

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-T3-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401150 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-T3-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4407.9 lumens
Efficiency: N/A
Efficacy: 104.7 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type III - Short
BUG Rating: B0 - U5 - G1

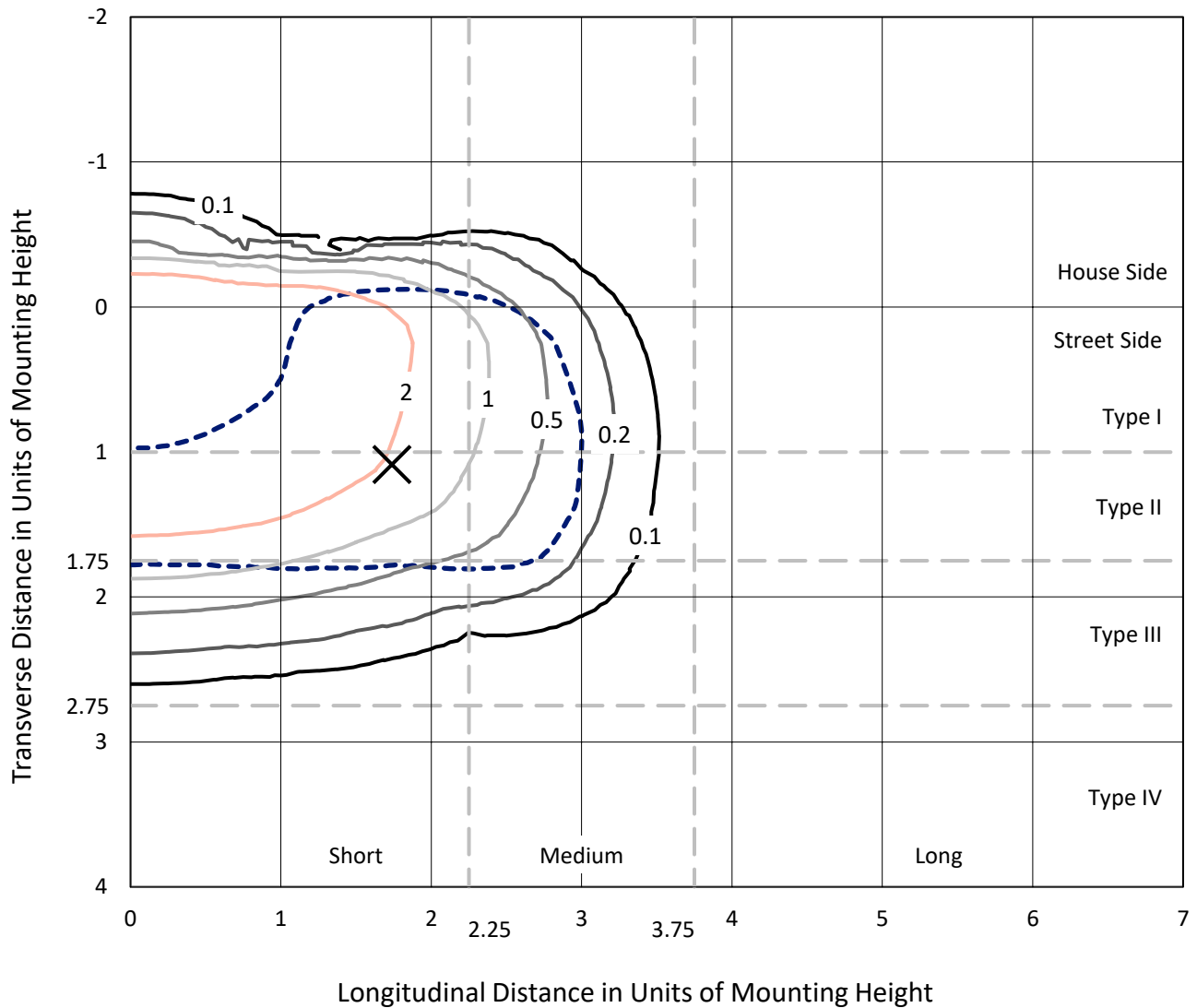
Input Watts (W): 42.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

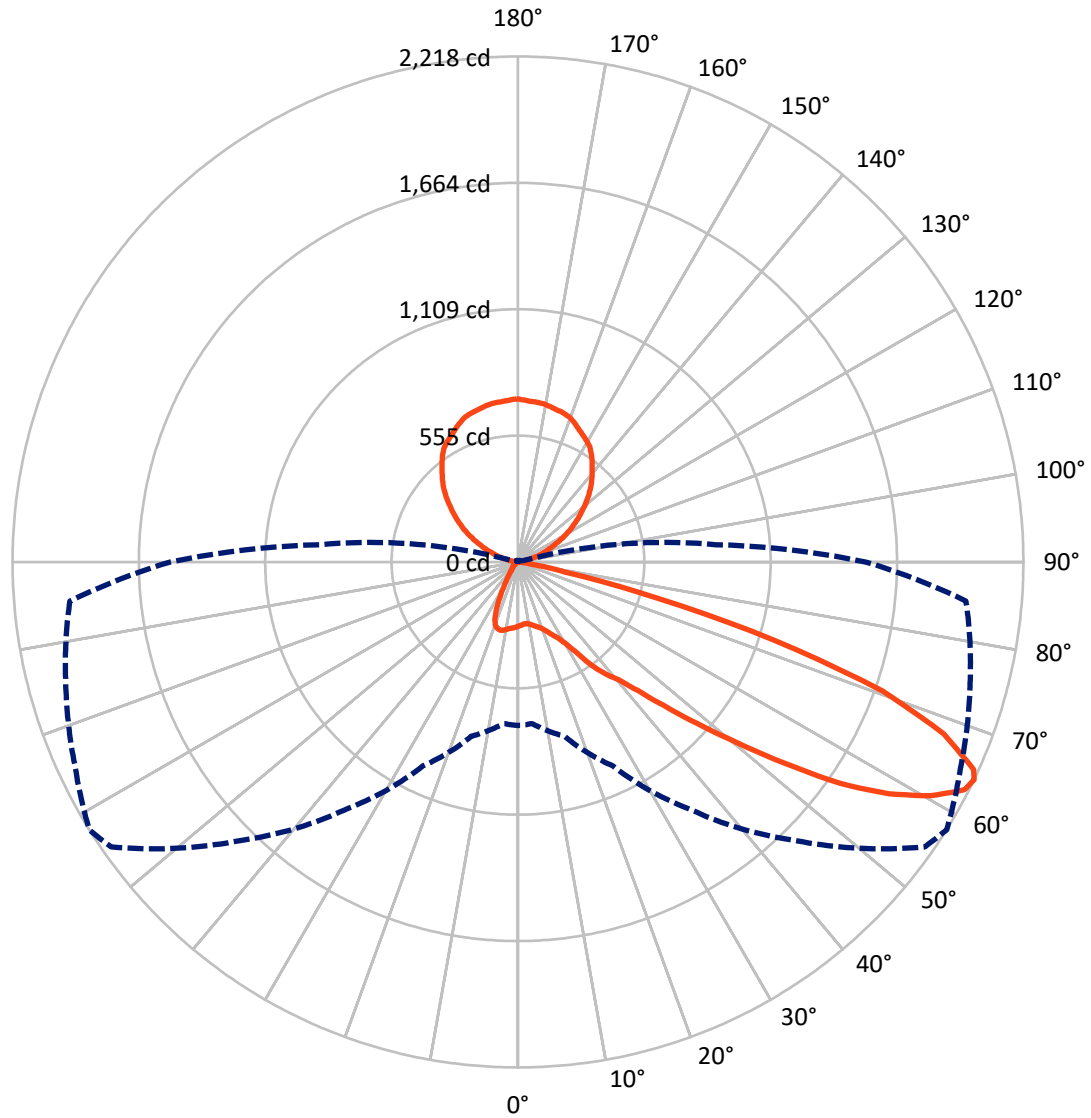
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 64-Deg Vertical

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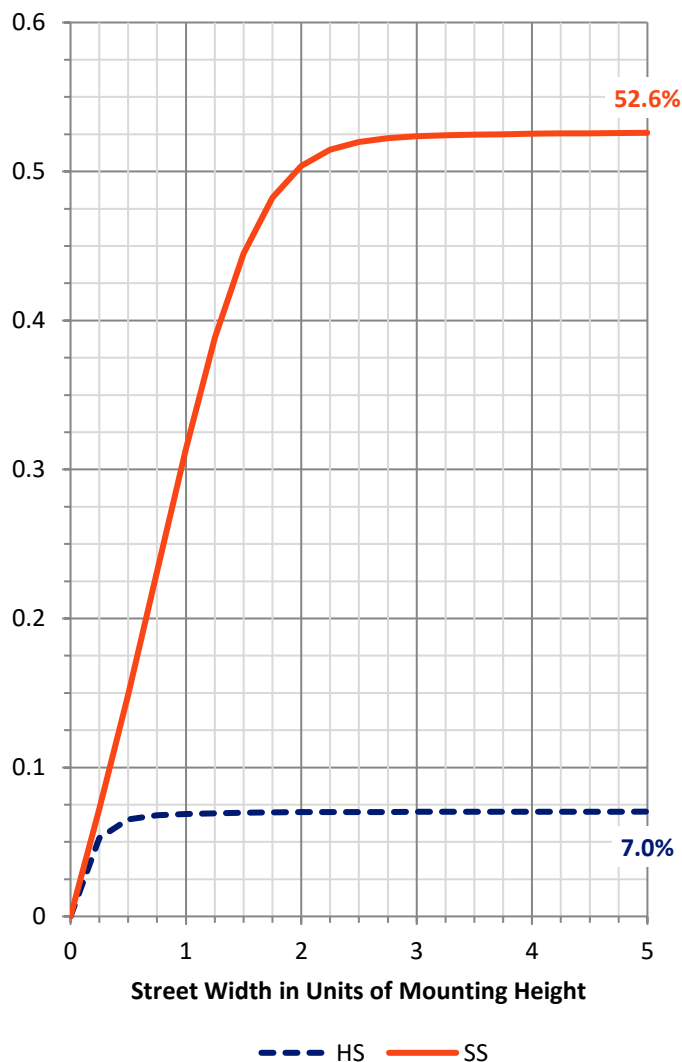
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	314.0	887.0	1201.0
	% Fixture	7.1	20.1	27.2
Street Side	Lumens	2320.0	887.0	3206.9
	% Fixture	52.6	20.1	72.8
Total	Lumens	2634.0	1773.9	4407.9
	% Fixture	59.8	40.2	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.7	0.6
10°-20°	77.7	1.8
20°-30°	139.6	3.2
30°-40°	244.8	5.6
40°-50°	447.6	10.2
50°-60°	765.7	17.4
60°-70°	742.7	16.9
70°-80°	184.0	4.2
80°-90°	5.2	0.1
90°-100°	8.4	0.2
100°-110°	58.7	1.3
110°-120°	169.9	3.9
120°-130°	279.4	6.3
130°-140°	344.6	7.8
140°-150°	352.5	8.0
150°-160°	297.0	6.7
160°-170°	195.5	4.4
170°-180°	67.8	1.5
0°-90°	2634.0	59.8
0°-180°	4407.9	100.0

Coefficient of Utilization

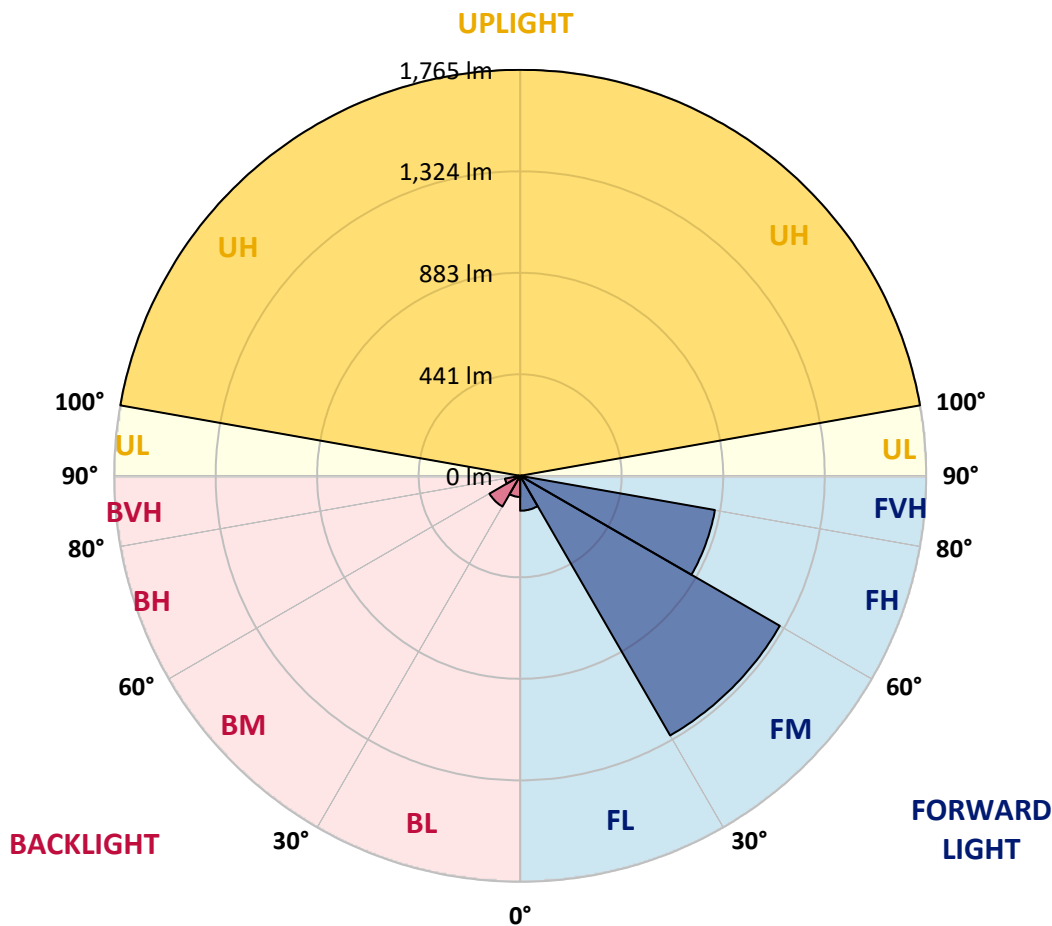


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	152.1	3.5			
FM (30°-60°)	1303.8	29.6			
FH (60°-80°)	859.7	19.5			G1/1800
FVH (80°-90°)	4.5	0.1			G0/10
BL (0°-30°)	91.9	2.1	B0/110		
BM (30°-60°)	154.2	3.5	B0/220		
BH (60°-80°)	67.1	1.5	B0/110		G0/110
BVH (80°-90°)	0.8	0.0			G0/10
UL (90°-100°)	8.4	0.2		U1/10	
UH (100°-180°)	1765.5	40.1		U5	

BUG Rating: B0-U5-G1
 Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1
2.5°	270.4	270.4	271.4	271.9	273.4	274.8	276.8	277.3	278.2	280.7	281.7
5°	255.8	256.3	257.3	259.7	263.1	267.0	271.9	273.4	277.3	282.1	285.6
7.5°	250.0	250.5	251.9	254.9	259.2	265.1	270.9	272.9	278.2	286.0	290.9
10°	249.0	249.0	251.0	255.3	260.7	268.0	274.3	276.8	284.1	293.4	301.1
12.5°	249.0	249.0	251.4	256.8	263.1	272.4	281.2	284.6	292.9	304.6	314.3
15°	253.4	254.4	255.8	259.2	266.6	276.8	289.0	292.9	303.1	317.2	329.4
17.5°	284.6	283.6	278.7	274.3	272.9	281.7	296.3	301.6	316.7	334.8	347.9
20°	345.0	344.5	335.7	314.3	295.3	290.4	307.5	313.8	335.7	359.6	369.4
22.5°	418.1	420.5	406.9	378.1	339.2	314.3	324.1	332.8	361.1	389.8	395.7
25°	490.7	493.6	481.0	444.9	397.1	353.8	347.0	354.8	386.9	415.7	413.2
27.5°	576.5	574.0	561.4	520.4	464.9	406.9	377.7	379.1	404.0	436.1	428.3
30°	639.3	635.9	623.7	596.0	543.8	477.6	421.5	417.1	424.4	460.0	451.7
32.5°	696.8	699.3	690.0	653.0	603.8	550.2	487.3	475.6	472.7	502.9	489.2
35°	753.8	753.4	750.0	717.3	669.1	618.4	565.8	557.5	556.5	585.7	548.7
37.5°	822.1	818.7	812.3	779.2	740.7	692.4	636.4	623.3	620.8	626.7	583.3
40°	895.2	899.6	889.3	854.7	812.8	776.8	698.3	678.3	661.7	678.8	651.0
42.5°	1003.8	1007.2	989.2	965.3	911.2	877.6	798.2	770.9	763.1	788.9	757.7
45°	1140.3	1133.9	1121.8	1105.2	1060.4	1009.2	926.4	900.5	892.2	936.6	885.4
47.5°	1246.5	1245.5	1246.0	1242.6	1235.8	1174.4	1076.0	1058.4	1050.1	1114.0	1057.4
50°	1313.8	1317.7	1334.2	1376.6	1407.8	1382.0	1266.5	1245.0	1238.7	1305.0	1228.5
52.5°	1364.4	1373.7	1401.5	1485.3	1585.2	1593.9	1498.4	1468.2	1453.6	1472.1	1365.9
55°	1390.3	1394.6	1437.0	1560.8	1717.2	1780.1	1740.1	1714.8	1655.8	1620.8	1527.2
57.5°	1329.8	1323.0	1396.1	1553.5	1785.5	1930.2	1947.2	1918.5	1824.0	1796.7	1723.1
60°	1171.5	1168.5	1250.9	1440.0	1726.0	1965.3	2100.7	2082.7	1996.0	1931.2	1862.0
62.5°	893.7	898.6	985.8	1178.3	1514.0	1864.4	2186.0	2200.6	2108.5	2012.0	1964.8
64°	717.8	711.9	791.9	987.8	1328.4	1729.9	2179.7	2218.2	2142.6	2054.4	1974.0
65°	602.8	590.1	666.6	844.0	1171.5	1632.4	2134.8	2196.7	2145.1	2064.7	1940.4
67.5°	317.2	324.1	356.7	512.6	790.9	1234.3	1922.4	2015.9	2036.9	1924.8	1690.9
70°	142.3	143.3	164.2	261.7	437.6	800.6	1546.2	1697.7	1709.4	1581.3	1225.1
72.5°	47.3	47.8	72.6	104.8	183.7	370.8	1044.3	1182.2	1207.5	1025.3	664.7
75°	29.2	30.2	38.5	56.5	85.3	129.6	529.2	622.8	628.1	454.6	241.7
77.5°	18.5	19.5	23.4	33.6	46.8	49.2	173.5	210.0	237.8	163.7	75.0
80°	11.7	11.7	15.1	20.5	24.4	21.0	47.3	62.4	75.0	55.1	25.3
82.5°	4.4	4.4	7.8	11.2	10.2	7.3	12.7	16.6	28.8	27.3	12.2
85°	0.0	0.0	0.5	1.0	0.5	1.0	2.4	3.4	5.4	7.8	3.9
87.5°	0.0	0.0	0.0	0.0	0.5	0.5	1.0	1.0	1.0	1.0	1.0
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	7.2	7.2	7.2	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	7.5	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	11.7	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	28.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	50.2	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	73.0	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.9	96.2	92.1	89.0



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CATALOG NUMBER: ENT-SA1B-740-U-T3-HSS-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.1	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	152.0	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	184.0	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	217.1	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	252.9	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	286.6	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	320.8	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.2	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	386.9	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	422.0	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	454.7	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	484.5	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	512.1	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	541.0	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	570.6	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	594.9	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	611.6	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	626.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	641.9	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	660.0	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	675.0	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	683.6	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	689.0	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	695.4	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	702.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	705.7	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	707.4	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	711.5	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°	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1	282.1
2.5°	283.1	284.1	286.0	286.5	287.0	285.6	287.0	285.6	286.5	286.5	286.5
5°	287.5	289.0	290.4	290.9	290.4	287.0	288.0	285.6	285.1	285.1	285.1
7.5°	293.4	294.8	297.3	295.8	292.9	288.0	287.5	284.1	282.6	282.6	283.1
10°	304.1	305.5	306.5	303.6	297.7	290.4	285.1	277.8	274.3	272.9	272.9
12.5°	317.7	319.2	318.7	313.8	303.1	288.0	272.9	258.8	248.5	244.6	240.7
15°	332.3	334.3	333.3	323.1	302.6	275.8	246.6	213.4	193.0	179.8	177.4
17.5°	349.4	351.3	346.5	328.0	295.3	250.0	194.4	149.6	119.9	108.7	108.2
20°	370.3	369.4	357.7	328.4	282.1	202.2	130.1	93.6	80.9	78.0	77.5
22.5°	394.2	389.8	368.4	325.5	246.1	137.4	83.8	74.1	72.6	71.6	71.6
25°	407.9	400.1	372.3	317.2	189.6	87.7	71.1	69.2	67.2	65.3	64.8
27.5°	418.6	406.9	373.8	289.9	126.2	67.2	64.3	62.4	59.5	56.5	56.0
30°	438.1	420.5	376.2	242.2	77.5	57.5	56.0	52.6	48.2	45.3	44.3
32.5°	473.2	447.8	385.9	181.3	56.5	50.7	46.8	42.4	37.5	34.6	34.6
35°	510.7	473.7	390.8	119.4	49.2	44.3	38.5	33.1	28.8	26.3	25.8
37.5°	545.3	510.7	389.4	73.1	43.9	38.0	31.7	26.3	22.4	20.5	20.5
40°	615.9	575.5	369.4	50.2	38.5	32.2	25.8	20.5	18.0	16.6	16.6
42.5°	716.8	646.6	325.0	42.9	33.6	26.8	20.5	17.1	15.1	13.6	13.6
45°	829.9	725.1	259.2	38.5	29.2	22.4	17.1	14.1	12.2	11.7	11.7
47.5°	978.0	820.1	190.5	34.6	25.3	19.0	14.1	11.7	10.7	10.2	10.2
50°	1107.6	897.1	130.1	30.2	22.4	16.1	12.2	10.7	9.7	9.3	9.3
52.5°	1225.6	950.7	85.8	26.3	20.0	13.2	11.2	9.7	9.3	8.8	8.8
55°	1364.4	991.6	58.0	22.9	17.5	12.2	10.7	9.7	8.8	8.8	8.3
57.5°	1482.4	1016.0	41.4	19.5	15.6	11.2	10.2	9.3	8.3	7.8	7.8
60°	1551.1	987.3	30.2	17.1	13.6	10.2	9.3	8.3	7.8	7.3	7.3
62.5°	1570.1	931.7	23.4	14.6	11.7	9.3	8.3	7.3	6.8	6.3	6.3
64°	1526.2	872.3	20.0	12.7	10.2	8.3	7.8	6.8	5.8	4.9	4.9
65°	1464.3	817.2	18.0	11.7	9.3	7.8	7.3	6.3	4.9	3.9	3.9
67.5°	1220.2	651.5	14.6	9.7	7.3	6.8	5.8	4.9	3.4	2.4	2.4
70°	866.4	455.6	11.2	7.8	6.3	6.3	5.4	3.9	1.9	1.0	1.0
72.5°	458.5	236.8	9.3	6.3	4.9	4.9	4.4	2.4	1.5	1.0	0.5
75°	160.3	78.0	7.8	5.4	4.4	3.4	2.9	1.9	1.5	1.0	0.5
77.5°	48.7	25.8	6.8	5.4	3.9	2.9	3.4	2.9	2.9	1.9	1.5
80°	15.6	9.3	3.9	3.4	3.9	3.9	3.4	2.9	3.4	2.4	1.9
82.5°	5.8	3.4	1.5	1.9	1.9	2.4	2.4	1.9	1.5	0.5	0.0
85°	1.9	1.5	1.0	1.5	1.5	1.5	1.0	1.0	0.5	0.0	0.0
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	0.5	0.5	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°	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-T3-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)