1000		
BH (60°-80°)	233.9	4.5	B1/500		G1/500
BVH (80°-90°)	34.7	0.7			G1/100
UL (90°-100°)	8.4	0.2		U1/10	
UH (100°-180°)	1765.5	33.9		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°	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0
2.5°	369.9	369.4	369.9	367.9	366.0	363.1	362.1	358.7	356.2	352.8	349.9
5°	397.2	398.6	398.1	395.7	387.9	382.1	382.1	374.8	367.0	359.6	352.8
7.5°	426.9	426.9	424.0	419.1	411.3	402.5	401.6	391.8	380.6	370.4	359.6
10°	448.3	449.3	444.9	438.1	428.4	419.1	418.1	406.9	396.2	383.0	369.9
12.5°	463.4	463.4	459.5	453.2	441.5	432.7	431.8	421.5	410.3	396.7	381.6
15°	471.2	470.3	466.9	460.0	449.8	442.5	441.0	432.3	423.0	409.4	393.3
17.5°	469.8	469.8	466.9	460.0	452.7	446.9	445.9	439.6	432.7	419.6	403.5
20°	463.4	463.0	462.0	456.6	451.8	449.3	448.3	445.4	441.0	429.8	414.7
22.5°	457.6	457.1	455.6	452.2	450.3	451.8	451.8	451.3	450.8	442.0	427.4
25°	461.0	460.5	457.6	452.7	452.2	459.1	459.5	461.0	462.0	454.7	439.6
27.5°	484.9	483.4	475.1	462.5	458.1	466.9	467.8	472.2	471.2	463.4	450.3
30°	531.7	532.2	513.6	486.4	471.7	475.6	476.1	481.0	479.5	473.2	462.5
32.5°	602.3	602.3	572.1	530.7	493.7	485.9	484.4	488.8	494.6	486.4	475.6
35°	692.0	689.6	653.0	589.2	531.2	503.4	502.4	500.5	510.7	502.9	487.3
37.5°	782.2	773.4	737.8	667.6	583.8	537.5	533.6	527.8	533.6	517.1	503.4
40°	854.8	853.3	824.1	752.9	646.2	578.9	576.0	550.2	554.1	540.9	535.6
42.5°	934.7	935.7	916.2	844.5	720.8	635.0	627.2	587.2	598.4	593.6	591.1
45°	1022.4	1021.4	1006.8	931.8	811.9	713.0	703.2	654.0	676.9	674.0	687.6
47.5°	1089.7	1095.0	1086.7	1033.6	920.1	807.5	800.2	740.2	774.8	798.2	824.1
50°	1181.3	1180.8	1158.4	1136.4	1045.8	928.4	921.0	854.3	904.0	938.1	985.4
52.5°	1294.8	1290.9	1244.6	1236.8	1198.8	1060.4	1054.1	984.4	1055.5	1085.3	1181.3
55°	1366.0	1365.5	1341.6	1355.3	1356.2	1207.6	1199.8	1137.9	1218.3	1252.4	1397.6
57.5°	1425.4	1425.9	1445.9	1493.7	1525.8	1386.4	1383.5	1308.0	1389.4	1437.1	1608.7
60°	1471.2	1481.0	1537.0	1646.2	1699.8	1614.5	1601.8	1521.9	1576.5	1595.5	1770.0
62.5°	1452.7	1465.4	1575.5	1736.3	1874.3	1856.2	1851.8	1736.3	1735.9	1726.1	1890.3
65°	1306.5	1333.8	1507.3	1732.9	1989.3	2101.8	2095.5	1938.6	1884.0	1835.3	1926.4
67.5°	1069.2	1075.0	1284.1	1600.4	1988.3	2256.3	2249.5	2085.8	1976.1	1856.7	1820.6
69°	870.4	891.8	1085.3	1432.7	1918.1	2287.5	2287.5	2126.7	1972.7	1805.5	1665.7
70°	752.9	753.9	940.5	1299.2	1822.6	2269.0	2273.4	2126.7	1944.9	1738.8	1528.3
72.5°	352.8	374.8	492.7	847.9	1472.2	2085.8	2096.5	1986.3	1783.6	1498.0	1146.7
75°	105.7	109.6	164.2	402.0	843.6	1606.7	1630.6	1652.5	1452.7	1102.8	706.1
77.5°	62.9	62.4	79.4	136.5	390.3	952.7	963.4	1057.0	942.5	613.1	320.7
80°	30.7	31.7	42.4	66.3	146.2	346.0	380.6	494.1	417.6	239.8	117.4
82.5°	10.2	11.2	17.5	26.8	61.9	111.6	123.3	155.0	133.5	87.2	50.2
85°	0.0	0.0	0.5	1.0	3.4	8.3	8.3	18.5	27.8	30.7	16.6
87.5°	0.0	0.0	0.5	0.5	1.0	1.0	1.0	1.0	1.0	1.0	1.5
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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 CATALOG NUMBER: ENT-SA1B-740-U-T4W-ULG

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°	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0	348.0
2.5°	348.4	347.5	345.5	343.6	342.6	340.2	340.6	339.7	339.2	339.2	339.7
5°	349.4	348.0	345.0	343.1	341.1	340.2	342.6	343.6	344.5	344.5	345.0
7.5°	355.3	352.3	348.9	346.5	347.0	348.4	352.3	355.3	356.7	357.7	358.7
10°	365.0	361.6	356.7	356.2	357.2	361.1	366.5	370.9	374.8	377.2	377.2
12.5°	375.2	370.9	367.0	367.9	372.3	378.2	383.5	388.4	391.8	394.2	394.7
15°	386.4	382.1	378.2	380.6	387.9	394.7	399.6	401.6	403.0	405.5	405.9
17.5°	396.7	392.8	389.4	395.7	402.0	407.4	408.9	407.9	405.9	407.4	408.4
20°	407.4	404.0	402.0	408.9	413.3	413.7	409.8	405.5	400.6	400.6	401.1
22.5°	420.6	416.2	415.2	418.6	417.2	411.3	401.6	394.7	387.9	386.9	388.4
25°	433.2	428.8	428.4	425.9	413.3	398.1	385.0	377.2	371.8	372.3	375.2
27.5°	445.9	443.0	443.5	430.3	402.0	379.1	361.6	355.3	356.7	357.7	360.6
30°	458.6	458.6	460.5	430.3	386.4	352.3	335.8	335.3	339.2	342.1	345.5
32.5°	473.2	477.6	474.2	424.9	365.5	325.0	311.9	312.9	317.2	322.1	325.0
35°	487.3	497.6	487.8	412.8	336.7	300.2	289.5	288.0	291.4	295.8	297.3
37.5°	509.7	526.3	499.5	393.8	307.0	278.3	267.5	263.6	260.2	263.6	263.2
40°	548.7	568.7	508.3	362.1	278.3	257.8	246.6	239.3	231.0	223.7	223.7
42.5°	611.1	624.3	513.2	323.6	249.5	237.3	226.1	215.4	202.7	189.6	189.6
45°	713.0	715.9	515.1	282.6	223.2	216.9	205.2	194.9	178.4	165.2	162.3
47.5°	848.9	836.2	520.0	243.2	200.3	198.8	189.1	177.4	159.4	147.2	145.7
50°	1031.7	977.1	541.4	211.5	181.8	183.2	175.9	162.3	145.2	136.5	134.5
52.5°	1237.3	1155.0	558.0	186.2	165.7	170.1	164.7	151.6	136.9	129.6	128.2
55°	1462.0	1326.0	554.1	169.1	153.5	158.4	156.4	145.2	132.1	125.7	124.3
57.5°	1645.2	1446.4	520.0	154.0	141.3	148.1	150.1	141.3	129.1	123.3	121.8
60°	1782.6	1512.2	449.8	141.3	131.6	139.9	145.2	138.9	128.7	125.2	123.8
62.5°	1845.0	1506.3	358.7	131.6	124.3	134.0	145.7	142.8	136.0	138.4	138.9
65°	1809.9	1432.7	269.0	124.3	119.9	135.0	154.0	154.0	143.8	148.1	148.6
67.5°	1630.1	1240.2	195.9	118.9	115.5	139.9	169.6	159.8	140.3	143.8	142.3
69°	1459.1	1109.6	168.1	116.0	112.1	142.3	176.4	160.8	136.5	140.3	136.5
70°	1333.3	991.7	151.1	113.5	110.6	142.3	178.4	159.8	134.5	137.4	133.0
72.5°	948.8	688.6	124.3	108.7	105.3	131.6	174.9	154.5	129.1	125.7	117.4
75°	551.7	380.6	105.7	103.3	93.1	115.5	166.2	148.6	123.8	117.4	111.6
77.5°	231.5	170.1	90.2	94.1	82.4	102.8	155.5	142.8	117.4	108.7	105.7
80°	94.1	84.8	75.0	81.4	71.6	90.6	143.3	133.0	108.2	99.4	95.0
82.5°	49.2	46.8	57.5	65.8	59.5	83.3	135.0	126.2	100.4	91.6	86.3
85°	14.6	19.5	32.7	44.8	45.3	75.0	131.1	117.0	87.2	75.5	74.6
87.5°	1.0	3.9	11.2	23.4	29.7	57.5	106.2	96.0	70.7	59.5	59.9
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-SA1B-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)