

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-SA1C-740-U-T4FT-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401334 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1C-740-U-T4FT-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 615mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD
THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4968.9 lumens
Efficiency: N/A
Efficacy: 99.4 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

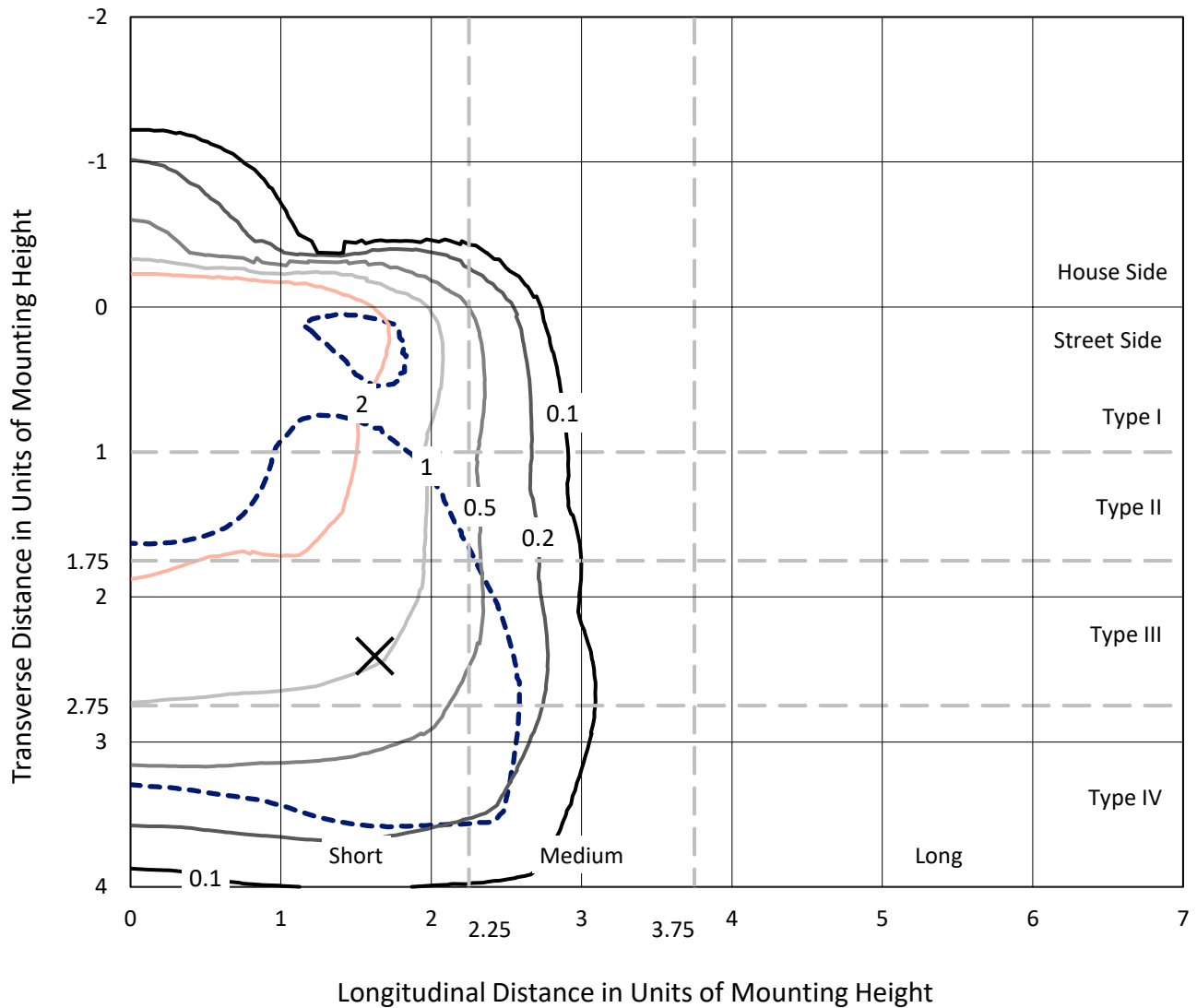
Input Watts (W): 50
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

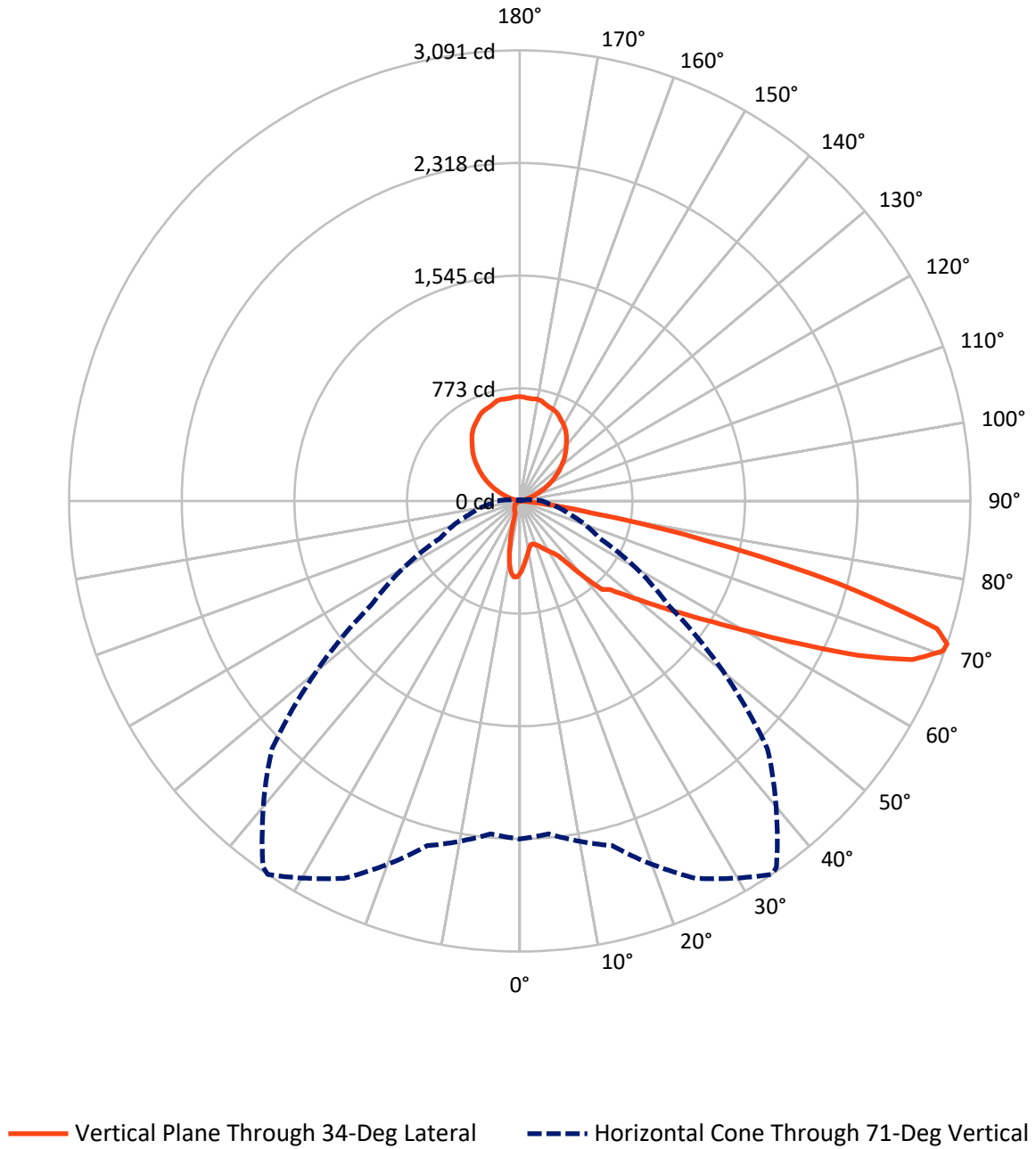
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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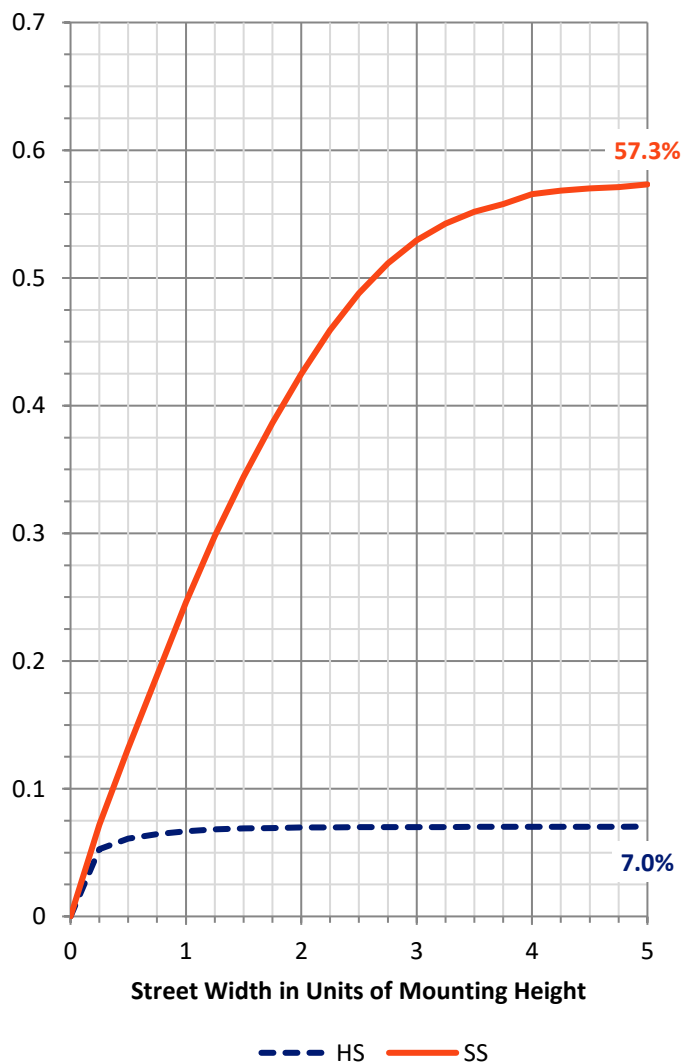
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	353.3	887.0	1240.3
	% Fixture	7.1	17.9	25.0
Street Side	Lumens	2841.7	887.0	3728.7
	% Fixture	57.2	17.9	75.0
Total	Lumens	3195.0	1773.9	4968.9
	% Fixture	64.3	35.7	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	43.6	0.9
10°-20°	100.0	2.0
20°-30°	149.3	3.0
30°-40°	249.3	5.0
40°-50°	450.2	9.1
50°-60°	714.4	14.4
60°-70°	960.0	19.3
70°-80°	509.4	10.3
80°-90°	18.8	0.4
90°-100°	8.4	0.2
100°-110°	58.7	1.2
110°-120°	169.9	3.4
120°-130°	279.4	5.6
130°-140°	344.6	6.9
140°-150°	352.5	7.1
150°-160°	297.0	6.0
160°-170°	195.5	3.9
170°-180°	67.8	1.4
0°-90°	3195.0	64.3
0°-180°	4968.9	100.0

Coefficient of Utilization

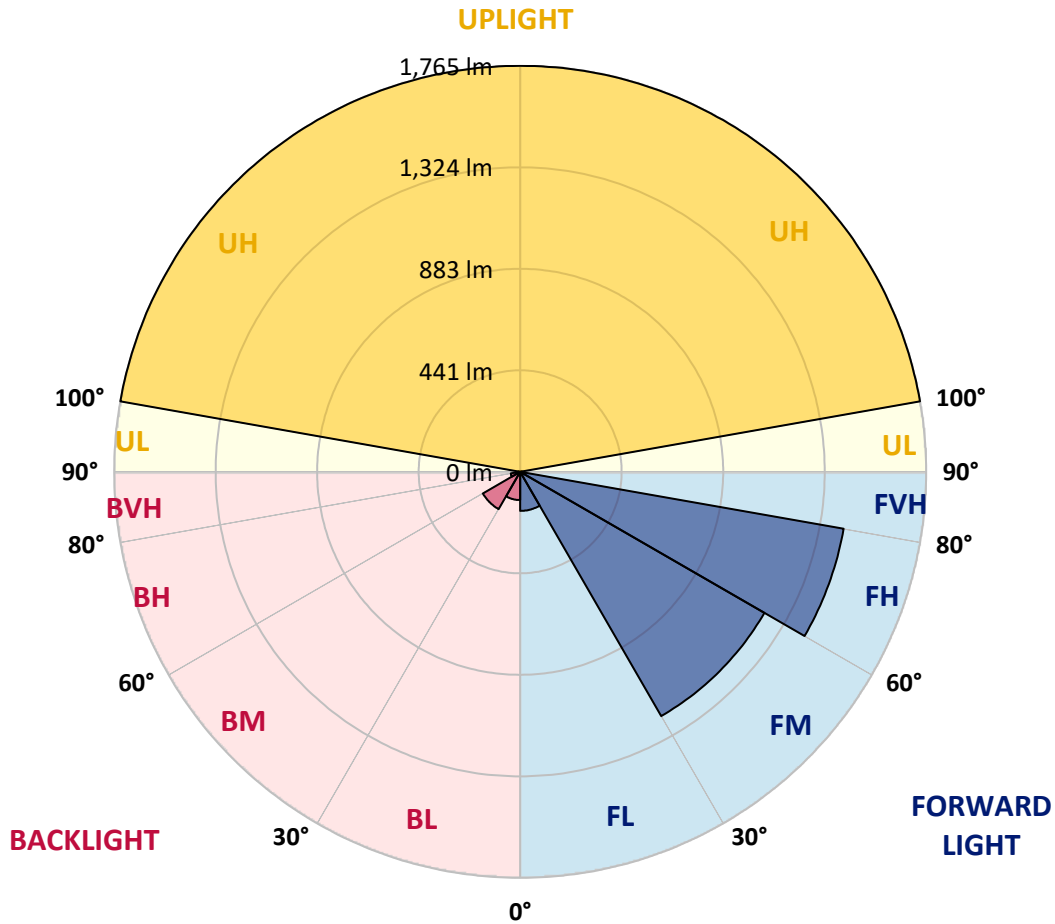


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	170.0	3.4			
FM (30°-60°)	1226.5	24.7			
FH (60°-80°)	1428.1	28.7			G1/1800
FVH (80°-90°)	17.1	0.3			G1/100
BL (0°-30°)	122.9	2.5	B1/500		
BM (30°-60°)	187.5	3.8	B0/220		
BH (60°-80°)	41.3	0.8	B0/110		G0/110
BVH (80°-90°)	1.7	0.0			G0/10
UL (90°-100°)	8.4	0.2		U1/10	
UH (100°-180°)	1765.5	35.5		U5	

BUG Rating: B1-U5-G1
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0
2.5°	450.8	445.0	450.2	452.7	454.6	457.2	461.1	468.1	475.8	484.8	489.9
5°	393.1	396.3	398.2	405.3	412.3	413.6	425.8	439.9	457.9	475.8	491.2
7.5°	346.3	346.3	352.0	362.9	374.5	375.8	396.9	415.5	441.2	468.8	493.8
10°	309.1	310.4	314.9	325.8	340.5	343.7	367.4	393.1	425.2	461.1	496.3
12.5°	296.9	296.3	295.6	303.3	315.5	318.7	345.0	375.8	413.6	457.2	502.7
15°	304.6	302.7	298.2	299.5	307.2	310.4	333.5	364.2	406.6	456.6	513.6
17.5°	316.8	314.2	305.9	303.3	311.6	314.9	334.1	361.0	404.0	459.8	526.5
20°	331.5	329.0	316.1	312.9	321.3	323.8	343.7	366.8	405.3	466.2	543.8
22.5°	352.7	349.5	330.9	327.0	335.4	337.9	359.1	380.3	413.0	477.7	567.5
25°	378.3	374.5	350.8	345.6	355.9	358.5	379.6	399.5	425.8	493.1	597.6
27.5°	406.6	402.1	377.1	366.8	378.3	382.2	402.1	423.9	444.4	512.4	637.4
30°	432.2	427.1	402.7	391.2	402.7	404.6	428.4	452.7	474.5	545.1	695.8
32.5°	503.4	490.6	452.7	419.4	427.1	430.9	459.8	498.3	531.0	584.2	770.8
35°	609.8	599.6	553.4	495.7	468.8	470.0	507.2	556.0	570.7	629.7	863.8
37.5°	712.4	703.5	663.1	609.8	558.5	560.5	566.9	613.7	631.0	708.6	977.3
40°	824.7	810.5	778.5	727.8	692.6	684.2	652.8	685.5	723.3	808.0	1101.0
42.5°	876.6	863.1	829.8	833.0	829.1	814.4	752.2	797.7	840.0	952.3	1237.6
45°	962.5	936.2	867.6	872.7	867.6	868.9	884.3	950.3	986.9	1104.9	1392.2
47.5°	1042.0	1011.9	940.1	934.9	957.4	968.9	1051.7	1131.8	1135.0	1237.6	1513.4
50°	1114.5	1092.7	1026.6	1027.3	1068.3	1081.2	1246.6	1319.7	1254.9	1339.6	1608.3
52.5°	1210.7	1179.9	1120.9	1142.1	1206.2	1217.7	1440.9	1484.5	1341.5	1431.9	1682.7
55°	1299.8	1283.1	1239.5	1271.0	1369.1	1399.2	1638.4	1611.5	1402.4	1514.0	1718.6
57.5°	1446.0	1430.0	1418.5	1434.5	1565.9	1603.8	1838.5	1701.2	1449.9	1568.5	1701.9
60°	1689.7	1673.7	1639.0	1653.8	1825.0	1844.2	1995.6	1792.3	1468.5	1583.9	1636.5
62.5°	1990.5	1970.6	1914.8	1982.8	2154.6	2154.0	2158.5	1840.4	1444.7	1538.4	1464.0
65°	2261.7	2234.1	2205.3	2343.8	2552.8	2524.0	2331.6	1846.2	1369.7	1318.4	1132.5
67.5°	2459.2	2448.3	2464.3	2680.4	2905.5	2876.7	2499.6	1766.7	1140.1	951.6	699.6
70°	2451.5	2429.1	2531.0	2876.0	3080.6	3056.9	2492.6	1451.8	760.5	504.0	293.1
71°	2318.8	2293.1	2448.3	2856.8	3090.8	3068.4	2402.8	1242.1	601.5	355.9	193.0
72.5°	1791.7	1869.3	2116.1	2650.9	2992.1	2963.2	2158.5	951.0	380.9	205.8	96.8
75°	758.0	800.3	1256.2	1892.3	2244.4	2229.6	1455.0	439.3	175.1	93.0	37.2
77.5°	194.9	192.4	384.8	811.8	1306.9	1330.0	670.8	150.7	91.1	66.0	21.2
80°	37.8	41.0	109.7	282.2	498.9	512.4	218.7	66.0	60.9	51.9	10.9
82.5°	3.8	4.5	19.2	87.2	167.4	161.6	48.1	25.0	37.2	35.3	5.1
85°	0.0	0.0	0.6	0.6	0.6	0.6	0.6	2.6	9.0	9.6	1.3
87.5°	0.0	0.0	0.6	0.6	0.0	0.0	0.0	0.0	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°	4.1	4.1	5.1	6.1	6.1	6.1	6.1	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	9.1	9.2	9.2	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.1	12.3	21.5	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	26.7	27.6	40.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	47.9	49.1	64.4	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	73.2	74.7	90.0	97.2	96.2	92.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	102.8	104.3	116.6	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	135.8	137.1	146.3	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.0	171.9	178.0	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.1	206.6	209.7	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.0	242.4	248.6	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	276.8	277.2	283.4	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	311.4	312.0	317.1	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.2	346.8	347.8	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.1	378.5	380.5	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.0	413.3	414.3	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	444.7	445.0	447.0	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.2	474.6	478.7	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.1	502.3	508.4	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	532.7	533.0	537.0	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.3	562.6	563.6	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	587.2	588.2	593.3	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	606.6	610.7	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	623.9	624.0	624.0	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.2	644.5	642.4	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.6	660.8	659.8	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.1	670.0	670.0	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.6	676.2	678.2	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.7	688.4	688.4	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.6	703.8	700.7	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.8	708.9	706.9	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	706.1	705.8	705.8	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	707.3	706.9	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.2	713.0	711.0	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°	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0	495.0
2.5°	493.8	499.5	505.9	510.4	514.9	515.6	522.0	520.7	522.6	523.3	522.6
5°	499.5	507.2	519.4	525.8	528.4	523.9	522.6	515.6	513.0	509.8	506.6
7.5°	505.9	515.6	529.7	532.9	523.9	507.2	493.8	476.5	460.4	450.2	451.4
10°	513.0	525.2	536.7	528.4	505.3	472.6	434.8	396.3	362.3	349.5	354.0
12.5°	522.0	536.7	541.9	518.8	473.9	407.8	339.2	280.9	245.6	224.4	221.9
15°	535.4	550.2	544.4	503.4	423.9	320.6	235.3	176.3	142.4	131.5	125.7
17.5°	552.1	566.2	544.4	475.8	352.7	229.6	143.0	107.1	96.2	93.6	94.3
20°	572.6	586.1	541.9	434.1	271.9	141.1	95.5	88.5	88.5	88.5	87.9
22.5°	600.2	607.3	538.0	379.0	187.2	95.5	84.6	84.0	84.6	84.6	84.6
25°	633.6	632.3	531.0	312.9	118.0	81.4	80.8	80.8	81.4	82.1	82.1
27.5°	677.8	664.3	518.8	234.1	83.4	75.7	77.0	78.2	79.5	80.8	80.8
30°	739.4	706.7	498.9	158.4	70.5	69.9	72.5	76.3	78.2	79.5	79.5
32.5°	805.4	750.3	464.9	101.3	64.8	64.1	66.7	72.5	77.6	78.9	78.9
35°	888.8	797.1	414.3	73.1	60.9	59.6	62.2	67.3	75.0	78.9	78.9
37.5°	976.6	847.1	340.5	61.6	57.1	55.8	57.7	61.6	70.5	77.6	78.2
40°	1070.3	891.3	255.9	57.1	53.2	52.6	53.2	57.1	64.1	73.7	75.7
42.5°	1164.5	928.5	178.9	52.6	50.0	48.7	50.0	52.6	59.0	67.3	68.6
45°	1268.4	969.6	119.3	48.7	47.5	46.2	47.5	49.4	53.9	58.4	59.0
47.5°	1344.1	984.3	82.1	44.2	43.6	44.2	44.9	46.2	48.7	49.4	48.7
50°	1394.1	976.6	59.0	39.8	40.4	42.3	42.3	43.0	43.0	41.0	40.4
52.5°	1430.6	948.4	45.5	34.0	37.8	39.8	39.8	38.5	37.2	34.6	34.0
55°	1434.5	884.9	35.9	29.5	34.0	37.2	36.6	34.0	31.4	28.9	28.9
57.5°	1385.8	788.7	29.5	25.0	29.5	32.7	31.4	28.9	25.7	23.7	23.7
60°	1306.9	690.0	25.0	21.2	24.4	27.6	25.7	23.7	20.5	18.6	18.6
62.5°	1161.3	592.5	20.5	17.3	19.9	21.8	21.2	19.2	16.0	14.7	14.1
65°	890.1	450.8	15.4	13.5	15.4	18.0	16.7	14.7	12.8	10.9	10.3
67.5°	534.8	271.3	12.2	10.3	12.2	14.1	12.8	10.9	9.0	7.7	7.7
70°	226.4	116.1	9.6	7.7	9.0	10.9	10.3	9.0	7.1	6.4	6.4
71°	153.9	82.7	8.3	7.1	8.3	10.3	9.6	8.3	7.1	6.4	6.4
72.5°	78.9	42.3	7.1	5.8	7.7	9.0	9.0	7.7	6.4	6.4	6.4
75°	28.2	18.0	5.8	5.1	6.4	6.4	7.1	7.1	7.1	7.1	6.4
77.5°	16.0	10.9	5.1	5.1	5.1	5.8	7.1	7.7	8.3	8.3	7.7
80°	9.0	5.8	3.2	3.8	5.1	5.8	7.1	7.7	9.0	9.0	8.3
82.5°	4.5	1.9	0.6	1.9	3.2	5.1	5.8	6.4	7.7	7.1	7.1
85°	0.6	0.0	0.0	0.6	1.9	2.6	3.8	5.1	6.4	6.4	5.8
87.5°	0.0	0.0	0.0	0.0	0.6	1.3	1.9	3.2	4.5	5.1	4.5
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-SA1C-740-U-T4FT-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)