

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-T4FT-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number:
REPORT IS A COMBINATION OF REPORTS P400976 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-T4FT-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV FORWARD
THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4390.9 lumens
Efficiency: N/A
Efficacy: 119.3 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

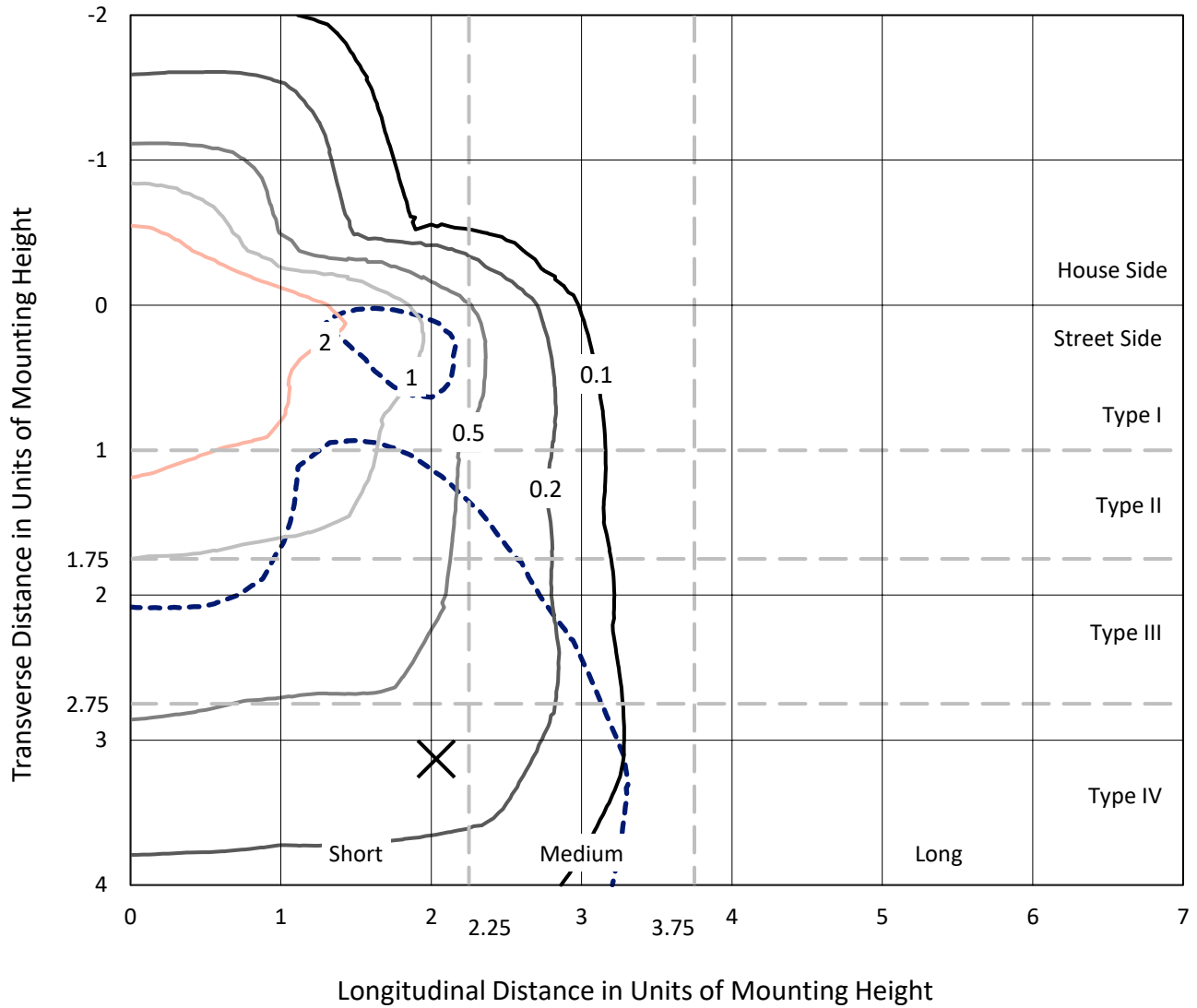
Input Watts (W): 36.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1A-740-U-T4FT-ULG

Iso-Footcandle Lines of Horizontal Illumination

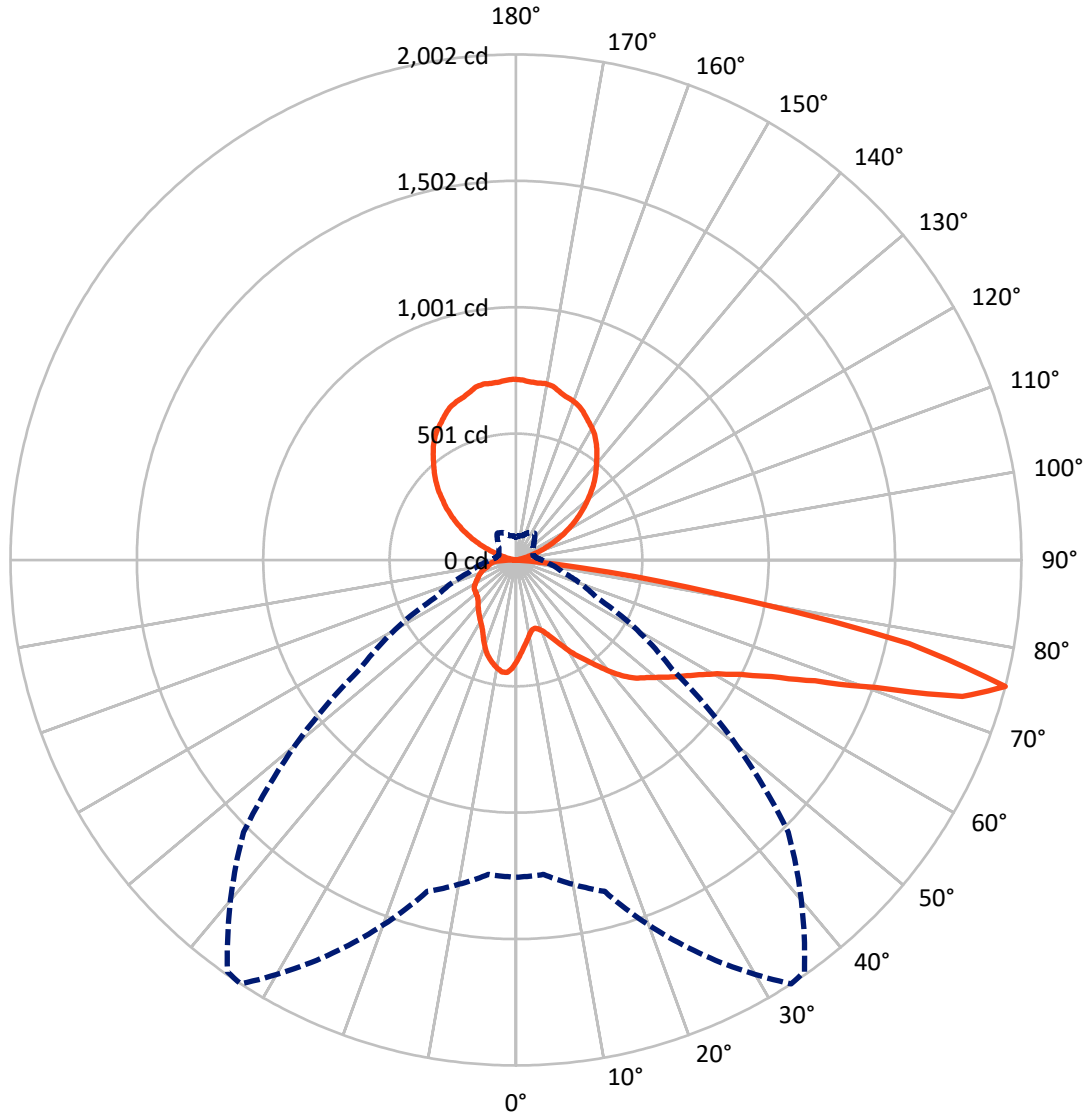
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.3 fc
 Type IV - Short - N/A

REPORT NUMBER:
CATALOG NUMBER: ENT-SA1A-740-U-T4FT-ULG

Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 75-Deg Vertical

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 CATALOG NUMBER: ENT-SA1A-740-U-T4FT-ULG

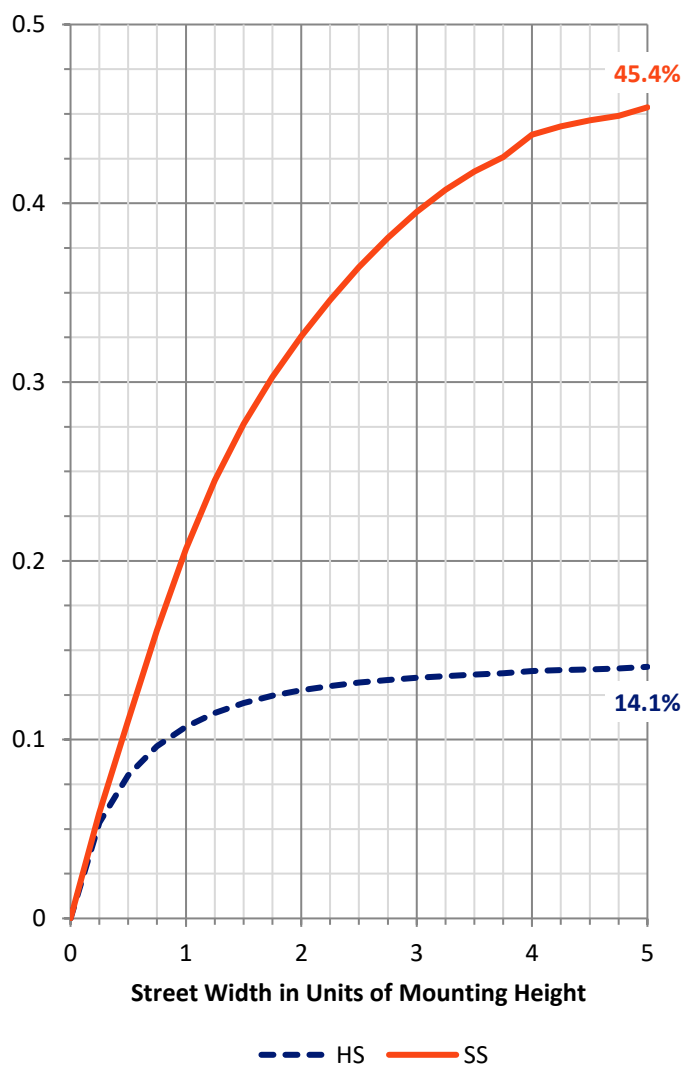
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	635.7	887.0	1522.7
	% Fixture	14.5	20.2	34.7
Street Side	Lumens	1981.3	887.0	2868.2
	% Fixture	45.1	20.2	65.3
Total	Lumens	2617.0	1773.9	4390.9
	% Fixture	59.6	40.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	37.5	0.9
10°-20°	105.4	2.4
20°-30°	175.2	4.0
30°-40°	261.4	6.0
40°-50°	365.1	8.3
50°-60°	487.4	11.1
60°-70°	604.3	13.8
70°-80°	522.5	11.9
80°-90°	58.4	1.3
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	7.8
140°-150°	352.5	8.0
150°-160°	297.0	6.8
160°-170°	195.5	4.5
170°-180°	67.8	1.5
0°-90°	2617.0	59.6
0°-180°	4390.9	100.0

Coefficient of Utilization

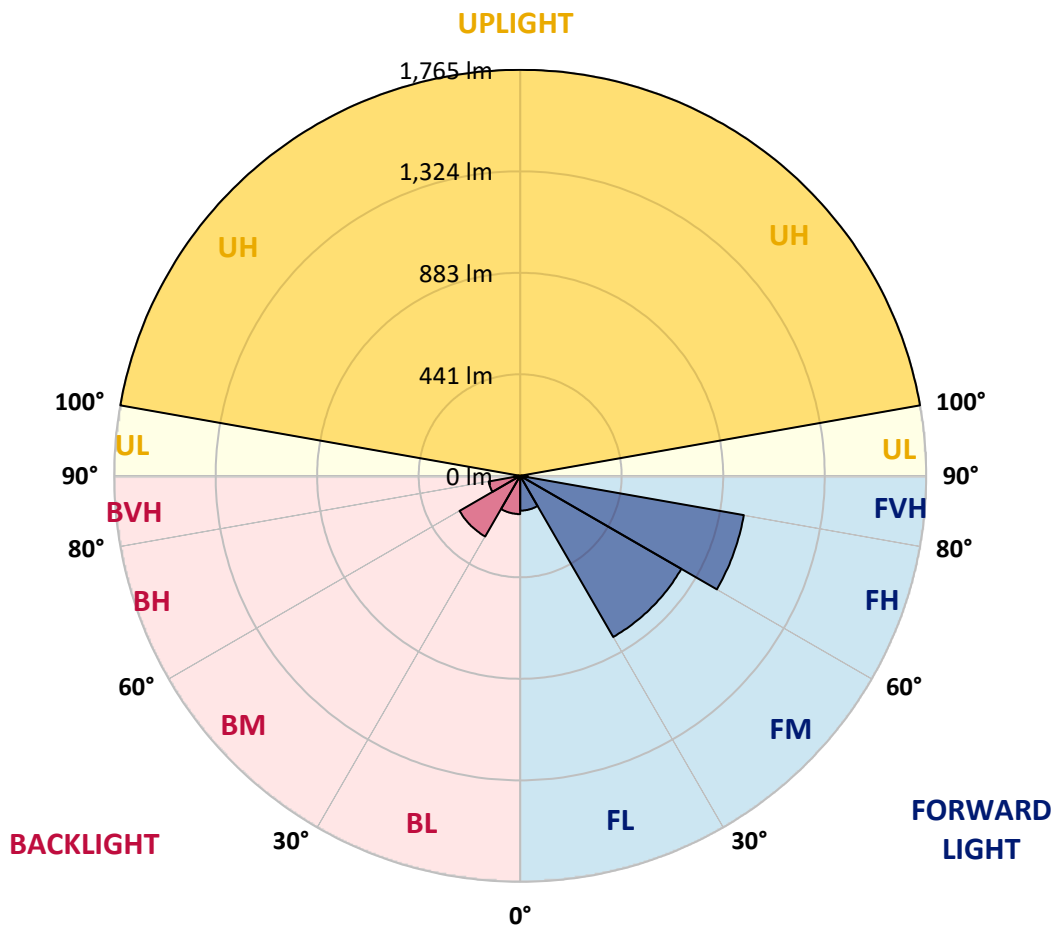


REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1A-740-U-T4FT-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	151.5	3.5			
FM (30°-60°)	809.2	18.4			
FH (60°-80°)	987.5	22.5			G1/1800
FVH (80°-90°)	33.0	0.8			G1/100
BL (0°-30°)	166.5	3.8	B1/500		
BM (30°-60°)	304.6	6.9	B1/1000		
BH (60°-80°)	139.2	3.2	B1/500		G1/500
BVH (80°-90°)	25.4	0.6			G1/100
UL (90°-100°)	8.4	0.2		U1/10	
UH (100°-180°)	1765.5	40.2		U5	

BUG Rating: B1-U5-G1
 Type IV Short





REPORT NUMBER:

CATALOG NUMBER: ENT-SA1A-740-U-T4FT-ULG

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	401.0	401.0	401.0	401.0	401.0	401.0	401.0	401.0	401.0	401.0	401.0
2.5°	363.7	364.5	366.8	369.5	371.1	371.1	375.4	380.4	386.6	392.1	397.9
5°	333.4	334.6	336.5	340.0	344.3	345.0	353.6	362.5	373.8	385.8	397.5
7.5°	303.5	305.8	309.7	314.4	321.0	322.5	334.6	346.6	362.1	380.4	399.4
10°	280.5	282.1	284.0	290.6	298.8	301.5	317.5	332.6	354.0	376.5	401.8
12.5°	274.3	274.3	274.3	277.4	284.0	286.4	303.1	322.5	346.6	373.8	405.3
15°	283.3	282.9	278.6	276.3	280.2	282.1	296.5	315.5	342.7	374.6	411.9
17.5°	303.5	302.3	292.2	284.4	287.2	288.3	297.6	314.0	341.6	377.7	421.6
20°	329.9	327.2	311.6	300.0	299.6	300.4	307.4	318.6	343.5	383.1	432.1
22.5°	364.9	363.3	340.4	322.5	319.4	319.4	322.5	329.5	348.5	389.3	446.5
25°	409.9	405.7	378.1	354.0	347.0	345.0	344.7	344.7	357.5	398.7	464.3
27.5°	456.2	451.1	423.2	390.5	381.2	377.7	371.5	366.8	369.1	408.8	485.7
30°	497.8	490.8	467.1	433.3	419.3	413.8	402.6	392.8	386.6	422.8	514.1
32.5°	520.7	518.0	501.6	470.9	455.0	452.7	434.0	421.2	410.3	441.0	552.2
35°	551.4	547.9	537.4	512.1	493.1	487.3	473.3	458.1	440.6	465.5	600.3
37.5°	579.7	577.8	573.9	556.4	536.2	530.4	517.6	501.6	477.9	501.6	654.3
40°	608.5	606.2	604.6	598.4	584.0	580.1	573.9	555.3	523.4	541.3	707.6
42.5°	650.5	645.4	629.1	628.7	629.9	633.0	633.4	612.8	573.1	590.6	754.2
45°	705.3	691.3	654.7	653.6	667.2	675.3	695.1	677.7	624.8	641.1	806.3
47.5°	733.2	718.9	681.2	678.8	696.7	708.7	757.7	740.6	678.4	697.9	860.3
50°	746.8	737.5	704.5	711.9	730.1	741.8	817.2	803.6	734.0	759.3	928.3
52.5°	765.9	750.3	727.0	742.6	769.8	781.8	870.4	868.1	781.0	826.1	1002.9
55°	759.3	751.1	755.4	776.4	810.6	828.4	924.0	924.0	828.8	897.6	1076.7
57.5°	764.7	759.3	794.6	813.3	856.4	882.1	988.5	971.4	869.2	957.4	1126.5
60°	810.9	795.4	823.0	859.9	915.5	940.3	1062.3	1021.2	902.3	1009.1	1135.4
62.5°	892.5	880.1	882.8	925.2	997.1	1025.8	1135.4	1065.1	924.4	1030.9	1102.0
65°	1027.8	1021.9	988.5	1014.2	1113.2	1139.3	1226.7	1103.1	918.2	1014.6	1013.8
67.5°	1209.6	1186.3	1141.2	1164.2	1278.4	1304.8	1336.7	1117.5	877.8	917.0	814.8
70°	1360.4	1341.0	1320.4	1380.6	1511.9	1526.3	1451.3	1103.9	779.5	717.7	546.3
72.5°	1456.4	1442.4	1461.4	1638.6	1848.8	1821.6	1564.4	1008.7	608.1	439.5	273.2
75°	1257.0	1250.4	1359.2	1718.6	2002.3	1992.2	1525.1	755.0	352.8	193.5	124.3
77.5°	632.2	704.1	818.7	1219.3	1593.1	1595.1	1111.3	362.9	148.4	108.4	85.5
80°	178.0	180.3	273.2	502.8	795.4	847.5	420.4	123.2	84.7	80.8	63.7
82.5°	42.4	39.2	69.9	148.8	266.9	277.8	126.3	44.3	47.4	50.5	39.2
85°	0.4	0.4	0.4	0.4	0.4	0.8	4.7	4.7	11.3	14.4	11.3
87.5°	0.0	0.0	0.0	0.4	0.4	0.4	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	9.0	9.2	9.2	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	11.9	12.3	21.5	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	25.8	27.6	40.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	46.6	49.1	64.4	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	71.6	74.7	90.0	97.2	96.2	92.1	89.0
110°	67.5	69.6	75.7	89.0	101.2	104.3	116.6	122.8	123.8	121.7	118.7



REPORT NUMBER:

CATALOG NUMBER: ENT-SA1A-740-U-T4FT-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
112.5°	101.3	101.3	108.4	123.8	134.4	137.1	146.3	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	170.0	171.9	178.0	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	205.6	206.6	209.7	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	241.6	242.4	248.6	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	276.4	277.2	283.4	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	310.8	312.0	317.1	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	345.6	346.8	347.8	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	377.7	378.5	380.5	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	412.7	413.3	414.3	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	444.4	445.0	447.0	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	473.8	474.6	478.7	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	501.9	502.3	508.4	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	532.4	533.0	537.0	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.0	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	623.8	624.0	624.0	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	643.9	644.5	642.4	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.4	660.8	659.8	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.2	670.0	670.0	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	677.0	676.2	678.2	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	689.0	688.4	688.4	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.4	703.8	700.7	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.7	708.9	706.9	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	706.4	705.8	705.8	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	707.7	706.9	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.4	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



REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1A-740-U-T4FT-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	401.0	401.0	401.0	401.0	401.0	401.0	401.0	401.0	401.0	401.0	401.0
2.5°	400.6	404.5	410.7	416.2	420.8	424.3	429.8	430.5	432.1	432.9	433.6
5°	404.1	411.5	423.2	433.3	440.2	442.2	446.9	446.5	446.9	446.9	446.5
7.5°	408.8	418.9	435.2	446.5	450.4	449.2	448.0	443.7	440.2	438.7	436.8
10°	414.6	426.3	445.3	453.5	451.5	445.3	437.9	430.1	423.9	420.8	420.0
12.5°	420.4	435.6	453.5	455.8	448.0	436.8	424.3	415.8	407.6	403.3	403.3
15°	430.1	446.9	460.1	455.4	441.4	427.0	409.9	398.3	389.0	383.1	382.7
17.5°	441.8	459.7	467.1	453.5	433.3	413.0	392.5	377.3	365.3	359.4	355.9
20°	456.2	472.9	470.6	447.2	421.2	396.3	370.7	352.4	340.0	333.8	332.6
22.5°	472.5	486.5	471.7	437.1	404.9	373.0	345.0	326.8	318.6	314.0	314.4
25°	492.3	503.2	472.1	425.1	381.6	342.3	317.8	309.3	308.1	306.2	307.0
27.5°	517.2	520.7	470.6	408.8	351.7	310.1	295.7	299.2	302.3	301.1	301.9
30°	546.7	541.7	467.1	385.1	314.7	280.5	281.3	289.1	293.4	292.2	292.6
32.5°	581.3	562.6	460.5	356.3	279.8	262.7	268.9	276.7	280.9	280.9	281.3
35°	620.2	587.9	447.6	319.0	255.3	251.8	257.2	263.4	266.2	264.6	265.8
37.5°	661.0	609.7	427.0	277.4	237.0	243.2	246.4	247.9	247.5	245.2	244.0
40°	699.0	626.8	390.1	236.2	221.9	234.3	235.9	231.6	226.5	222.3	219.5
42.5°	728.2	635.7	338.8	206.3	207.5	224.2	225.4	216.8	207.1	200.5	198.9
45°	758.1	638.8	287.9	182.2	192.0	214.1	217.2	205.6	192.3	184.6	183.4
47.5°	792.3	646.6	237.8	165.5	178.7	207.1	212.2	197.8	183.0	171.4	169.4
50°	838.1	661.3	200.1	152.7	169.4	203.6	210.6	191.6	172.9	160.1	158.5
52.5°	896.4	683.1	165.1	142.6	162.0	198.2	208.3	185.3	165.5	150.0	147.7
55°	946.6	691.3	142.6	134.1	154.3	191.6	206.3	183.0	157.4	139.9	137.2
57.5°	969.5	667.9	126.7	125.5	146.1	183.4	202.4	175.2	148.4	134.8	132.5
60°	959.0	610.1	114.6	117.7	136.8	172.9	192.3	167.5	142.2	130.9	128.6
62.5°	912.4	543.2	105.7	110.4	126.3	159.7	180.7	160.5	136.8	126.7	123.6
65°	830.4	469.8	99.1	103.7	117.0	146.9	171.4	152.3	130.6	120.5	117.7
67.5°	677.7	373.8	92.1	97.1	109.2	136.4	162.8	145.7	123.6	117.0	114.6
70°	448.4	251.4	85.5	90.5	101.4	126.3	153.9	138.7	117.0	112.7	109.6
72.5°	205.9	135.2	78.5	83.5	92.5	115.0	142.6	128.2	108.0	105.3	100.6
75°	101.8	83.2	69.9	74.6	81.6	101.4	129.4	119.3	99.9	95.2	89.8
77.5°	74.2	62.2	60.2	64.9	70.7	89.8	115.4	110.0	91.7	85.1	82.0
80°	55.2	48.2	50.5	55.2	60.6	81.2	108.0	103.0	84.7	78.1	75.8
82.5°	33.8	32.3	38.9	44.3	50.9	74.6	103.0	94.0	76.2	69.9	67.2
85°	9.7	11.7	19.8	28.8	36.1	60.2	96.0	82.4	64.1	53.6	51.7
87.5°	0.0	1.2	6.2	13.2	21.4	40.0	73.8	64.5	49.0	39.6	38.1
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
110°	119.7	118.7	121.7	123.8	122.8	116.6	104.3	89.0	75.7	69.6	67.5



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CATALOG NUMBER: ENT-SA1A-740-U-T4FT-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
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

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