

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: **ENC-SA1A-740-U-SL4-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P400954 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENC-SA1A-740-U-SL4-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT
ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4016.9 lumens
Efficiency: N/A
Efficacy: 109.2 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: B0 - U5 - G1

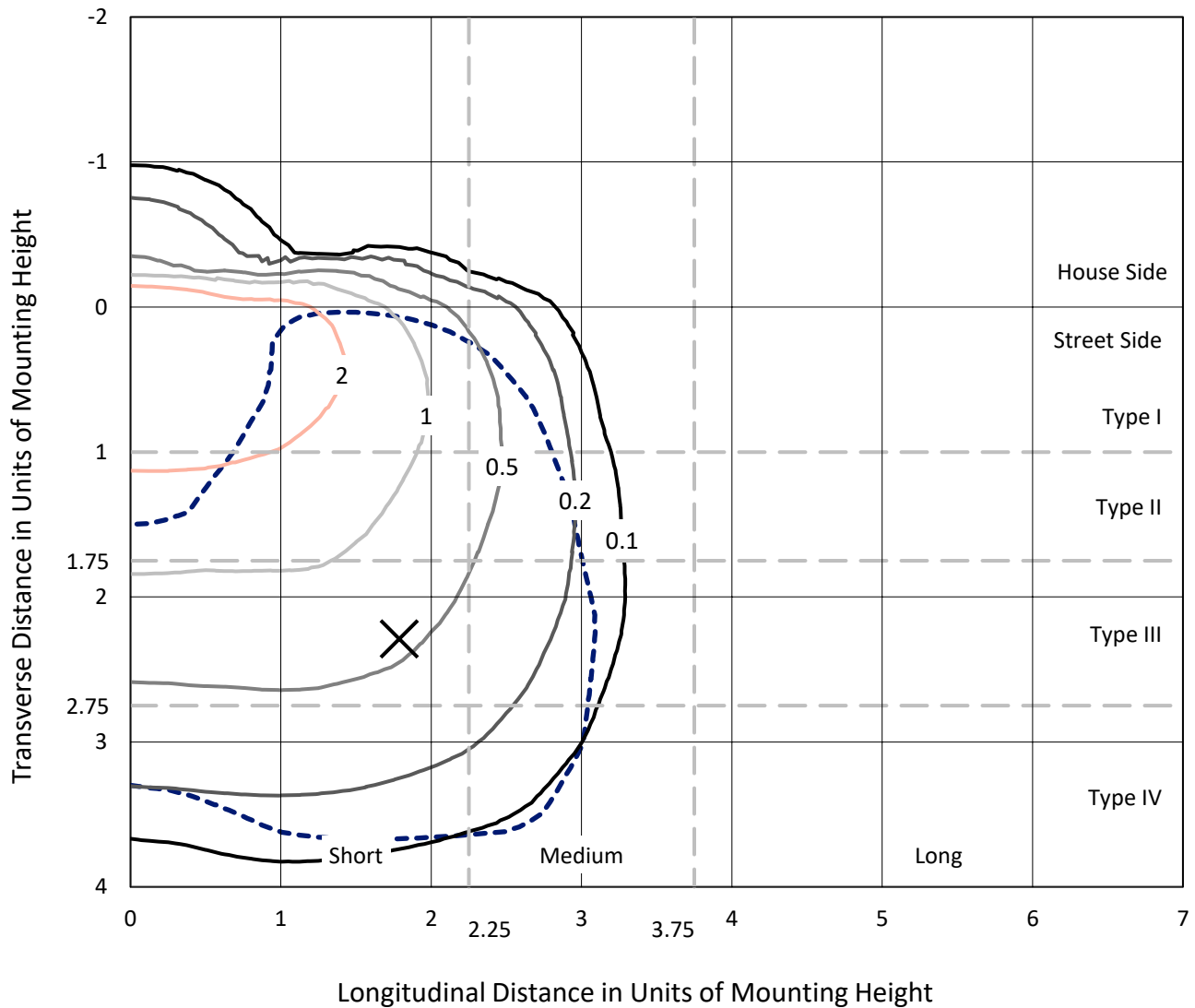
Input Watts (W): 36.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

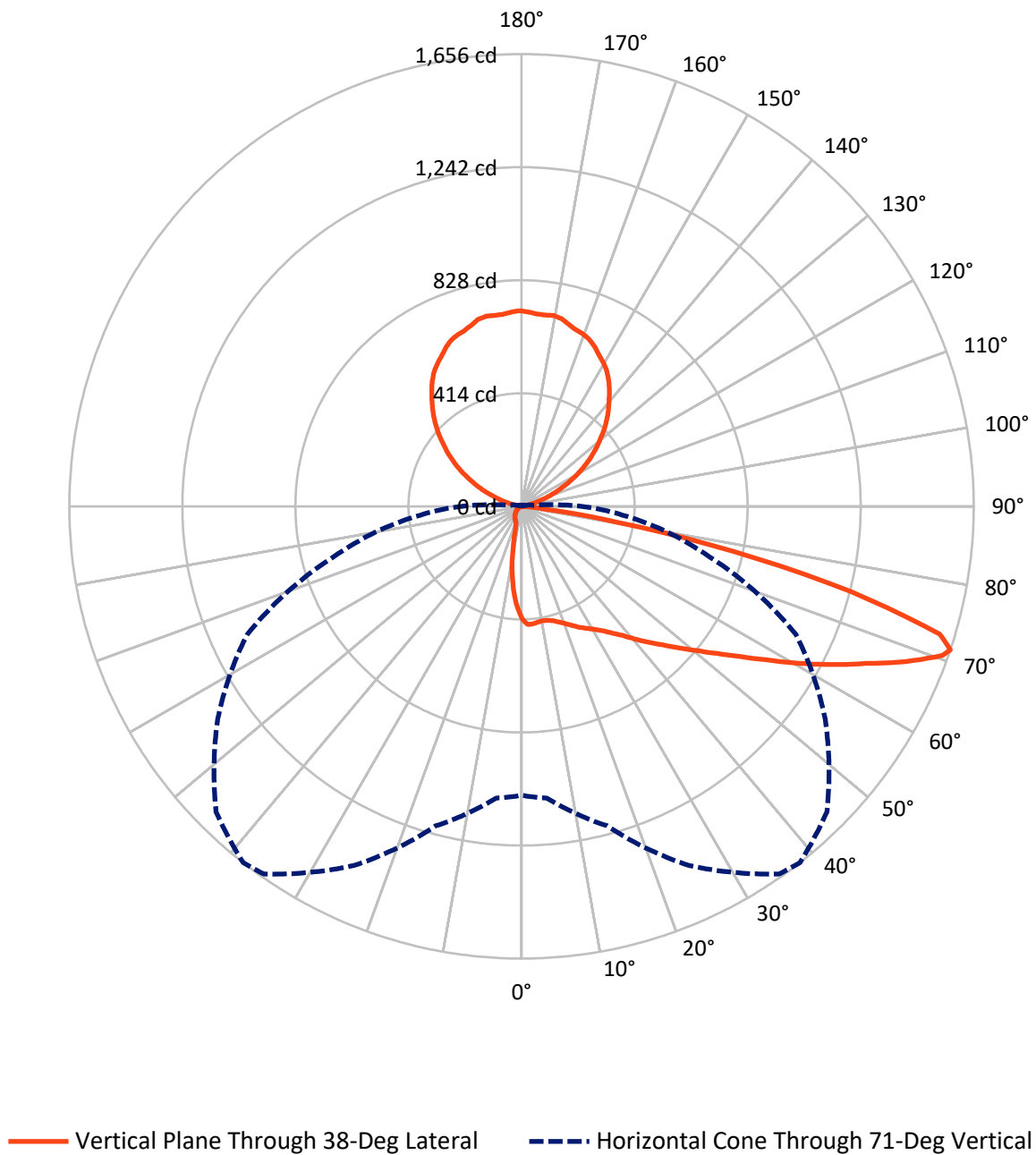
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



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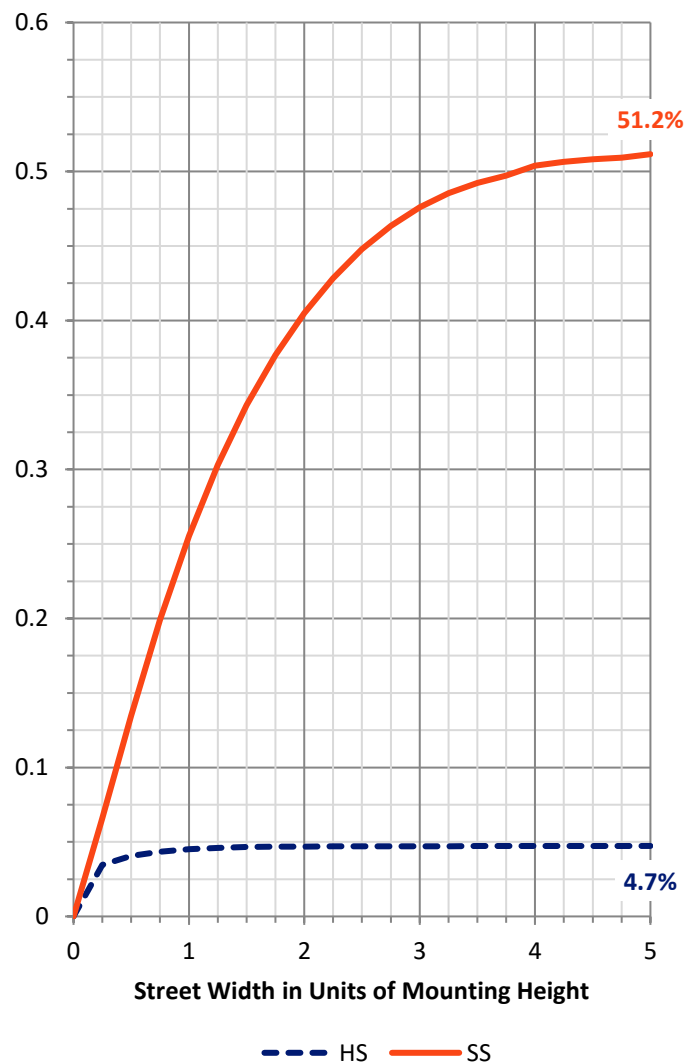
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	191.6	887.0	1078.6
	% Fixture	4.8	22.1	26.9
Street Side	Lumens	2051.4	887.0	2938.4
	% Fixture	51.1	22.1	73.1
Total	Lumens	2243.0	1773.9	4016.9
	% Fixture	55.8	44.2	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	34.9	0.9
10°-20°	84.6	2.1
20°-30°	135.6	3.4
30°-40°	206.3	5.1
40°-50°	321.5	8.0
50°-60°	470.1	11.7
60°-70°	603.0	15.0
70°-80°	368.6	9.2
80°-90°	18.5	0.5
90°-100°	8.4	0.2
100°-110°	58.7	1.5
110°-120°	169.9	4.2
120°-130°	279.4	7.0
130°-140°	344.6	8.6
140°-150°	352.5	8.8
150°-160°	297.0	7.4
160°-170°	195.5	4.9
170°-180°	67.8	1.7
0°-90°	2243.0	55.8
0°-180°	4016.9	100.0

Coefficient of Utilization



REPORT NUMBER:

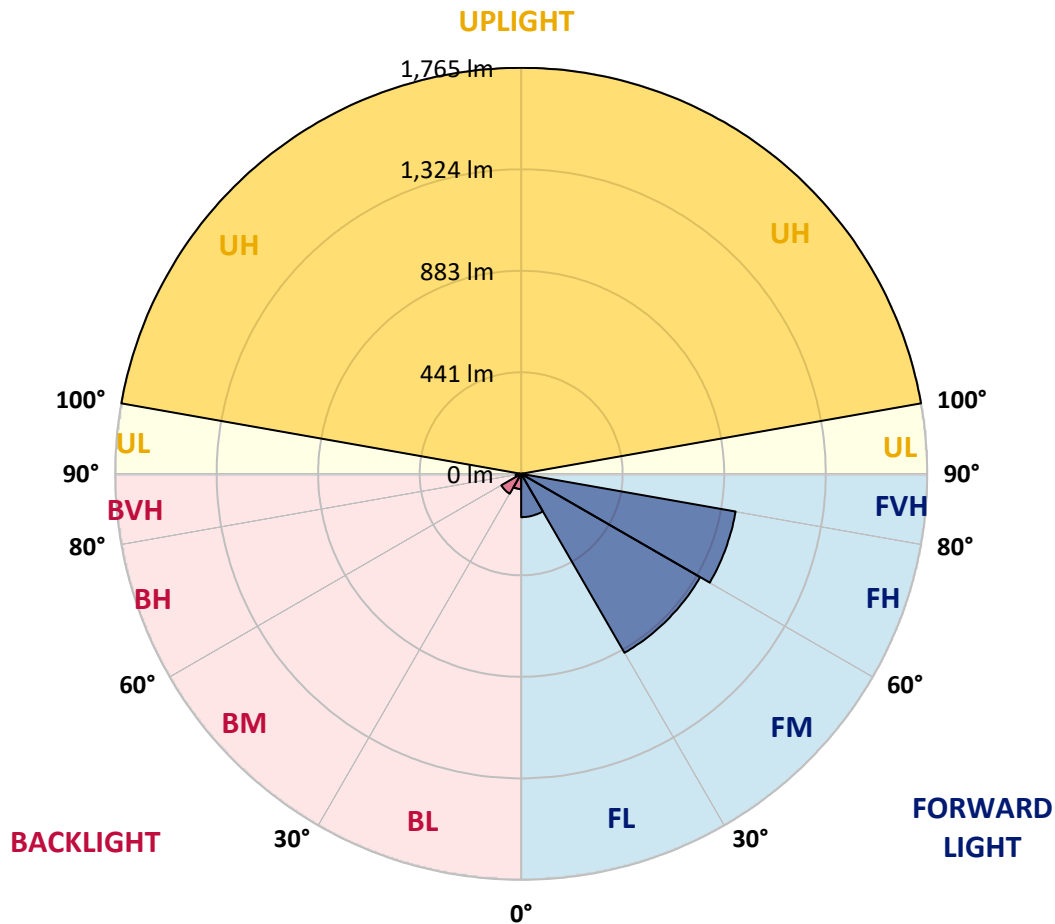
CATALOG NUMBER: ENC-SA1A-740-U-SL4-HSS-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	188.5	4.7			
FM	(30°-60°)	898.4	22.4			
FH	(60°-80°)	946.9	23.6			G1/1800
FVH	(80°-90°)	17.7	0.4			G1/100
BL	(0°-30°)	66.6	1.7	B0/110		
BM	(30°-60°)	99.5	2.5	B0/220		
BH	(60°-80°)	24.6	0.6	B0/110		G0/110
BVH	(80°-90°)	0.8	0.0			G0/10
UL	(90°-100°)	8.4	0.2		U1/10	
UH	(100°-180°)	1765.5	44.0		U5	

BUG Rating: B0-U5-G1

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	413.5	413.5	413.5	413.5	413.5	413.5	413.5	413.5	413.5	413.5	413.5
2.5°	438.0	436.8	438.0	436.8	434.5	433.3	431.8	427.5	423.6	418.9	411.9
5°	438.8	438.0	438.0	436.4	433.7	432.5	431.0	426.7	421.7	414.7	404.2
7.5°	434.5	434.1	433.3	431.8	428.7	427.9	426.7	421.7	416.6	409.2	396.4
10°	427.5	428.3	427.9	427.9	426.7	425.9	425.2	419.3	413.9	405.3	391.7
12.5°	420.9	421.7	423.6	426.7	427.9	428.3	428.3	422.4	415.8	406.5	392.5
15°	416.6	418.2	423.6	429.8	433.3	434.5	435.7	429.4	421.7	411.6	396.8
17.5°	415.4	417.8	428.3	438.0	444.6	445.4	445.4	437.6	429.4	417.8	401.8
20°	419.3	422.4	436.0	449.6	457.8	458.6	457.0	446.9	437.2	424.4	406.1
22.5°	431.0	433.7	449.3	465.2	473.0	473.7	470.2	456.3	445.8	435.3	411.9
25°	451.2	452.8	469.5	484.6	488.9	490.1	484.2	467.5	455.5	445.8	420.1
27.5°	478.0	478.8	493.9	505.2	506.0	505.6	499.4	481.9	469.9	461.7	432.5
30°	506.0	507.2	519.6	527.0	523.9	522.3	516.9	498.2	487.3	481.1	450.4
32.5°	532.0	533.2	546.8	550.7	543.7	542.5	538.6	518.8	509.5	512.6	476.1
35°	557.7	557.7	573.2	575.2	569.0	569.0	569.0	545.2	543.7	554.2	511.8
37.5°	580.6	584.5	600.8	600.0	598.9	599.7	602.0	584.1	589.6	607.4	558.8
40°	600.0	605.1	626.9	628.8	633.9	638.1	641.6	632.3	645.1	674.3	619.1
42.5°	617.5	623.4	651.3	660.3	674.3	680.1	686.7	684.4	712.7	766.0	696.0
45°	640.1	646.3	675.0	696.4	715.9	723.6	738.4	748.5	795.5	856.2	779.2
47.5°	670.0	674.3	700.7	734.5	760.9	774.9	797.9	823.9	881.0	951.8	853.4
50°	710.8	711.2	731.0	774.9	814.2	829.3	869.0	902.8	974.3	1036.1	907.1
52.5°	755.9	753.6	769.1	824.7	874.4	895.0	941.6	988.7	1060.6	1097.1	931.2
55°	798.6	799.8	809.5	877.5	950.2	970.0	1029.1	1076.9	1139.5	1134.4	944.4
57.5°	848.0	847.6	860.0	935.4	1038.8	1061.7	1123.5	1162.8	1187.3	1161.2	946.7
60°	894.6	893.5	912.5	1004.6	1133.2	1167.1	1222.6	1221.1	1235.1	1178.3	944.8
62.5°	936.2	938.9	972.4	1085.1	1238.9	1275.5	1303.5	1284.0	1287.9	1198.1	920.7
65°	986.7	991.8	1045.8	1182.6	1369.5	1387.0	1397.9	1366.4	1327.6	1182.2	847.6
67.5°	1050.5	1065.6	1141.8	1326.4	1505.5	1517.6	1518.0	1416.2	1326.0	1101.8	712.7
70°	1075.7	1091.7	1212.9	1440.3	1620.2	1635.4	1587.9	1408.4	1221.5	862.8	481.1
71°	1058.2	1072.6	1211.0	1451.1	1643.9	1655.9	1581.7	1357.5	1107.6	710.8	372.7
72.5°	931.9	969.2	1136.4	1382.7	1601.5	1601.9	1481.1	1237.4	881.0	443.8	187.3
75°	503.3	548.4	832.8	1052.4	1235.5	1245.2	1139.5	859.3	426.3	115.0	45.5
77.5°	165.9	186.9	373.5	546.4	774.9	790.1	696.8	381.6	134.5	38.9	23.7
80°	104.2	106.5	126.3	229.7	344.7	357.5	286.8	154.7	60.6	21.4	16.3
82.5°	17.5	21.0	59.5	67.6	121.6	96.4	65.3	78.9	28.4	9.7	14.0
85°	0.0	0.0	0.4	0.4	1.9	0.4	0.4	15.9	1.6	1.6	7.4
87.5°	0.0	0.0	0.4	0.4	0.4	0.4	0.4	0.4	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	9.2	9.2	9.2	12.3	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	15.1	21.5	29.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	31.6	40.9	51.1	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	53.7	64.4	73.7	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	79.3	90.0	97.2	96.2	92.1	89.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	108.0	116.6	122.8	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	139.9	146.3	151.4	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	173.7	178.0	183.1	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	207.5	209.7	215.8	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	244.3	248.6	251.6	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	279.1	283.4	285.4	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	313.5	317.1	320.2	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.1	347.8	352.9	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	379.1	380.5	385.7	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	413.6	414.3	420.4	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	445.6	447.0	453.2	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	475.8	478.7	483.9	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	504.1	508.4	511.5	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	534.2	537.0	539.1	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	562.9	563.6	568.8	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	587.5	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	624.0	624.0	624.0	625.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	643.9	642.4	640.4	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	660.5	659.8	658.8	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	670.0	673.1	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	676.8	678.2	682.3	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	688.4	687.4	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	702.9	700.7	693.6	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	708.3	706.9	701.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	705.8	704.8	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	706.6	705.8	705.8	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	712.4	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°	413.5	413.5	413.5	413.5	413.5	413.5	413.5	413.5	413.5	413.5	413.5
2.5°	408.8	405.7	399.5	392.9	384.7	377.7	375.4	370.4	368.0	366.1	366.1
5°	397.6	392.1	378.9	365.3	352.1	338.1	325.3	313.2	307.4	299.2	303.1
7.5°	388.2	378.9	360.3	338.9	311.7	284.1	262.7	244.1	228.5	223.5	220.0
10°	381.6	370.0	342.8	310.1	270.5	231.2	198.2	167.5	149.6	138.7	138.7
12.5°	380.9	366.1	330.7	280.6	223.5	170.2	129.4	100.3	85.9	79.3	78.9
15°	383.6	365.7	319.8	253.8	180.3	118.1	80.8	68.0	64.5	63.7	63.7
17.5°	385.9	365.3	307.0	223.5	132.9	77.7	64.1	61.8	61.0	60.6	60.6
20°	388.2	363.4	292.2	189.3	94.0	63.3	59.8	58.7	58.3	57.9	57.9
22.5°	391.3	361.4	277.1	150.4	69.6	59.1	57.1	56.0	55.6	55.6	55.6
25°	395.6	360.3	258.4	113.9	59.8	56.0	54.0	53.2	53.2	52.9	52.9
27.5°	403.8	361.4	238.2	81.6	56.0	52.9	51.7	50.9	50.9	50.5	50.5
30°	415.1	364.9	213.0	63.7	52.9	49.7	48.6	48.2	47.8	47.8	47.8
32.5°	431.0	370.4	185.4	54.4	49.0	46.6	45.5	45.1	45.1	45.1	44.7
35°	455.5	381.6	151.6	49.7	45.5	43.1	42.0	42.0	42.0	41.6	42.0
37.5°	492.8	399.9	117.4	45.9	41.6	39.6	38.9	38.5	38.5	38.5	38.5
40°	539.8	429.4	85.5	42.4	38.1	36.1	35.4	35.0	34.6	34.6	34.6
42.5°	600.4	462.1	62.2	38.5	35.0	33.0	32.3	31.5	30.7	30.3	30.3
45°	663.4	500.9	48.6	35.4	31.9	30.3	29.5	28.4	27.2	26.0	26.0
47.5°	724.4	530.9	41.6	31.9	29.1	27.6	26.8	25.3	23.3	22.2	22.2
50°	762.9	540.2	37.3	28.8	26.4	25.3	24.1	22.2	19.4	18.3	18.3
52.5°	774.9	523.1	33.4	26.0	24.1	22.9	21.4	18.7	15.9	14.4	14.4
55°	779.6	490.1	29.5	24.1	21.8	20.2	18.3	15.5	12.8	11.3	11.3
57.5°	773.8	443.4	26.4	21.8	19.4	17.9	15.5	12.4	9.7	8.5	8.5
60°	753.9	375.8	23.7	19.4	17.1	15.2	12.8	9.7	7.4	5.8	6.2
62.5°	700.3	290.7	20.6	16.3	14.8	12.8	10.1	7.4	4.7	3.9	3.9
65°	614.8	201.3	17.5	13.6	12.4	10.5	7.8	5.1	2.7	2.3	2.3
67.5°	499.4	130.2	13.6	11.3	10.5	8.5	5.8	3.1	1.6	1.6	1.2
70°	313.6	64.5	10.9	8.5	8.5	6.6	4.3	1.9	1.2	1.2	1.2
71°	221.9	43.9	9.7	7.8	7.8	6.2	3.9	1.6	1.2	1.2	1.2
72.5°	100.3	27.6	8.2	7.0	6.6	5.1	3.5	1.6	1.6	1.6	1.6
75°	31.5	15.2	5.8	5.4	5.4	4.3	3.1	1.9	1.9	1.9	1.9
77.5°	21.0	11.7	3.9	3.5	4.3	4.3	3.1	2.3	2.3	2.3	2.3
80°	17.1	6.2	2.3	2.3	3.1	3.9	3.1	2.3	2.7	2.3	2.3
82.5°	16.7	3.1	0.8	1.2	1.9	2.3	2.3	1.9	2.3	2.3	2.3
85°	7.0	0.8	0.4	0.8	0.8	1.2	1.2	1.6	1.9	1.9	1.9
87.5°	0.0	0.0	0.0	0.0	0.4	0.4	0.8	0.8	1.2	1.6	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°	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: ENC-SA1A-740-U-SL4-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)