

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-T2-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401146 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-T2-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4367.9 lumens
Efficiency: N/A
Efficacy: 103.8 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type II - Medium
BUG Rating: B0 - U5 - G1

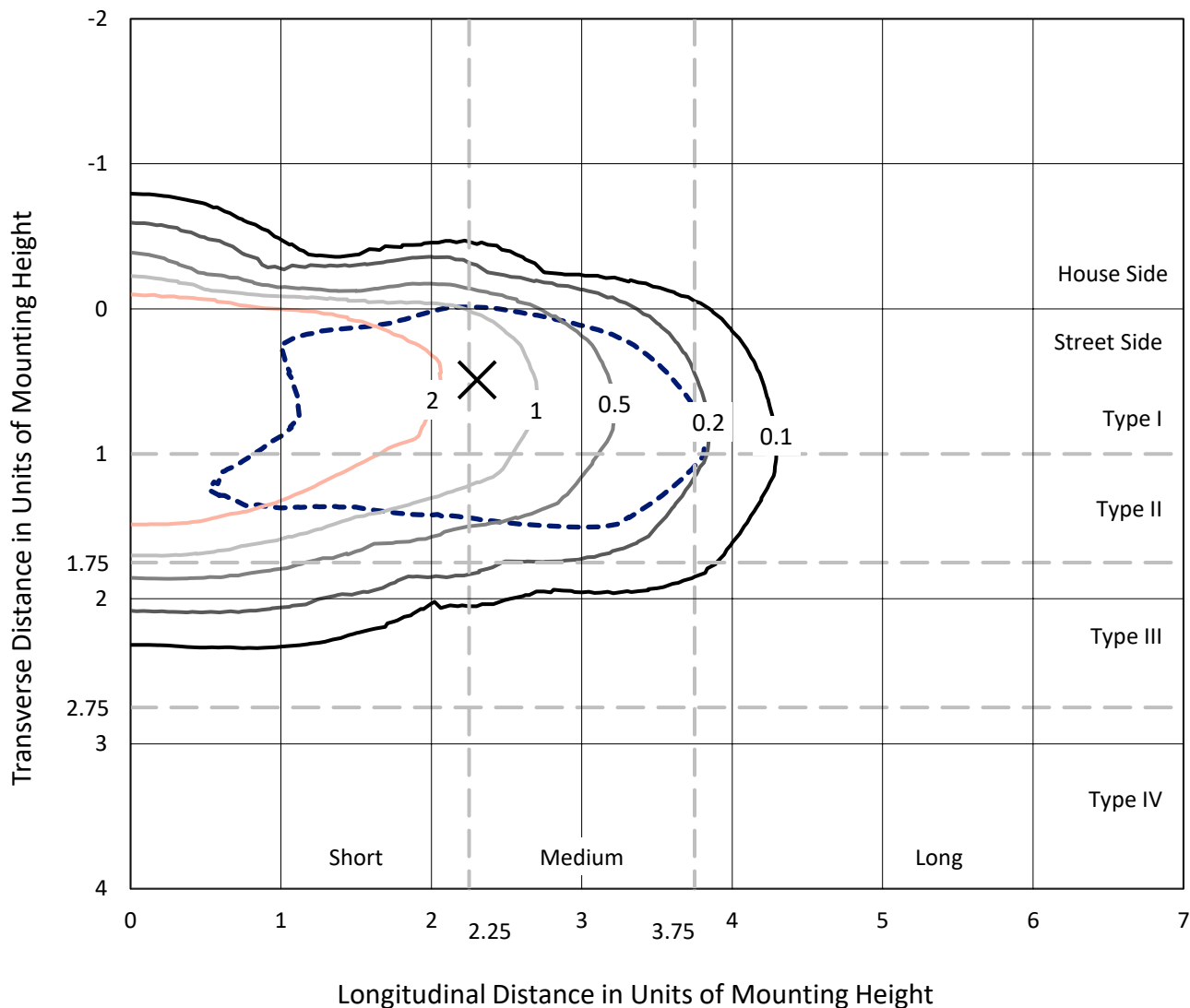
Input Watts (W): 42.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

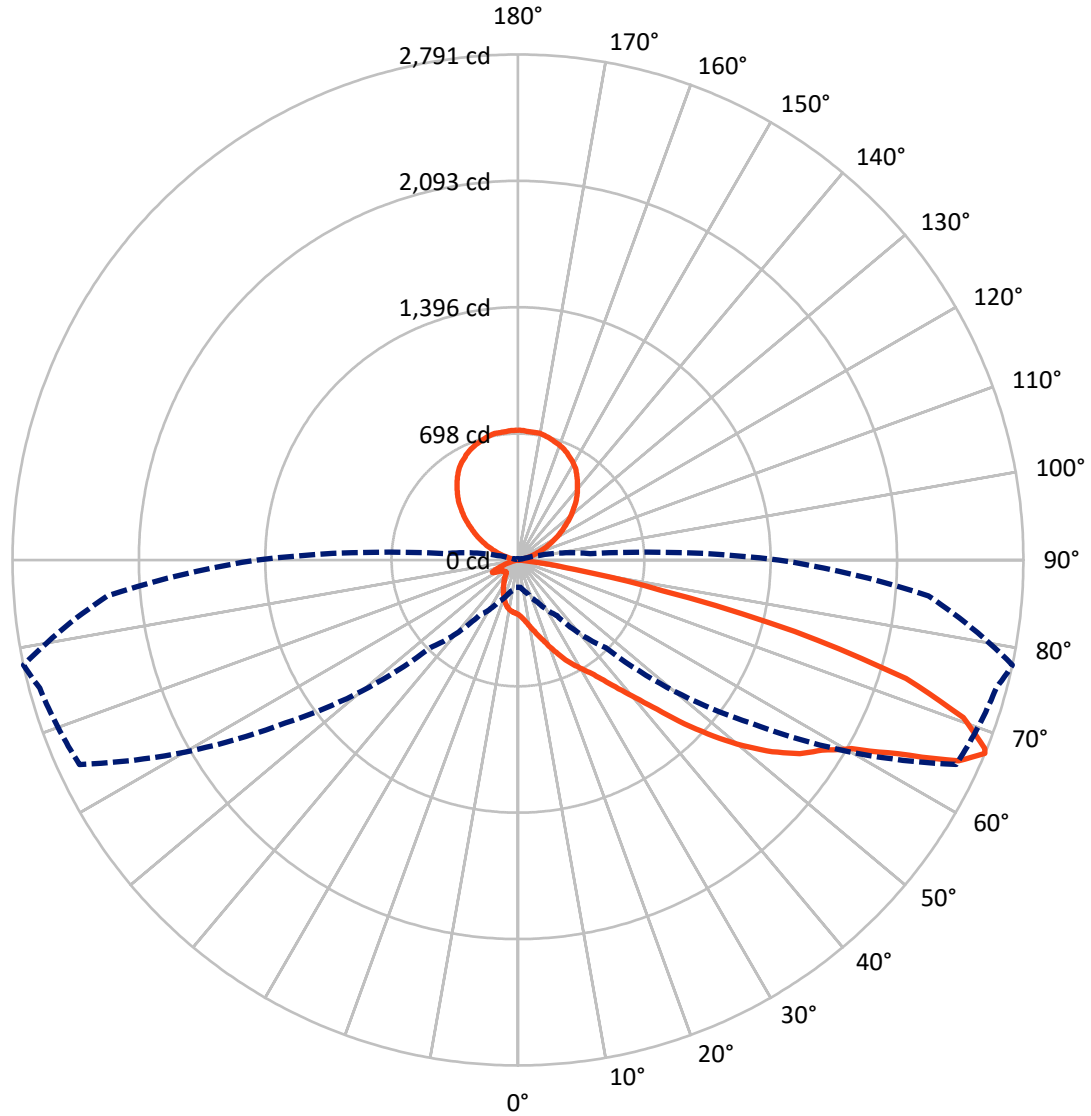
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.7 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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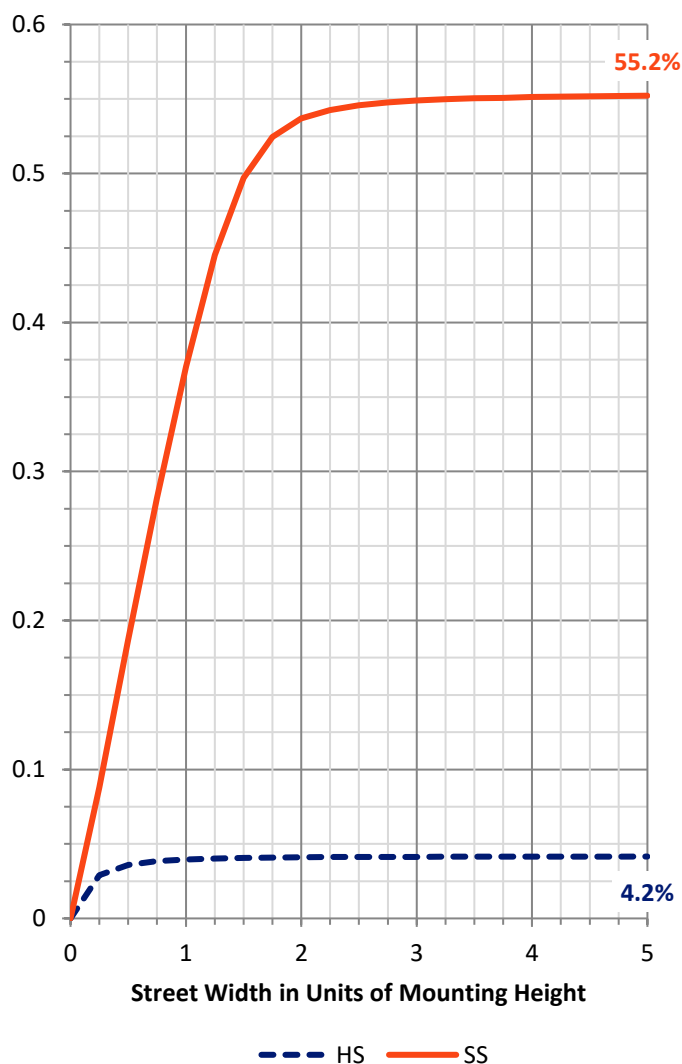
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	183.0	887.0	1070.0
	% Fixture	4.2	20.3	24.5
Street Side	Lumens	2411.0	887.0	3297.9
	% Fixture	55.2	20.3	75.5
Total	Lumens	2594.0	1773.9	4367.9
	% Fixture	59.4	40.6	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.0	0.7
10°-20°	83.2	1.9
20°-30°	146.9	3.4
30°-40°	259.0	5.9
40°-50°	445.2	10.2
50°-60°	670.2	15.3
60°-70°	659.5	15.1
70°-80°	288.2	6.6
80°-90°	12.8	0.3
90°-100°	8.4	0.2
100°-110°	58.7	1.3
110°-120°	169.9	3.9
120°-130°	279.4	6.4
130°-140°	344.6	7.9
140°-150°	352.5	8.1
150°-160°	297.0	6.8
160°-170°	195.5	4.5
170°-180°	67.8	1.6
0°-90°	2594.0	59.4
0°-180°	4367.9	100.0

Coefficient of Utilization

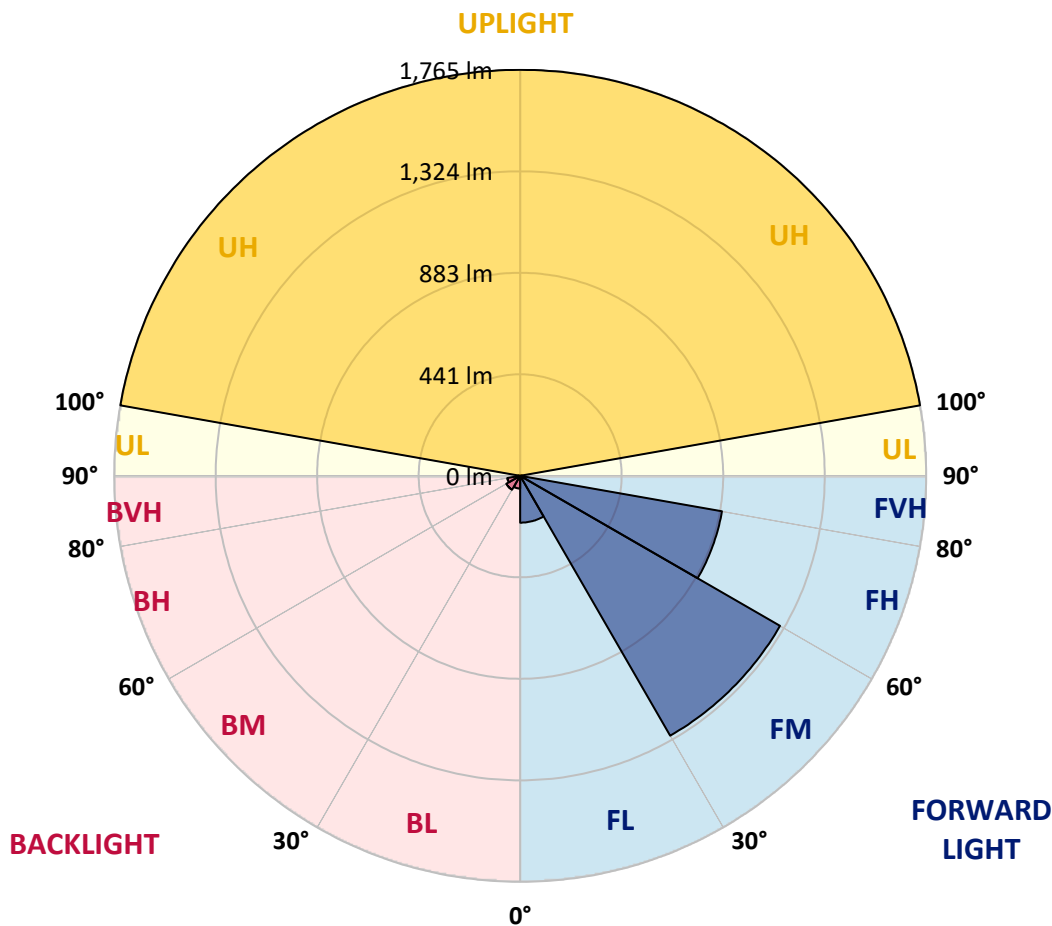


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	203.8	4.7			
FM (30°-60°)	1304.8	29.9			
FH (60°-80°)	890.9	20.4			G1/1800
FVH (80°-90°)	11.5	0.3			G1/100
BL (0°-30°)	55.3	1.3	B0/110		
BM (30°-60°)	69.6	1.6	B0/220		
BH (60°-80°)	56.8	1.3	B0/110		G0/110
BVH (80°-90°)	1.3	0.0			G0/10
UL (90°-100°)	8.4	0.2		U1/10	
UH (100°-180°)	1765.5	40.4		U5	

BUG Rating: B0-U5-G1
 Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	301.2	301.2	301.2	301.2	301.2	301.2	301.2	301.2	301.2	301.2	301.2
2.5°	345.5	347.0	345.0	343.6	339.7	334.8	329.9	322.6	314.8	311.9	307.0
5°	387.9	387.9	387.9	384.0	380.6	371.4	360.1	348.9	334.3	329.0	317.7
7.5°	410.3	410.8	412.3	412.3	410.3	404.0	391.8	379.2	357.2	349.9	331.9
10°	412.8	414.7	418.6	424.5	428.9	432.3	425.0	411.3	385.0	376.2	349.9
12.5°	406.4	407.4	413.8	424.5	438.6	452.7	453.2	444.9	415.7	403.5	371.8
15°	391.8	393.3	402.5	419.6	441.5	466.9	481.5	479.1	451.8	437.6	396.2
17.5°	368.4	369.9	381.6	406.9	439.1	476.1	507.3	519.5	487.3	473.7	421.1
20°	367.5	367.9	372.3	391.3	429.3	481.5	532.7	561.4	530.7	516.1	450.3
22.5°	429.8	425.9	416.2	404.0	420.6	480.0	555.6	605.8	584.3	561.4	483.9
25°	499.5	501.0	490.3	461.5	440.6	477.6	573.1	656.0	634.5	611.6	518.5
27.5°	572.6	570.2	560.9	534.6	499.5	495.1	585.8	696.4	682.8	655.0	549.2
30°	643.8	641.8	635.0	608.2	570.2	540.5	595.5	733.0	728.6	697.9	574.1
32.5°	725.2	728.6	719.8	684.7	638.4	601.9	616.5	771.5	784.1	746.6	599.9
35°	819.7	819.7	801.7	769.5	721.8	670.6	658.4	813.9	854.8	814.4	640.9
37.5°	897.7	904.0	893.3	847.0	802.2	748.6	722.2	866.0	942.0	901.1	695.9
40°	959.1	969.8	970.3	924.5	883.1	848.0	811.4	939.6	1051.7	999.1	761.7
42.5°	1016.1	1018.1	1026.3	1000.0	958.6	949.3	911.8	1026.8	1188.6	1126.7	849.4
45°	1088.7	1092.6	1087.8	1068.3	1032.7	1044.9	1023.9	1137.5	1342.6	1290.5	952.8
47.5°	1195.5	1204.7	1197.4	1162.3	1118.9	1141.8	1126.7	1247.6	1516.6	1453.3	1064.8
50°	1295.4	1302.7	1310.5	1299.3	1255.9	1234.0	1215.4	1364.1	1665.7	1612.1	1175.0
52.5°	1306.1	1312.9	1355.8	1395.3	1424.0	1366.5	1308.5	1482.0	1803.7	1758.8	1275.9
55°	1236.4	1240.8	1312.4	1390.4	1522.5	1542.0	1445.5	1598.5	1919.2	1888.5	1343.6
57.5°	1042.4	1060.9	1162.8	1282.2	1498.1	1646.2	1639.9	1734.0	1994.2	1980.1	1430.8
60°	684.7	705.2	827.0	1007.8	1318.8	1618.5	1853.4	1937.2	2099.5	2115.1	1583.9
62.5°	354.8	378.7	485.9	646.2	955.7	1409.4	1926.0	2271.0	2301.2	2354.4	1856.8
65°	202.7	207.6	261.2	378.7	591.6	1009.3	1838.7	2601.4	2566.8	2674.5	2205.2
67°	150.6	150.6	188.1	257.3	374.8	686.2	1568.3	2671.1	2734.0	2791.0	2275.4
67.5°	135.0	142.3	174.5	237.3	336.3	608.7	1467.4	2652.6	2744.7	2780.3	2251.0
70°	92.6	97.5	125.2	170.1	226.6	316.8	962.0	2346.1	2644.3	2608.3	2040.0
72.5°	55.6	57.5	82.8	122.3	169.1	169.6	524.9	1780.8	2240.8	2240.3	1666.2
75°	34.6	36.6	48.7	81.9	118.4	106.2	242.7	1211.5	1609.2	1578.0	1116.5
77.5°	19.5	22.4	29.2	44.8	75.1	67.7	102.3	678.9	869.4	815.8	554.6
80°	7.8	9.3	16.6	21.4	42.4	40.4	41.9	238.8	351.9	317.3	185.7
82.5°	1.9	2.4	5.8	10.2	16.6	16.6	13.2	65.3	83.3	77.5	47.8
85°	0.0	0.0	0.5	0.5	0.5	1.0	3.4	7.3	8.8	10.2	7.8
87.5°	0.0	0.0	0.0	0.5	0.5	0.5	1.0	1.5	1.5	1.5	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	7.2	7.2	6.1	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	8.2	7.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	10.2	9.2	8.9	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	26.6	23.5	22.3	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	48.1	43.0	42.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	71.6	66.5	65.3	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.2	92.1	91.1	89.0



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CATALOG NUMBER: ENT-SA1B-740-U-T2-HSS-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.8	121.7	120.8	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	153.4	152.4	151.8	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	186.2	183.1	182.5	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	219.9	214.8	214.2	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	255.7	250.6	250.0	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	289.5	284.4	283.8	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	322.2	317.1	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.9	353.9	353.6	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	389.7	389.7	389.1	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	425.5	423.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	458.3	457.3	458.2	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	485.9	486.9	488.5	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	513.5	515.6	517.1	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	545.2	545.2	545.5	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	574.9	573.9	573.0	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	598.4	599.4	598.5	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	613.8	616.8	617.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	628.1	632.2	633.7	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	645.5	650.6	651.2	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	662.9	664.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	679.2	676.2	675.9	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	686.4	685.4	684.8	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	692.5	695.6	695.0	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	699.7	703.8	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	704.8	709.9	710.5	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	707.9	709.9	710.5	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	711.0	712.0	711.4	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	715.0	717.1	716.2	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°	301.2	301.2	301.2	301.2	301.2	301.2	301.2	301.2	301.2	301.2	301.2
2.5°	303.1	299.7	292.9	285.6	278.3	272.4	267.6	260.7	259.8	259.8	259.8
5°	309.5	301.7	286.1	270.5	254.9	240.7	230.5	222.2	214.9	212.5	214.4
7.5°	318.7	304.6	277.3	250.0	225.6	205.7	191.0	179.3	174.0	171.1	168.6
10°	330.9	309.0	265.6	225.6	194.9	171.1	155.5	144.3	138.9	135.5	136.0
12.5°	344.1	312.4	251.0	199.3	165.2	143.3	130.1	120.9	112.1	106.7	108.2
15°	357.2	314.8	233.0	175.0	142.3	122.8	104.3	87.7	81.9	80.9	80.4
17.5°	371.8	314.3	213.0	152.1	122.8	95.5	77.0	75.1	74.6	74.6	74.1
20°	387.0	311.9	190.1	133.0	103.3	72.6	69.7	68.7	67.3	66.8	66.3
22.5°	403.5	307.5	169.1	116.5	77.0	66.3	62.4	59.5	57.0	55.6	56.0
25°	418.6	299.2	148.6	100.9	65.8	59.5	54.1	49.7	47.3	45.3	45.8
27.5°	428.9	284.6	131.1	81.4	60.4	52.6	46.3	41.9	38.5	37.0	37.0
30°	429.8	263.7	115.5	66.8	55.1	46.3	39.5	34.6	32.7	31.7	31.2
32.5°	428.9	242.2	103.8	61.4	50.2	40.4	33.6	30.2	28.3	27.3	27.3
35°	433.7	220.3	93.1	56.5	44.8	35.6	29.7	26.3	24.9	23.9	23.9
37.5°	448.4	205.2	81.9	51.7	40.0	31.2	26.8	23.9	22.4	21.4	21.4
40°	468.3	192.5	68.2	46.8	35.1	28.3	24.4	21.9	20.0	19.0	19.0
42.5°	503.4	187.6	57.0	41.9	30.7	25.3	22.4	19.5	17.5	16.6	16.6
45°	555.6	190.1	52.1	37.5	27.8	22.9	20.0	17.1	15.1	14.6	14.6
47.5°	613.1	200.3	48.7	33.6	25.3	21.4	18.0	15.1	13.2	12.7	12.7
50°	677.4	216.4	45.8	29.7	22.9	19.5	16.1	13.2	11.7	11.2	11.2
52.5°	738.8	236.8	42.9	26.8	21.4	17.5	14.1	11.7	10.7	10.2	10.2
55°	785.6	250.0	40.4	24.9	20.0	16.1	12.7	11.2	9.7	9.3	9.3
57.5°	850.9	271.9	37.5	22.4	18.0	14.6	11.7	10.2	8.8	8.8	8.8
60°	983.5	330.9	33.1	20.5	16.1	13.2	11.2	9.3	8.3	7.8	7.8
62.5°	1222.3	428.4	28.8	19.0	14.1	11.7	9.7	8.3	7.3	6.3	6.3
65°	1452.3	468.8	24.4	16.6	12.7	10.2	8.8	7.3	5.4	4.4	4.4
67°	1439.6	401.1	20.5	14.1	10.7	9.3	7.3	5.8	3.9	2.4	2.4
67.5°	1405.5	373.3	20.0	13.6	10.2	8.8	7.3	5.4	3.4	1.9	1.9
70°	1194.5	261.2	15.6	10.7	8.8	7.8	5.8	3.9	1.9	1.0	1.0
72.5°	970.3	207.1	12.2	8.8	7.3	5.8	4.9	2.4	1.5	0.5	0.5
75°	686.2	127.2	10.7	7.8	5.8	4.4	3.9	2.4	1.5	1.0	0.5
77.5°	338.7	58.5	8.8	6.8	5.4	4.4	3.4	2.9	2.4	1.9	1.0
80°	99.4	19.0	5.8	4.9	4.9	4.4	3.9	3.4	2.9	2.4	1.5
82.5°	22.4	6.8	1.9	2.4	3.4	3.4	3.4	2.4	1.9	1.0	0.5
85°	2.9	1.5	1.5	1.5	1.9	1.9	1.5	1.0	1.0	0.0	0.0
87.5°	1.0	1.0	1.0	1.5	1.5	1.5	1.0	0.5	0.5	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°	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-T2-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)