

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-HSS-ULG**

Issue Date: 3/30/2022

**Test Information**

Test Method: LM-79-08  
Report Number: REPORT IS A COMBINATION OF REPORTS P401158 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-HSS-ULG  
Description: ENTRI LED LUMINAIRE WITH UPLIGHT  
(1) 70 CRI, 4000K, 450mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

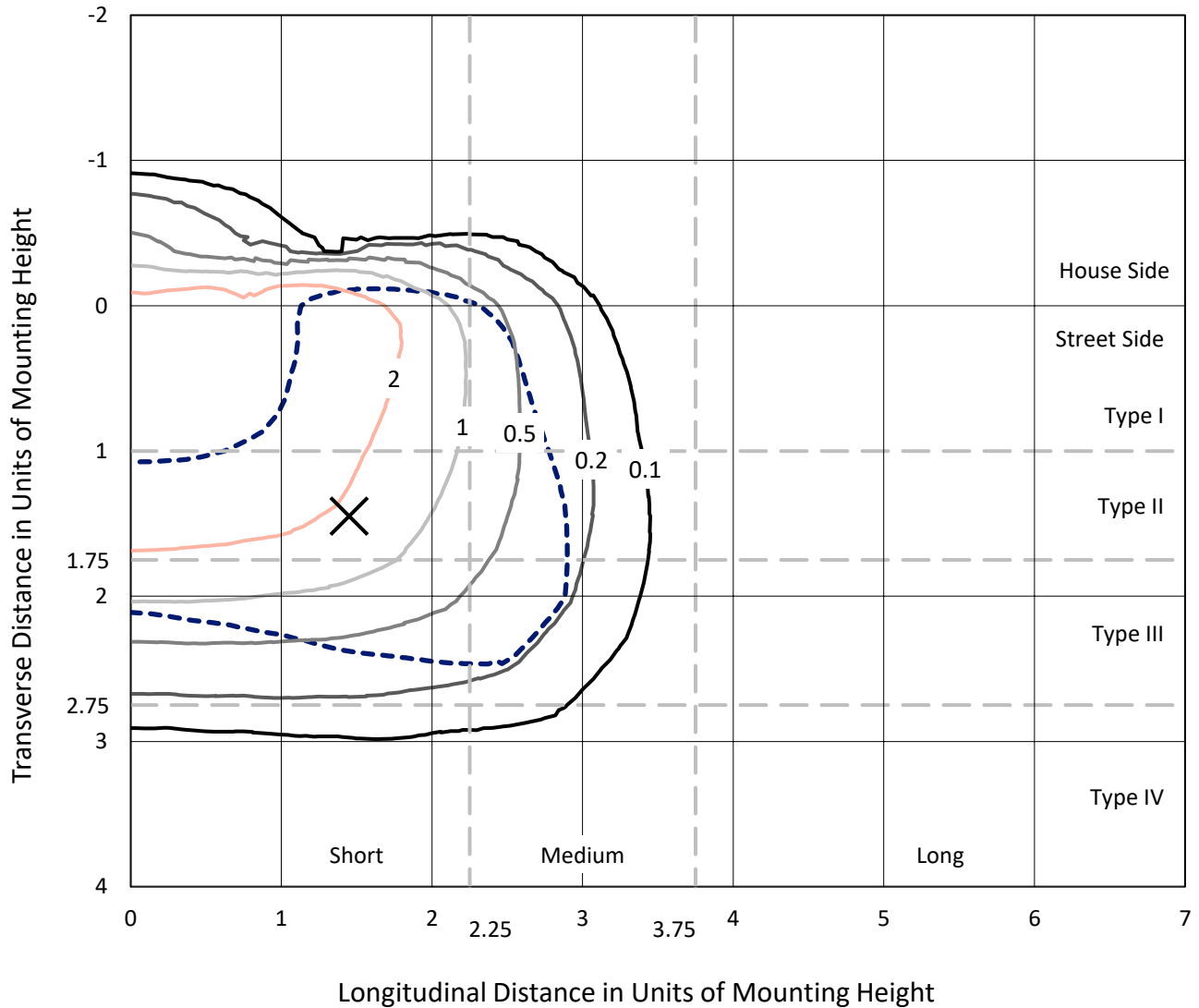
Lumens per Lamp: N/A  
Luminaire Lumens: 4329.9 lumens  
Efficiency: N/A  
Efficacy: 102.8 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')  
IES Classification: Type III - Short  
BUG Rating: B0 - U5 - G1  
  
Input Watts (W): 42.1  
Input Voltage (V): NR  
Input Current (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

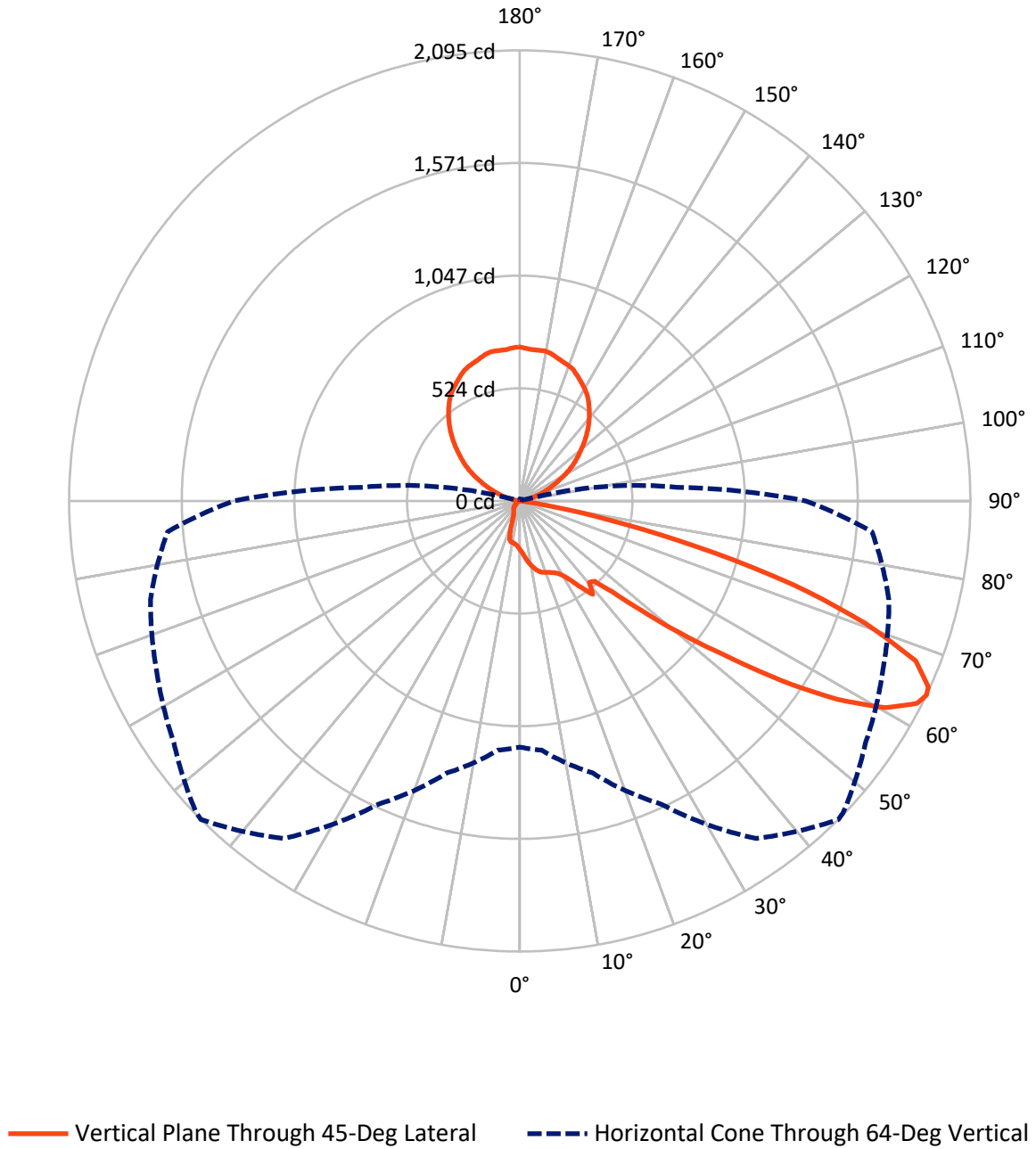
✕ Max cd  
 - - - 1/2 Max cd



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

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### Luminous Intensity Polar Plot



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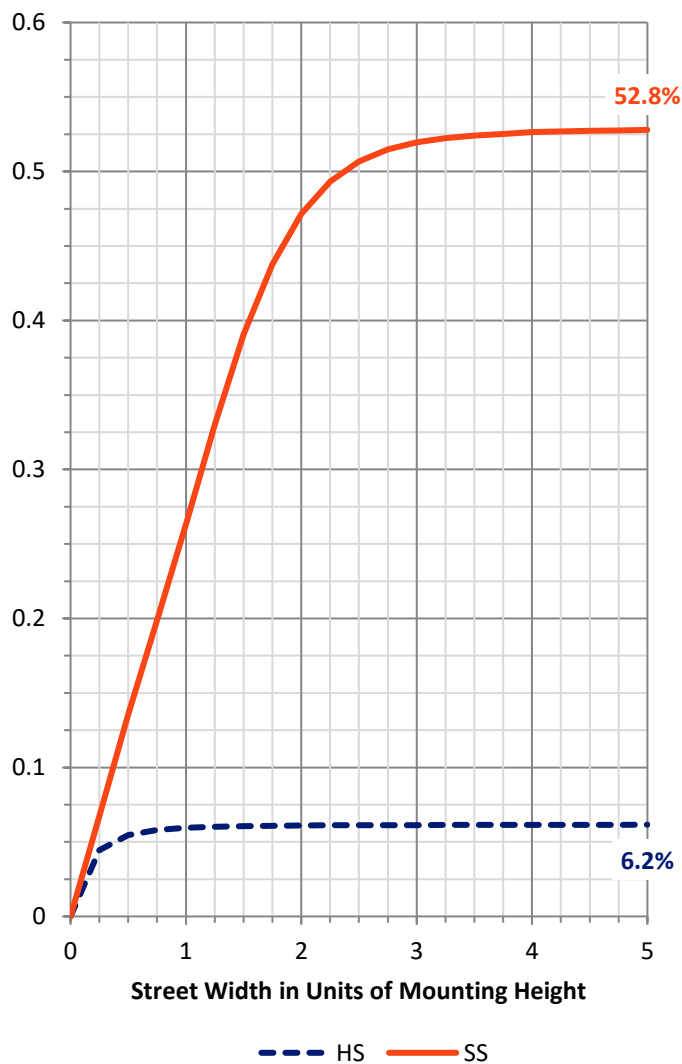
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	269.7	887.0	1156.7
	% Fixture	6.2	20.5	26.7
<b>Street Side</b>	Lumens	2286.3	887.0	3173.3
	% Fixture	52.8	20.5	73.3
<b>Total</b>	Lumens	2556.0	1773.9	4329.9
	% Fixture	59.0	41.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	23.0	0.5
10°-20°	71.6	1.7
20°-30°	116.6	2.7
30°-40°	185.3	4.3
40°-50°	352.9	8.2
50°-60°	727.3	16.8
60°-70°	812.3	18.8
70°-80°	256.5	5.9
80°-90°	10.4	0.2
90°-100°	8.4	0.2
100°-110°	58.7	1.4
110°-120°	169.9	3.9
120°-130°	279.4	6.5
130°-140°	344.6	8.0
140°-150°	352.5	8.1
150°-160°	297.0	6.9
160°-170°	195.5	4.5
170°-180°	67.8	1.6
0°-90°	2556.0	59.0
0°-180°	4329.9	100.0

**Coefficient of Utilization**

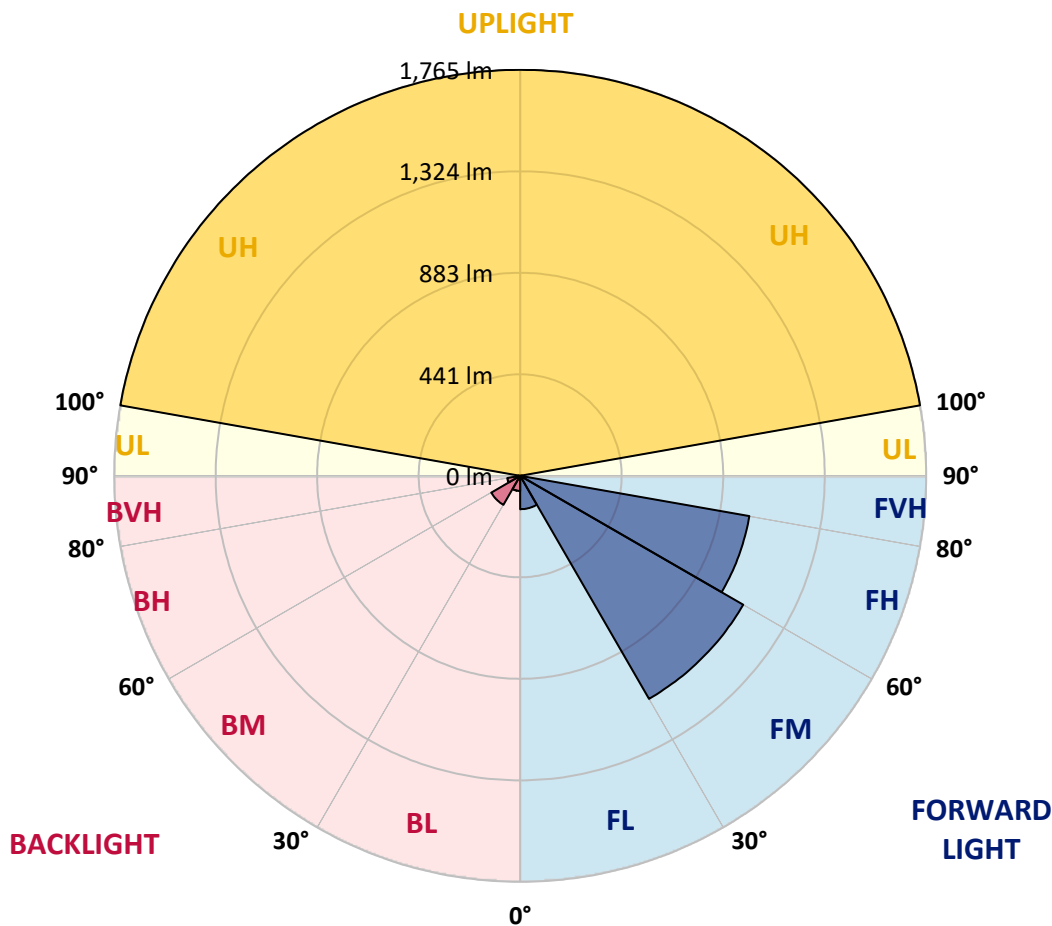


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	145.2	3.4			
FM (30°-60°)	1119.9	25.9			
FH (60°-80°)	1012.0	23.4			G1/1800
FVH (80°-90°)	9.2	0.2			G0/10
BL (0°-30°)	66.1	1.5	B0/110		
BM (30°-60°)	145.6	3.4	B0/220		
BH (60°-80°)	56.8	1.3	B0/110		G0/110
BVH (80°-90°)	1.2	0.0			G0/10
UL (90°-100°)	8.4	0.2		U1/10	
UH (100°-180°)	1765.5	40.8		U5	

**BUG Rating: B0-U5-G1**  
 Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	226.6	226.6	226.6	226.6	226.6	226.6	226.6	226.6	226.6	226.6	226.6
2.5°	249.9	250.9	249.5	247.5	245.6	242.1	242.6	238.3	234.8	232.4	228.5
5°	281.6	281.1	278.2	273.8	269.4	263.1	262.1	255.3	248.0	240.2	232.9
7.5°	313.8	312.3	309.4	303.5	295.3	287.0	284.5	274.8	264.1	252.4	239.7
10°	340.1	339.1	335.7	329.4	319.6	306.9	306.9	293.3	279.2	265.0	249.9
12.5°	361.5	360.5	356.6	348.8	337.2	325.9	324.5	312.3	296.7	280.2	261.6
15°	374.7	373.7	369.3	360.5	350.3	340.1	338.6	326.9	312.8	293.8	272.4
17.5°	378.1	377.1	373.7	365.9	358.1	349.3	347.4	337.2	325.0	305.5	283.6
20°	376.6	374.7	372.7	366.4	360.1	354.2	353.2	345.9	335.2	318.6	295.3
22.5°	372.7	370.8	369.3	364.9	361.5	361.0	360.1	355.7	348.8	334.7	312.8
25°	371.3	369.8	368.3	365.4	364.9	369.8	369.3	368.8	365.9	353.7	330.8
27.5°	379.5	379.1	375.6	370.8	373.2	381.5	382.0	384.4	382.5	374.7	357.1
30°	408.8	406.3	398.5	387.8	394.2	404.9	406.8	414.6	415.1	416.1	392.2
32.5°	448.2	444.3	431.2	417.5	421.4	441.4	441.9	454.1	479.9	463.8	411.2
35°	475.5	470.7	450.7	443.4	462.9	494.5	498.9	523.8	525.7	467.2	409.8
37.5°	552.0	544.7	508.2	463.8	482.8	551.0	555.9	551.5	510.6	462.4	430.7
40°	654.3	647.5	614.9	540.3	486.7	497.0	499.4	512.6	520.3	496.5	497.9
42.5°	787.3	778.6	745.0	653.8	547.6	510.1	515.0	541.8	592.9	604.2	661.6
45°	923.3	918.4	884.3	785.9	658.7	599.8	602.2	634.8	726.4	797.1	845.8
47.5°	1056.3	1057.3	1028.0	944.7	820.5	755.2	752.3	794.7	910.6	960.8	1010.5
50°	1243.9	1242.9	1190.8	1139.1	1042.2	964.7	959.8	983.7	1095.3	1113.8	1190.8
52.5°	1457.3	1456.3	1377.9	1353.5	1312.6	1187.8	1201.0	1180.5	1260.9	1294.1	1403.2
55°	1558.6	1549.8	1516.7	1547.4	1596.1	1470.9	1469.0	1391.0	1453.9	1482.1	1583.9
57.5°	1548.4	1551.8	1583.5	1685.3	1845.1	1740.3	1743.3	1598.6	1635.1	1652.6	1727.2
60°	1490.4	1492.8	1566.4	1736.0	1969.3	1951.3	1941.1	1792.5	1768.6	1761.3	1796.9
62.5°	1324.7	1325.7	1445.1	1662.9	1968.4	2073.1	2063.4	1928.9	1854.4	1807.6	1742.8
64°	1144.5	1163.0	1309.2	1555.2	1915.3	2094.6	2089.2	1962.0	1862.2	1776.4	1643.4
65°	996.4	1024.1	1201.0	1459.7	1855.3	2087.2	2080.9	1956.2	1851.4	1717.9	1540.6
67.5°	679.7	694.3	853.1	1148.9	1626.8	1984.4	1982.5	1881.2	1735.0	1484.1	1208.8
70°	401.0	411.7	529.1	802.0	1250.2	1704.8	1730.6	1694.1	1440.2	1066.0	769.8
72.5°	124.7	131.1	233.4	445.3	819.5	1328.2	1361.8	1335.5	1048.5	666.0	426.8
75°	46.8	48.7	77.0	193.4	407.8	849.2	859.5	890.1	638.7	351.8	186.6
77.5°	25.8	26.3	38.0	72.6	179.3	417.1	426.8	422.9	339.6	166.1	59.4
80°	12.7	13.2	18.5	32.2	69.7	117.9	139.8	184.7	119.9	81.9	19.0
82.5°	4.4	3.9	8.3	14.6	23.4	31.7	35.6	51.2	50.2	44.8	6.8
85°	0.0	0.0	0.5	0.5	0.5	1.0	1.0	6.3	12.7	14.6	1.9
87.5°	0.0	0.0	0.0	0.5	0.5	0.5	0.5	0.5	0.5	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	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-HSS-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°	226.6	226.6	226.6	226.6	226.6	226.6	226.6	226.6	226.6	226.6	226.6
2.5°	226.6	225.6	222.2	218.8	216.3	213.4	212.9	211.0	210.5	210.5	210.5
5°	229.0	226.1	219.7	214.4	209.5	205.1	203.2	201.2	199.8	199.3	199.3
7.5°	234.4	230.0	219.7	211.9	204.6	199.3	196.3	194.4	192.9	192.9	192.9
10°	242.1	235.3	222.7	211.9	203.2	196.3	192.0	189.0	187.1	186.6	187.1
12.5°	251.9	243.1	227.5	214.4	204.1	195.4	186.1	169.1	157.9	151.5	150.6
15°	261.1	250.9	232.9	217.8	205.6	186.1	152.5	126.2	108.6	103.3	102.3
17.5°	271.4	260.7	240.2	222.7	200.2	150.1	108.6	86.7	83.3	84.3	84.3
20°	284.0	271.4	248.0	227.5	172.5	106.7	79.4	76.5	77.5	79.4	79.4
22.5°	298.7	285.0	258.7	224.6	131.5	78.0	72.6	73.1	74.1	76.0	76.0
25°	317.7	303.5	270.4	202.7	91.6	68.2	68.7	69.2	70.6	72.6	73.1
27.5°	345.9	328.9	284.5	170.0	69.2	63.3	63.8	65.3	66.7	69.2	69.2
30°	376.1	355.2	297.2	131.1	60.4	58.0	58.5	59.9	62.4	64.3	65.3
32.5°	389.3	370.8	299.6	89.6	56.0	53.6	52.6	54.1	56.0	58.0	58.5
35°	396.6	388.8	287.9	64.8	52.6	49.7	47.7	47.3	47.7	49.2	49.2
37.5°	432.7	427.3	264.6	55.5	49.2	46.3	43.4	40.9	40.0	39.5	40.0
40°	501.8	490.1	233.9	51.2	46.3	42.9	39.0	35.1	31.7	30.2	30.2
42.5°	654.3	595.4	190.0	48.2	43.4	39.5	33.6	28.3	24.4	23.4	23.4
45°	818.5	726.0	142.8	45.8	40.4	35.6	28.3	22.4	19.0	18.0	18.0
47.5°	976.4	822.4	99.9	42.9	37.0	31.2	23.4	18.0	15.6	15.1	15.1
50°	1142.0	906.2	69.7	39.5	33.6	26.8	19.0	14.6	13.2	13.2	13.2
52.5°	1303.3	968.1	51.2	36.1	29.2	22.4	16.1	13.2	12.2	12.2	12.2
55°	1425.1	992.0	39.0	31.7	24.8	19.0	14.6	12.7	11.7	11.2	11.2
57.5°	1506.5	972.0	31.7	26.3	21.0	16.6	13.2	11.7	10.7	10.2	10.2
60°	1504.5	905.7	25.3	21.4	17.1	14.1	12.2	10.7	9.7	9.3	9.3
62.5°	1416.3	798.1	20.0	17.1	14.1	12.2	10.7	9.7	8.8	8.3	7.8
64°	1330.1	731.3	17.1	14.6	12.7	11.2	9.7	8.8	7.8	6.8	6.8
65°	1236.6	668.0	15.6	13.2	11.2	10.2	9.3	8.3	6.8	5.8	5.8
67.5°	940.3	494.5	12.7	10.2	8.8	8.3	7.3	6.3	4.9	3.9	3.9
70°	610.5	320.1	10.7	8.3	7.3	7.3	6.8	5.4	3.9	3.4	2.9
72.5°	312.8	159.3	8.8	6.8	6.3	6.3	5.8	4.4	3.4	2.9	2.4
75°	132.5	64.8	7.3	5.8	5.4	4.9	4.4	3.9	2.9	2.4	2.4
77.5°	46.3	24.4	6.8	5.8	4.4	3.9	3.9	3.9	3.9	3.4	2.9
80°	15.6	9.3	4.4	4.4	4.9	5.4	5.4	4.9	5.4	4.4	3.4
82.5°	6.3	3.4	1.5	1.9	3.4	3.9	4.4	4.4	4.4	3.4	2.9
85°	1.5	1.0	1.0	1.5	1.5	1.9	1.9	2.4	2.4	1.9	1.9
87.5°	1.0	1.0	1.0	1.0	1.0	1.0	1.5	1.0	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°	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-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)