

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-HSS-ULG**

Issue Date: 3/30/2022

**Test Information**

Test Method: LM-79-08  
Report Number: REPORT IS A COMBINATION OF REPORTS P400978 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-HSS-ULG  
Description: ENTRI LED LUMINAIRE WITH UPLIGHT  
(1) 70 CRI, 4000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

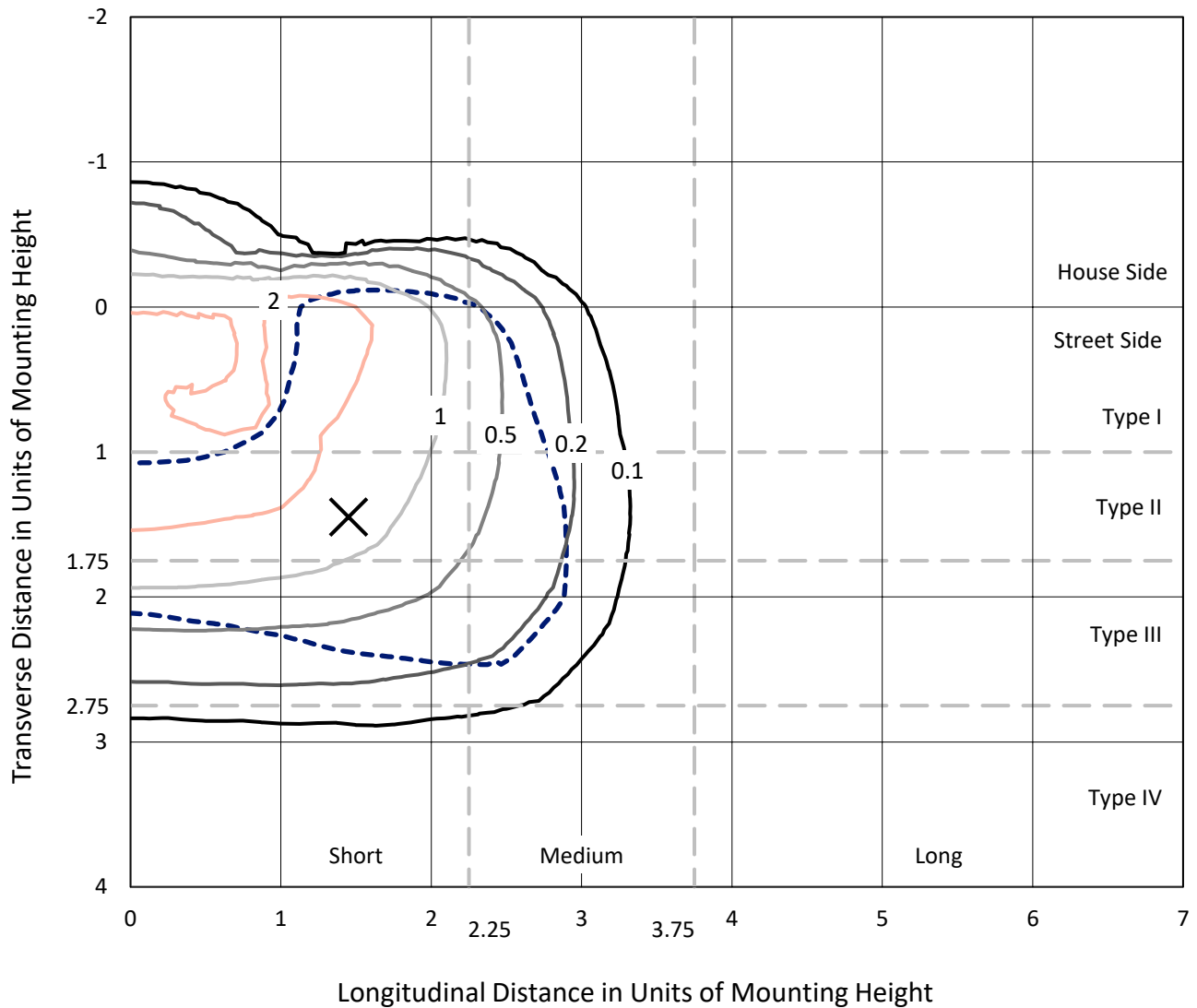
Lumens per Lamp: N/A  
Luminaire Lumens: 3812.9 lumens  
Efficiency: N/A  
Efficacy: 103.6 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')  
IES Classification: Type III - Short  
BUG Rating: B0 - U5 - G1  
  
Input Watts (W): 36.8  
Input Voltage (V): NR  
Input Current (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

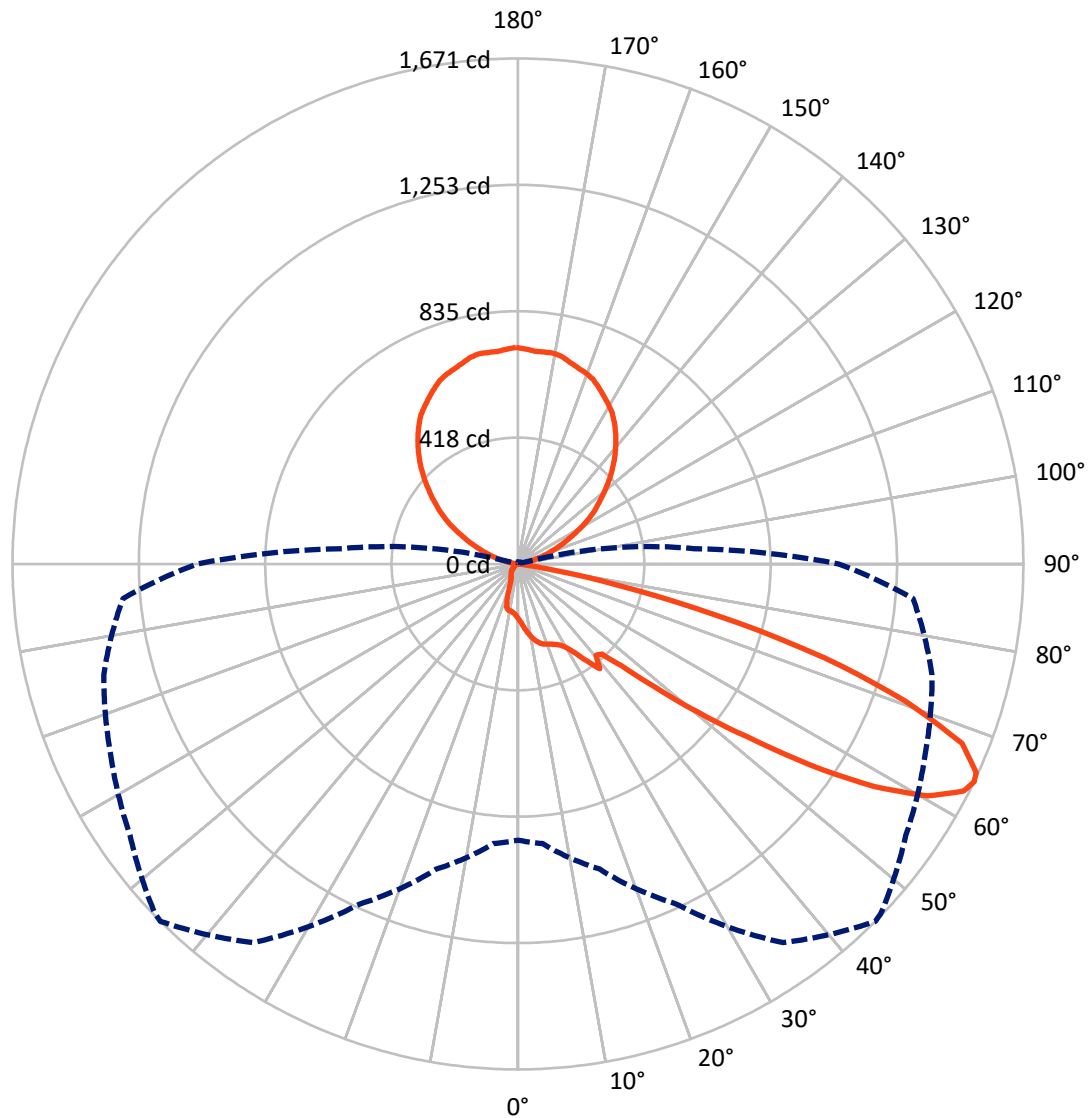
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.7 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral      - - - Horizontal Cone Through 64-Deg Vertical

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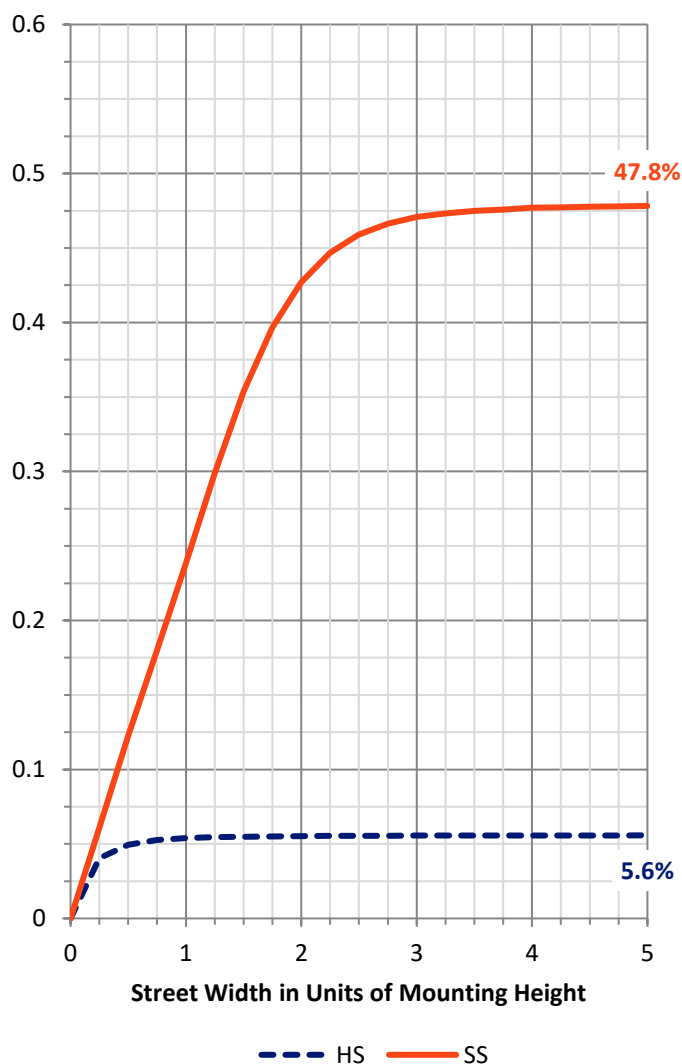
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	215.2	887.0	1102.1
	% Fixture	5.6	23.3	28.9
<b>Street Side</b>	Lumens	1823.9	887.0	2710.8
	% Fixture	47.8	23.3	71.1
<b>Total</b>	Lumens	2039.0	1773.9	3812.9
	% Fixture	53.5	46.5	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	18.3	0.5
10°-20°	57.2	1.5
20°-30°	93.0	2.4
30°-40°	147.8	3.9
40°-50°	281.6	7.4
50°-60°	580.2	15.2
60°-70°	648.0	17.0
70°-80°	204.7	5.4
80°-90°	8.3	0.2
90°-100°	8.4	0.2
100°-110°	58.7	1.5
110°-120°	169.9	4.5
120°-130°	279.4	7.3
130°-140°	344.6	9.0
140°-150°	352.5	9.2
150°-160°	297.0	7.8
160°-170°	195.5	5.1
170°-180°	67.8	1.8
0°-90°	2039.0	53.5
0°-180°	3812.9	100.0

**Coefficient of Utilization**

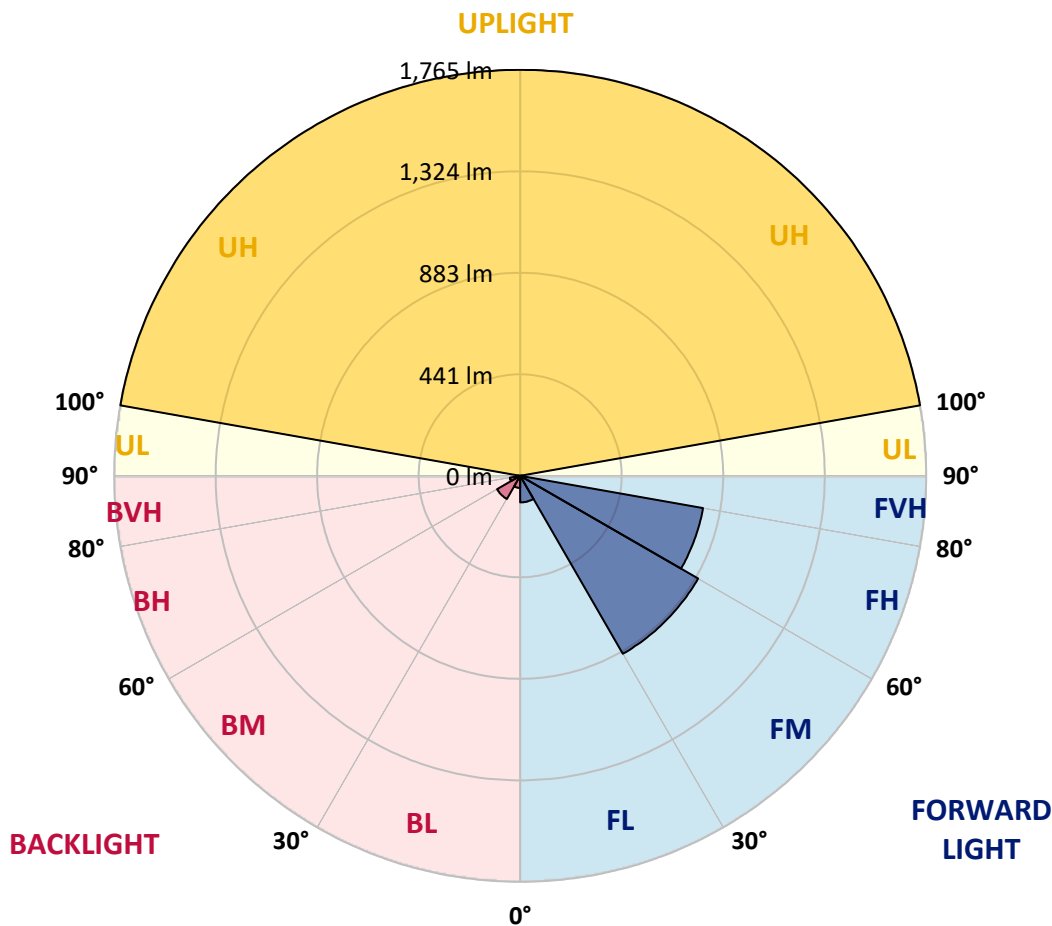


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	115.8	3.0			
FM (30°-60°)	893.4	23.4			
FH (60°-80°)	807.3	21.2			G1/1800
FVH (80°-90°)	7.3	0.2			G0/10
BL (0°-30°)	52.7	1.4	B0/110		
BM (30°-60°)	116.1	3.0	B0/220		
BH (60°-80°)	45.3	1.2	B0/110		G0/110
BVH (80°-90°)	1.0	0.0			G0/10
UL (90°-100°)	8.4	0.2		U1/10	
UH (100°-180°)	1765.5	46.3		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°	180.7	180.7	180.7	180.7	180.7	180.7	180.7	180.7	180.7	180.7	180.7
2.5°	199.4	200.2	199.0	197.4	195.9	193.2	193.6	190.1	187.3	185.4	182.3
5°	224.7	224.3	221.9	218.4	214.9	209.9	209.1	203.7	197.8	191.6	185.8
7.5°	250.3	249.1	246.8	242.1	235.5	228.9	227.0	219.2	210.7	201.3	191.2
10°	271.3	270.5	267.8	262.7	255.0	244.9	244.9	234.0	222.7	211.4	199.4
12.5°	288.4	287.6	284.5	278.3	269.0	260.0	258.9	249.1	236.7	223.5	208.7
15°	298.9	298.1	294.6	287.6	279.5	271.3	270.1	260.8	249.5	234.4	217.3
17.5°	301.6	300.8	298.1	291.9	285.7	278.7	277.1	269.0	259.2	243.7	226.2
20°	300.4	298.9	297.3	292.3	287.2	282.6	281.8	276.0	267.4	254.2	235.5
22.5°	297.3	295.8	294.6	291.1	288.4	288.0	287.2	283.7	278.3	267.0	249.5
25°	296.2	295.0	293.8	291.5	291.1	295.0	294.6	294.2	291.9	282.2	263.9
27.5°	302.8	302.4	299.7	295.8	297.7	304.3	304.7	306.7	305.1	298.9	284.9
30°	326.1	324.2	317.9	309.4	314.4	323.0	324.5	330.8	331.1	331.9	312.9
32.5°	357.6	354.5	344.0	333.1	336.2	352.1	352.5	362.2	382.8	370.0	328.0
35°	379.3	375.5	359.5	353.7	369.2	394.5	398.0	417.8	419.4	372.7	326.9
37.5°	440.4	434.5	405.4	370.0	385.2	439.6	443.5	440.0	407.3	368.8	343.6
40°	522.0	516.5	490.5	431.0	388.3	396.4	398.4	408.9	415.1	396.1	397.2
42.5°	628.1	621.1	594.3	521.6	436.9	406.9	410.8	432.2	473.0	482.0	527.8
45°	736.5	732.6	705.4	626.9	525.5	478.5	480.4	506.4	579.5	635.9	674.7
47.5°	842.6	843.4	820.1	753.6	654.5	602.4	600.1	633.9	726.4	766.5	806.1
50°	992.3	991.5	949.9	908.7	831.4	769.6	765.7	784.7	873.7	888.5	949.9
52.5°	1162.5	1161.7	1099.2	1079.7	1047.1	947.6	958.1	941.7	1005.9	1032.3	1119.4
55°	1243.4	1236.4	1209.9	1234.4	1273.3	1173.4	1171.8	1109.7	1159.8	1182.3	1263.6
57.5°	1235.2	1237.9	1263.2	1344.4	1471.9	1388.3	1390.7	1275.2	1304.4	1318.4	1377.8
60°	1188.9	1190.9	1249.6	1384.8	1571.0	1556.6	1548.5	1429.9	1410.9	1405.0	1433.4
62.5°	1056.8	1057.6	1152.8	1326.5	1570.2	1653.8	1646.0	1538.7	1479.3	1442.0	1390.3
64°	913.0	927.8	1044.4	1240.6	1527.9	1670.9	1666.6	1565.2	1485.5	1417.1	1311.0
65°	794.8	817.0	958.1	1164.5	1480.1	1665.1	1660.0	1560.5	1476.9	1370.4	1229.0
67.5°	542.2	553.9	680.6	916.5	1297.8	1583.1	1581.5	1500.7	1384.1	1183.9	964.3
70°	319.9	328.4	422.1	639.7	997.3	1360.0	1380.6	1351.4	1148.9	850.4	614.1
72.5°	99.5	104.6	186.2	355.2	653.7	1059.5	1086.3	1065.3	836.4	531.3	340.5
75°	37.3	38.9	61.4	154.3	325.3	677.5	685.6	710.1	509.5	280.6	148.9
77.5°	20.6	21.0	30.3	57.9	143.0	332.7	340.5	337.4	270.9	132.5	47.4
80°	10.1	10.5	14.8	25.7	55.6	94.1	111.5	147.3	95.6	65.3	15.2
82.5°	3.5	3.1	6.6	11.7	18.7	25.3	28.4	40.8	40.0	35.8	5.4
85°	0.0	0.0	0.4	0.4	0.4	0.8	0.8	5.1	10.1	11.7	1.6
87.5°	0.0	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	0.8	0.8
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°	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°	180.7	180.7	180.7	180.7	180.7	180.7	180.7	180.7	180.7	180.7	180.7
2.5°	180.7	180.0	177.2	174.5	172.6	170.2	169.8	168.3	167.9	167.9	167.9
5°	182.7	180.3	175.3	171.0	167.1	163.6	162.1	160.5	159.4	159.0	159.0
7.5°	187.0	183.5	175.3	169.1	163.2	159.0	156.6	155.1	153.9	153.9	153.9
10°	193.2	187.7	177.6	169.1	162.1	156.6	153.1	150.8	149.2	148.9	149.2
12.5°	200.9	193.9	181.5	171.0	162.9	155.9	148.5	134.9	125.9	120.9	120.1
15°	208.3	200.2	185.8	173.7	164.0	148.5	121.7	100.7	86.7	82.4	81.6
17.5°	216.5	207.9	191.6	177.6	159.7	119.7	86.7	69.2	66.5	67.2	67.2
20°	226.6	216.5	197.8	181.5	137.6	85.1	63.4	61.0	61.8	63.4	63.4
22.5°	238.3	227.4	206.4	179.2	104.9	62.2	57.9	58.3	59.1	60.6	60.6
25°	253.4	242.1	215.7	161.7	73.1	54.4	54.8	55.2	56.4	57.9	58.3
27.5°	276.0	262.4	227.0	135.6	55.2	50.5	50.9	52.1	53.2	55.2	55.2
30°	300.1	283.3	237.1	104.6	48.2	46.3	46.6	47.8	49.7	51.3	52.1
32.5°	310.5	295.8	239.0	71.5	44.7	42.8	42.0	43.1	44.7	46.3	46.6
35°	316.4	310.2	229.7	51.7	42.0	39.6	38.1	37.7	38.1	39.3	39.3
37.5°	345.1	340.9	211.0	44.3	39.3	36.9	34.6	32.6	31.9	31.5	31.9
40°	400.3	391.0	186.6	40.8	36.9	34.2	31.1	28.0	25.3	24.1	24.1
42.5°	522.0	475.0	151.6	38.5	34.6	31.5	26.8	22.5	19.4	18.7	18.7
45°	653.0	579.1	113.9	36.5	32.3	28.4	22.5	17.9	15.2	14.4	14.4
47.5°	778.9	656.1	79.7	34.2	29.5	24.9	18.7	14.4	12.4	12.0	12.0
50°	911.0	722.9	55.6	31.5	26.8	21.4	15.2	11.7	10.5	10.5	10.5
52.5°	1039.7	772.3	40.8	28.8	23.3	17.9	12.8	10.5	9.7	9.7	9.7
55°	1136.9	791.3	31.1	25.3	19.8	15.2	11.7	10.1	9.3	8.9	8.9
57.5°	1201.8	775.4	25.3	21.0	16.7	13.2	10.5	9.3	8.6	8.2	8.2
60°	1200.2	722.5	20.2	17.1	13.6	11.3	9.7	8.6	7.8	7.4	7.4
62.5°	1129.9	636.6	15.9	13.6	11.3	9.7	8.6	7.8	7.0	6.6	6.2
64°	1061.1	583.4	13.6	11.7	10.1	8.9	7.8	7.0	6.2	5.4	5.4
65°	986.4	532.9	12.4	10.5	8.9	8.2	7.4	6.6	5.4	4.7	4.7
67.5°	750.1	394.5	10.1	8.2	7.0	6.6	5.8	5.1	3.9	3.1	3.1
70°	487.0	255.4	8.6	6.6	5.8	5.8	5.4	4.3	3.1	2.7	2.3
72.5°	249.5	127.1	7.0	5.4	5.1	5.1	4.7	3.5	2.7	2.3	1.9
75°	105.7	51.7	5.8	4.7	4.3	3.9	3.5	3.1	2.3	1.9	1.9
77.5°	36.9	19.4	5.4	4.7	3.5	3.1	3.1	3.1	3.1	2.7	2.3
80°	12.4	7.4	3.5	3.5	3.9	4.3	4.3	3.9	4.3	3.5	2.7
82.5°	5.1	2.7	1.2	1.6	2.7	3.1	3.5	3.5	3.5	2.7	2.3
85°	1.2	0.8	0.8	1.2	1.2	1.6	1.6	1.9	1.9	1.6	1.6
87.5°	0.8	0.8	0.8	0.8	0.8	0.8	1.2	0.8	1.2	1.2	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°	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



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CATALOG NUMBER: ENT-SA1A-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)