

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-SL2-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number:
REPORT IS A COMBINATION OF REPORTS P400946 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-SL2-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL LIGHT
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3983.9 lumens
Efficiency: N/A
Efficacy: 108.3 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type III - Medium
BUG Rating: B0 - U5 - G1

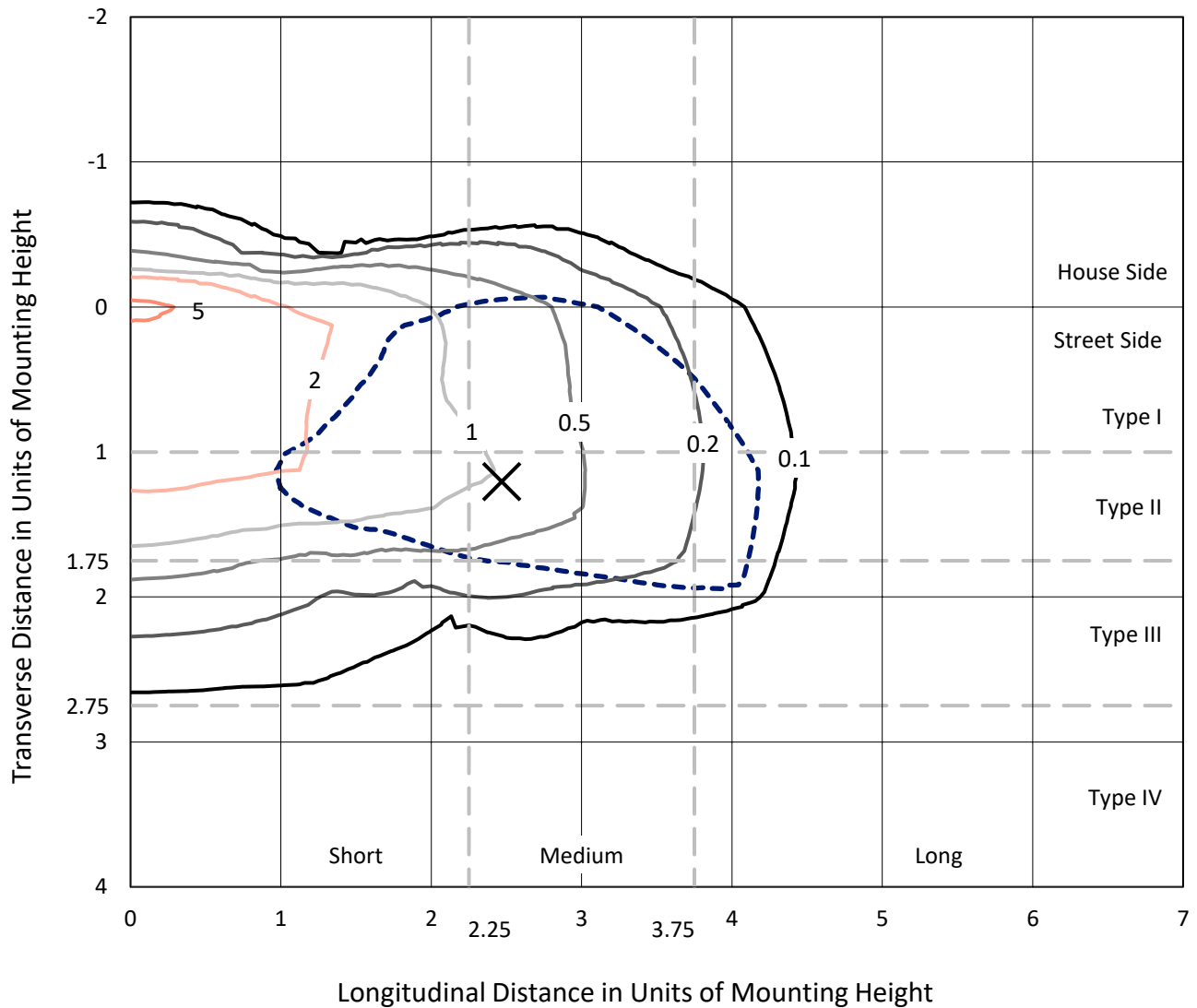
Input Watts (W): 36.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1A-740-U-SL2-HSS-ULG

Iso-Footcandle Lines of Horizontal Illumination

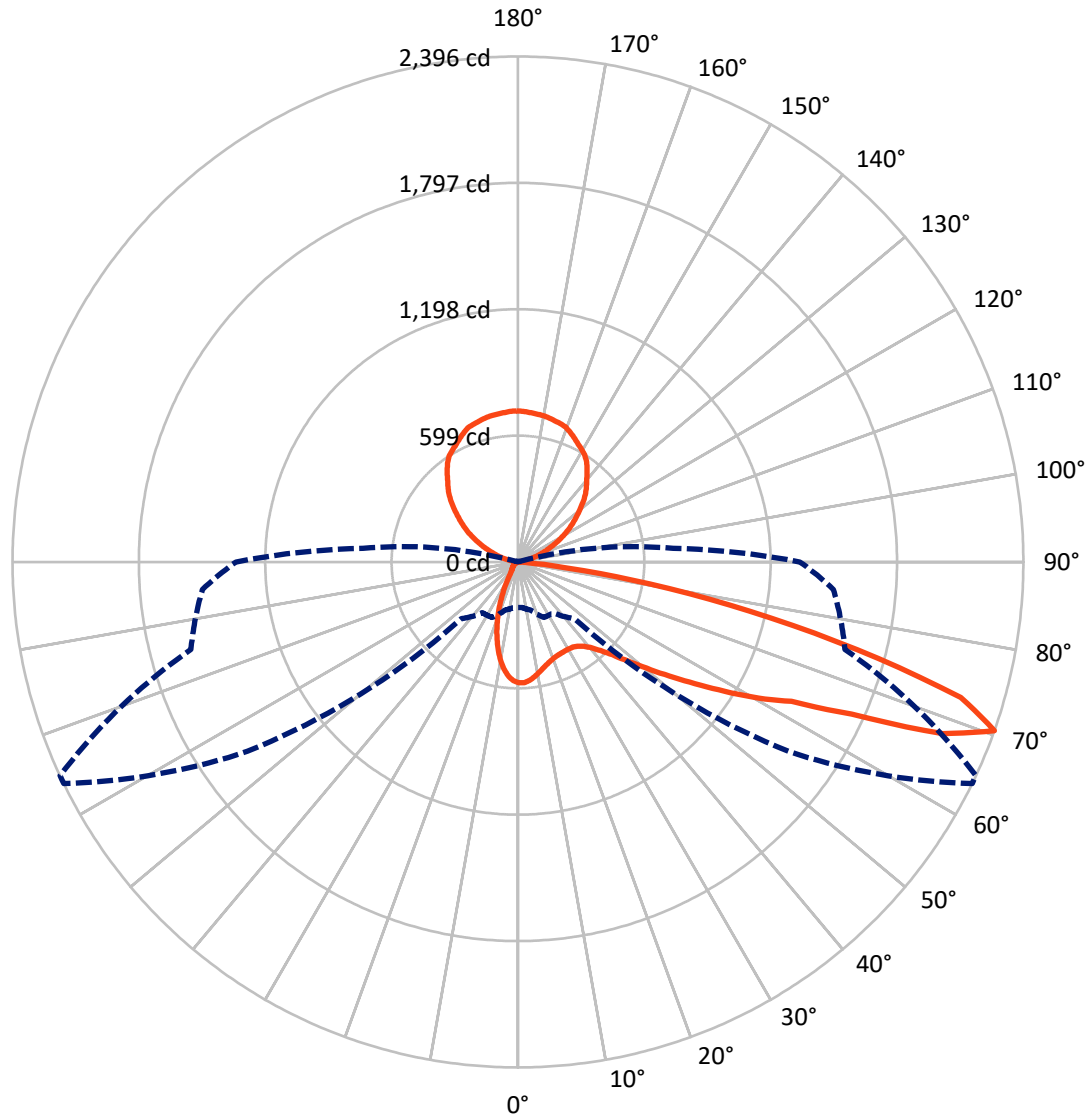
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.7 fc
 Type III - Medium - N/A

REPORT NUMBER:
CATALOG NUMBER: ENT-SA1A-740-U-SL2-HSS-ULG

Luminous Intensity Polar Plot



— Vertical Plane Through 64-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER:

CATALOG NUMBER: ENT-SA1A-740-U-SL2-HSS-ULG

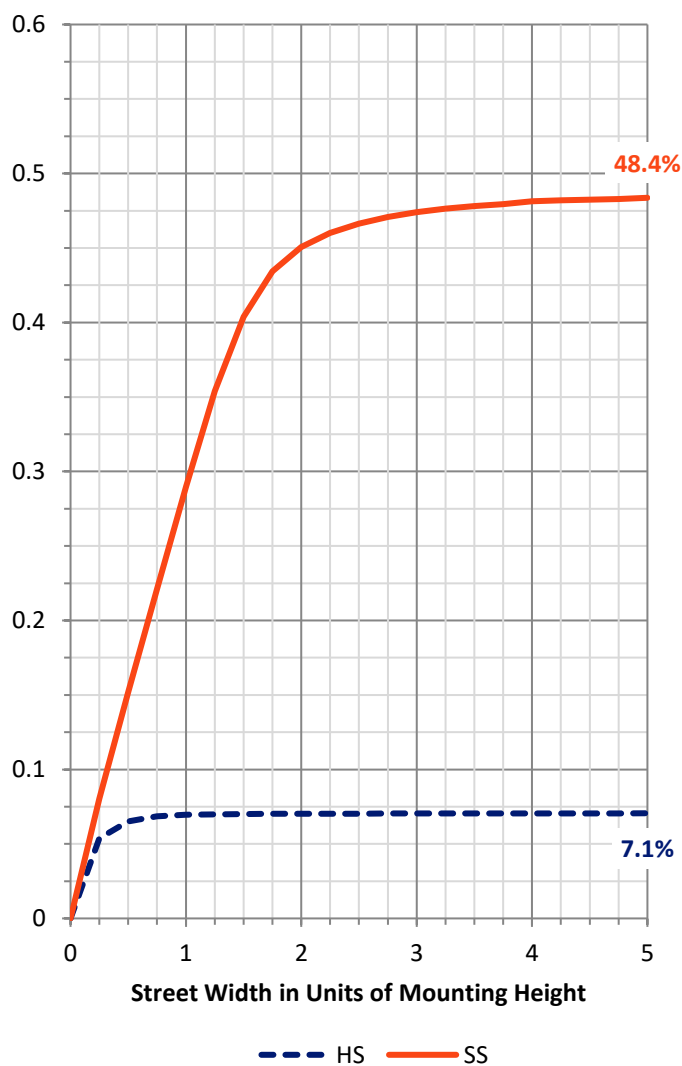
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	283.9	887.0	1170.9
	% Fixture	7.1	22.3	29.4
Street Side	Lumens	1926.1	887.0	2813.0
	% Fixture	48.3	22.3	70.6
Total	Lumens	2210.0	1773.9	3983.9
	% Fixture	55.5	44.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.2	1.2
10°-20°	107.0	2.7
20°-30°	147.3	3.7
30°-40°	202.9	5.1
40°-50°	302.4	7.6
50°-60°	477.7	12.0
60°-70°	541.3	13.6
70°-80°	355.4	8.9
80°-90°	27.9	0.7
90°-100°	8.4	0.2
100°-110°	58.7	1.5
110°-120°	169.9	4.3
120°-130°	279.4	7.0
130°-140°	344.6	8.6
140°-150°	352.5	8.8
150°-160°	297.0	7.5
160°-170°	195.5	4.9
170°-180°	67.8	1.7
0°-90°	2210.0	55.5
0°-180°	3983.9	100.0

Coefficient of Utilization

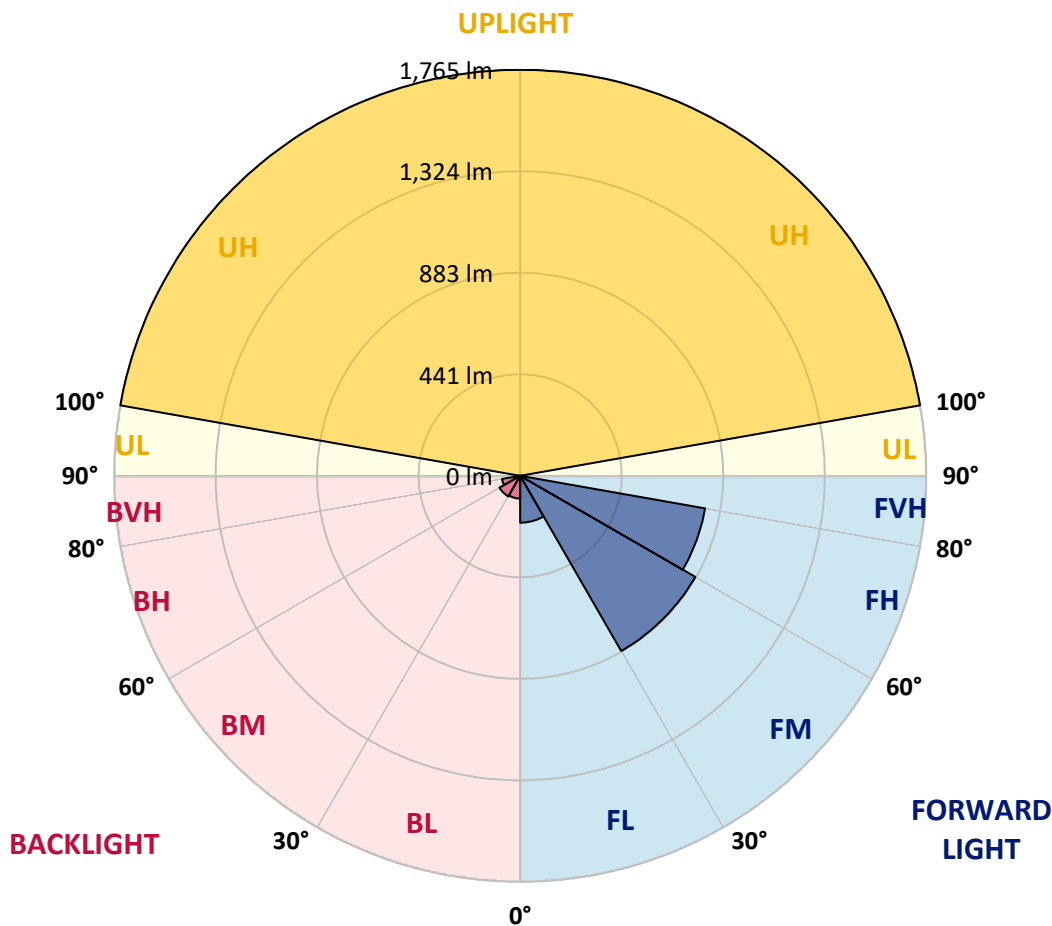


REPORT NUMBER:
 CATALOG NUMBER: ENT-SA1A-740-U-SL2-HSS-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	203.7	5.1			
FM (30°-60°)	879.5	22.1			
FH (60°-80°)	816.5	20.5			G1/1800
FVH (80°-90°)	26.3	0.7			G1/100
BL (0°-30°)	98.8	2.5	B0/110		
BM (30°-60°)	103.4	2.6	B0/220		
BH (60°-80°)	80.2	2.0	B0/110		G0/110
BVH (80°-90°)	1.6	0.0			G0/10
UL (90°-100°)	8.4	0.2		U1/10	
UH (100°-180°)	1765.5	44.3		U5	

BUG Rating: B0-U5-G1
 Type III Medium





REPORT NUMBER:

CATALOG NUMBER: ENT-SA1A-740-U-SL2-HSS-ULG

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
0°	572.1	572.1	572.1	572.1	572.1	572.1	572.1	572.1	572.1	572.1	572.1
2.5°	556.2	556.2	558.9	561.6	563.1	567.4	570.5	572.9	572.9	574.4	571.7
5°	519.2	519.2	521.6	528.2	535.2	544.1	554.2	564.3	566.3	573.6	573.3
7.5°	485.0	488.1	492.0	498.6	506.0	519.2	533.2	550.7	552.7	570.5	574.4
10°	461.3	463.3	465.6	473.0	483.9	499.0	514.2	534.8	538.3	565.1	574.4
12.5°	442.3	442.7	446.2	454.3	464.8	479.6	496.7	519.2	523.5	555.4	572.9
15°	428.7	428.3	432.2	439.9	450.1	465.2	481.9	505.6	510.3	547.2	572.5
17.5°	420.5	420.9	424.0	429.8	439.6	453.9	471.0	494.4	499.0	540.6	574.4
20°	420.5	420.5	422.5	425.2	432.6	445.4	462.1	486.2	490.9	536.3	577.1
22.5°	428.7	427.9	429.5	427.1	430.6	439.6	456.7	480.8	485.8	534.4	581.4
25°	443.4	441.9	443.1	438.0	434.1	438.0	453.2	478.4	483.9	534.8	585.3
27.5°	464.0	464.0	461.7	454.7	445.0	440.7	452.8	476.9	482.3	534.8	588.0
30°	492.8	491.6	488.1	481.1	466.0	451.6	456.7	476.9	482.3	535.2	588.8
32.5°	521.6	522.3	524.3	517.3	496.7	470.3	466.0	480.4	485.0	534.8	587.6
35°	550.7	551.1	559.6	560.4	534.0	500.2	481.9	489.7	492.8	538.7	588.4
37.5°	576.4	578.3	595.0	603.2	581.4	538.7	507.2	507.2	508.7	549.2	593.1
40°	605.1	610.2	630.4	648.6	640.1	588.0	544.1	532.8	533.6	568.2	603.6
42.5°	638.5	644.8	671.2	697.6	697.2	648.6	590.7	573.6	574.4	601.2	624.9
45°	680.9	685.2	718.6	751.6	758.6	715.5	649.4	626.9	627.7	651.4	666.5
47.5°	732.6	737.6	769.9	809.5	827.4	795.9	725.6	701.1	698.8	715.5	726.4
50°	800.2	809.9	829.0	867.1	910.2	889.2	815.0	790.5	787.4	800.6	804.1
52.5°	864.7	873.7	881.4	916.4	1000.0	1005.0	924.6	897.8	894.7	897.8	902.0
55°	874.5	879.5	885.3	932.7	1072.7	1152.3	1049.3	1017.5	1008.5	1002.7	1017.1
57.5°	797.1	794.0	813.4	877.9	1084.7	1315.2	1218.0	1156.2	1147.7	1115.4	1101.0
60°	631.2	626.9	645.2	733.4	1017.1	1396.0	1452.0	1309.7	1288.7	1180.7	1166.7
62.5°	443.4	438.4	462.1	514.2	788.9	1380.1	1715.9	1455.1	1413.5	1238.6	1219.6
65°	341.6	339.3	352.1	363.8	481.5	1195.5	1861.2	1738.8	1652.9	1301.6	1277.1
67.5°	267.8	270.9	286.8	320.6	310.9	745.0	1847.6	2171.7	2085.9	1417.4	1401.8
70°	215.3	216.1	235.9	289.9	293.4	379.3	1564.3	2395.6	2394.4	1604.3	1500.9
72.5°	130.2	133.7	166.0	250.7	296.1	290.3	1051.7	2195.1	2225.4	1647.9	1353.7
75°	62.6	66.1	85.9	168.3	294.2	282.5	569.0	1661.8	1700.7	1477.6	1097.5
77.5°	23.3	26.4	39.6	82.4	218.0	258.8	299.3	1120.5	1151.2	1081.6	743.5
80°	7.4	8.6	15.5	37.7	110.8	213.8	192.8	631.9	652.5	473.4	249.9
82.5°	0.8	1.2	4.3	12.8	42.8	108.8	113.1	237.9	248.3	92.5	50.5
85°	0.0	0.0	0.0	0.0	0.8	0.8	28.0	45.5	37.3	8.9	14.8
87.5°	0.0	0.0	0.0	0.0	0.0	0.4	0.8	1.2	1.2	1.2	1.6
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	8.1	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	10.4	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	26.9	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	48.4	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	71.8	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.3	96.2	92.1	89.0
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.7	123.8	121.7	118.7



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CATALOG NUMBER: ENT-SA1A-740-U-SL2-HSS-ULG

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	64°	65°	75°	85°
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	153.2	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	185.9	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	219.5	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	255.3	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	289.1	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	322.0	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.8	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	389.3	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	425.0	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	457.8	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	485.7	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	513.3	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	544.6	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	574.3	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	597.9	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	613.5	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	627.8	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	645.0	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	662.5	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	678.6	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	686.0	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	692.0	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	699.1	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	704.5	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	707.6	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	710.4	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	714.5	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



REPORT NUMBER:

CATALOG NUMBER: ENT-SA1A-740-U-SL2-HSS-ULG

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	572.1	572.1	572.1	572.1	572.1	572.1	572.1	572.1	572.1	572.1	572.1
2.5°	571.3	571.3	568.6	564.3	558.9	551.1	549.2	542.9	542.9	537.9	537.1
5°	572.1	569.8	560.8	547.6	529.3	509.5	497.1	483.5	471.8	464.4	465.2
7.5°	572.1	567.0	549.2	520.0	485.8	451.6	425.6	395.3	381.3	371.9	376.2
10°	570.5	562.0	530.9	486.6	432.6	385.1	342.4	307.4	283.3	273.2	264.7
12.5°	567.0	554.6	508.0	445.0	375.8	313.6	254.6	208.7	176.8	160.9	159.0
15°	563.9	546.8	481.1	399.5	311.7	230.5	164.4	120.5	93.3	87.1	87.8
17.5°	563.1	539.4	455.5	351.3	249.1	153.5	94.8	76.6	72.7	71.1	70.7
20°	563.5	532.8	427.5	303.5	176.4	95.6	71.9	67.6	66.1	65.3	64.9
22.5°	565.1	525.4	399.9	253.4	120.5	70.0	64.1	61.4	59.5	58.3	57.9
25°	565.1	517.3	369.2	200.2	78.9	61.4	57.5	54.0	51.3	49.7	49.7
27.5°	563.9	508.0	337.3	152.0	62.6	54.8	50.5	45.9	42.4	40.4	40.4
30°	560.4	496.7	306.6	106.1	54.8	49.0	43.5	37.7	33.4	31.5	30.7
32.5°	555.4	484.6	271.3	74.6	49.4	42.8	36.5	30.3	26.4	24.1	24.1
35°	549.9	472.6	233.2	57.1	44.7	37.7	30.7	24.5	21.0	19.4	19.0
37.5°	547.2	459.8	195.9	49.4	40.0	32.3	24.9	19.8	17.1	15.9	15.5
40°	549.2	450.1	159.3	44.3	35.8	27.2	20.6	16.7	14.4	12.8	12.8
42.5°	560.8	444.6	124.8	40.4	31.9	22.9	17.1	13.6	11.3	10.1	10.1
45°	584.5	448.5	94.8	36.9	27.2	19.0	14.4	10.9	8.6	7.4	7.4
47.5°	624.2	464.0	71.9	33.8	23.3	15.5	11.7	8.6	6.6	5.8	5.4
50°	682.1	494.7	56.4	30.7	19.4	13.2	9.7	6.6	5.1	4.3	4.3
52.5°	765.6	548.0	48.2	27.2	15.9	10.9	7.8	5.1	3.9	3.1	3.1
55°	868.2	615.6	43.5	24.1	12.8	8.9	6.2	3.9	2.7	2.3	1.9
57.5°	951.4	669.2	40.8	21.0	10.9	7.8	4.7	3.1	2.3	1.6	1.6
60°	1024.9	703.8	36.1	17.5	9.3	6.2	3.9	2.3	1.6	1.2	1.2
62.5°	1084.3	726.4	29.9	14.0	7.8	5.1	3.1	1.9	1.6	1.2	1.2
65°	1151.9	744.6	24.5	10.9	6.6	4.3	2.7	1.6	1.2	1.2	1.2
67.5°	1284.5	785.5	18.3	8.6	5.1	3.5	2.3	1.6	1.2	0.8	0.8
70°	1336.2	737.6	14.4	7.0	3.9	3.1	2.3	1.6	0.8	0.8	0.8
72.5°	1137.2	552.3	11.3	5.8	3.5	2.7	2.3	1.6	1.2	1.2	0.8
75°	902.0	373.1	8.9	4.7	3.5	3.1	2.3	2.3	1.9	1.6	1.6
77.5°	576.0	165.2	7.0	3.9	3.5	3.9	3.5	2.3	2.3	1.9	1.9
80°	171.8	39.6	5.1	3.1	2.7	3.1	3.5	2.3	1.6	1.2	1.2
82.5°	37.3	9.3	3.1	1.6	1.9	1.6	2.3	2.3	1.6	1.2	1.2
85°	12.4	3.5	1.9	1.6	1.2	1.2	1.2	1.2	1.2	1.2	0.8
87.5°	0.8	1.2	1.2	0.8	0.8	0.8	0.8	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°	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



REPORT NUMBER:

CATALOG NUMBER: ENT-SA1A-740-U-SL2-HSS-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

(END OF REPORT)