

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-T3-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P400972 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-T3-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4556.9 lumens
Efficiency: N/A
Efficacy: 123.8 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: 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



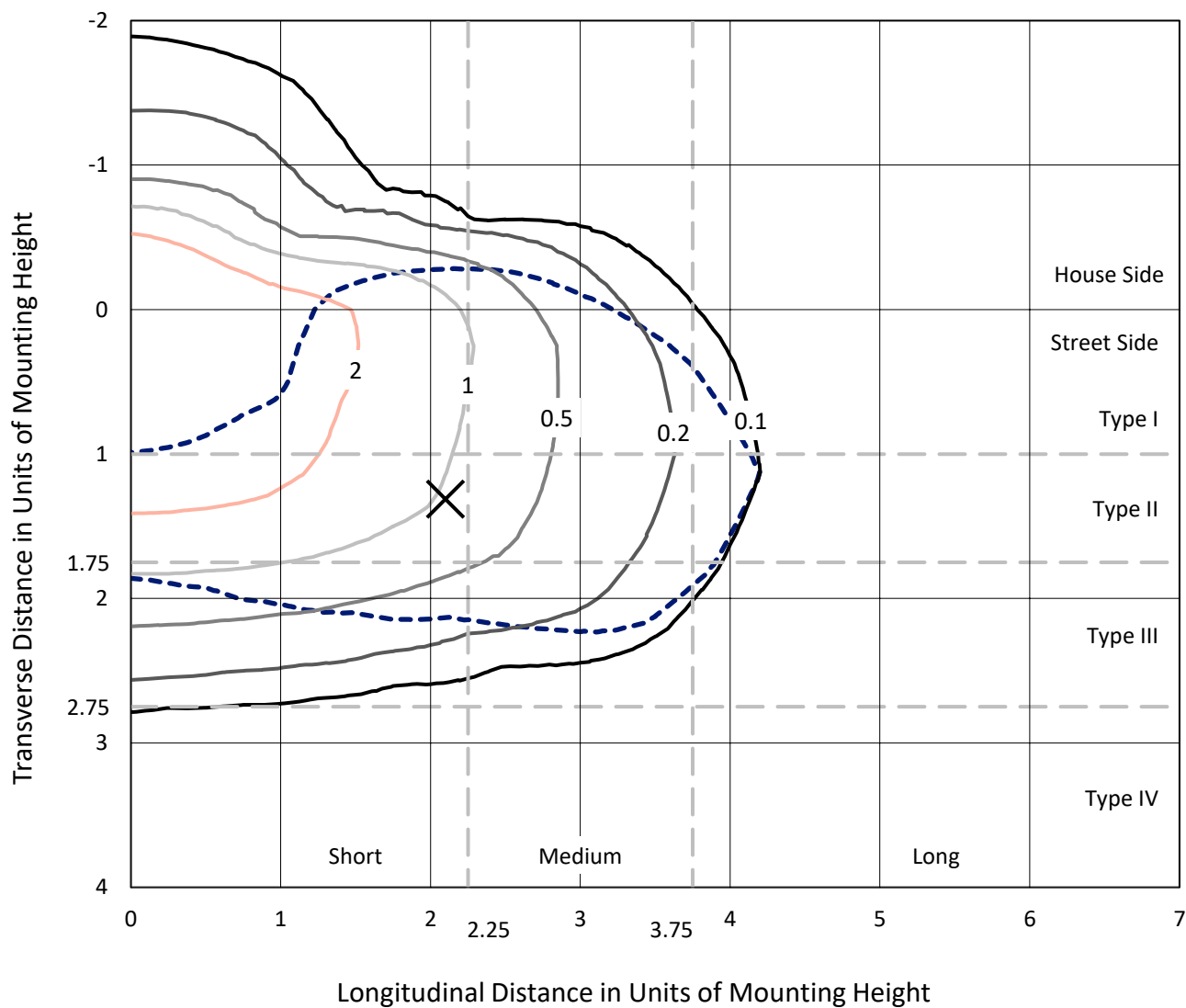
REPORT NUMBER:

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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd

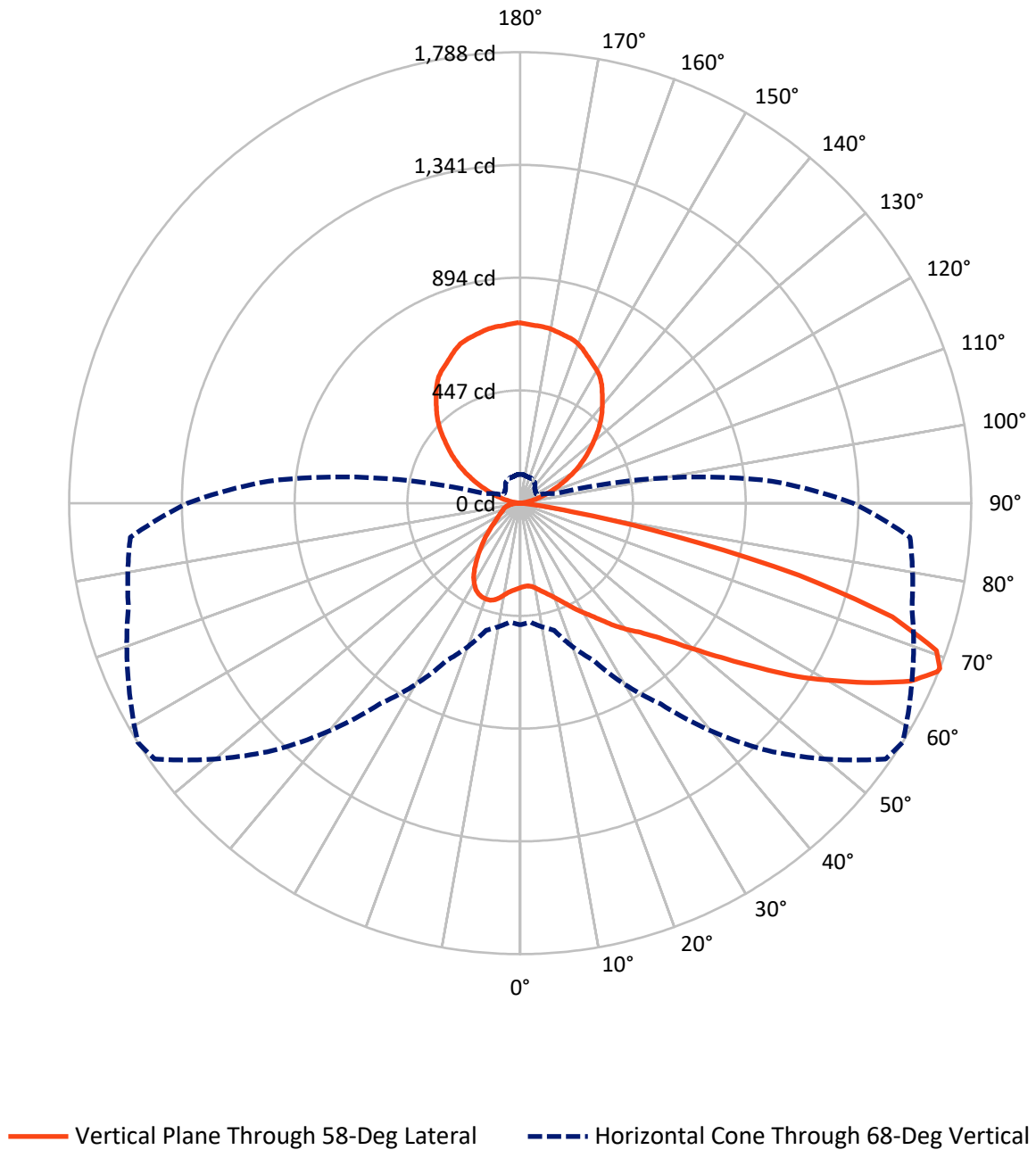
--- 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.7 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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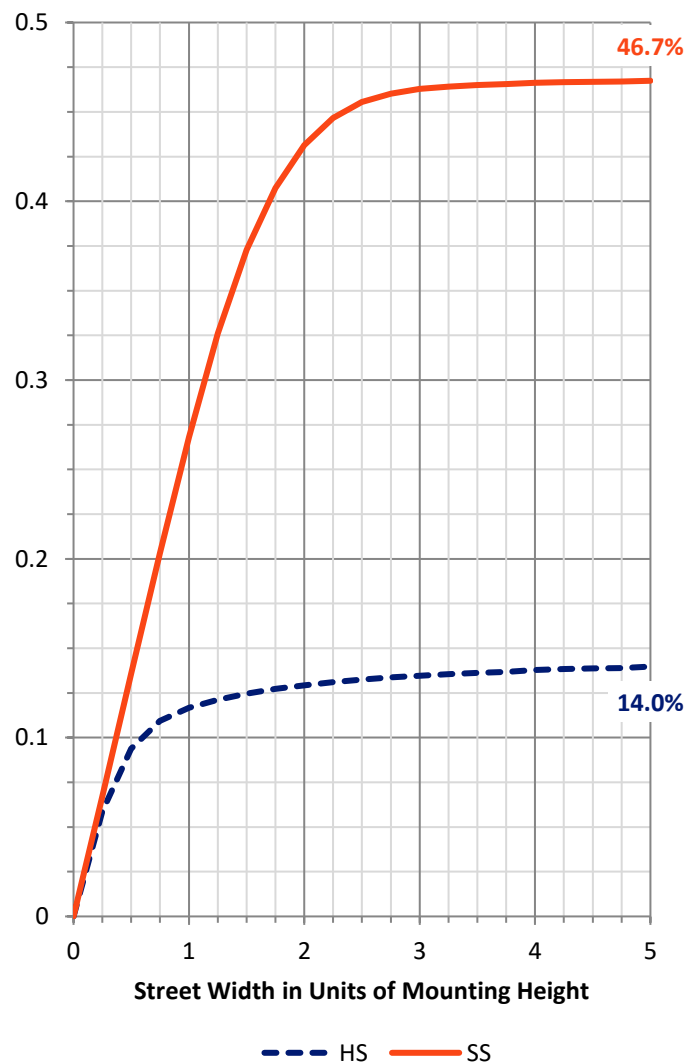
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	651.6	887.0	1538.6
	% Fixture	14.3	19.5	33.8
Street Side	Lumens	2131.4	887.0	3018.3
	% Fixture	46.8	19.5	66.2
Total	Lumens	2783.0	1773.9	4556.9
	% Fixture	61.1	38.9	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.9	0.7
10°-20°	107.7	2.4
20°-30°	193.6	4.2
30°-40°	284.4	6.2
40°-50°	417.1	9.2
50°-60°	623.6	13.7
60°-70°	729.1	16.0
70°-80°	359.5	7.9
80°-90°	35.1	0.8
90°-100°	8.4	0.2
100°-110°	58.7	1.3
110°-120°	169.9	3.7
120°-130°	279.4	6.1
130°-140°	344.6	7.6
140°-150°	352.5	7.7
150°-160°	297.0	6.5
160°-170°	195.5	4.3
170°-180°	67.8	1.5
0°-90°	2783.0	61.1
0°-180°	4556.9	100.0

Coefficient of Utilization



REPORT NUMBER:

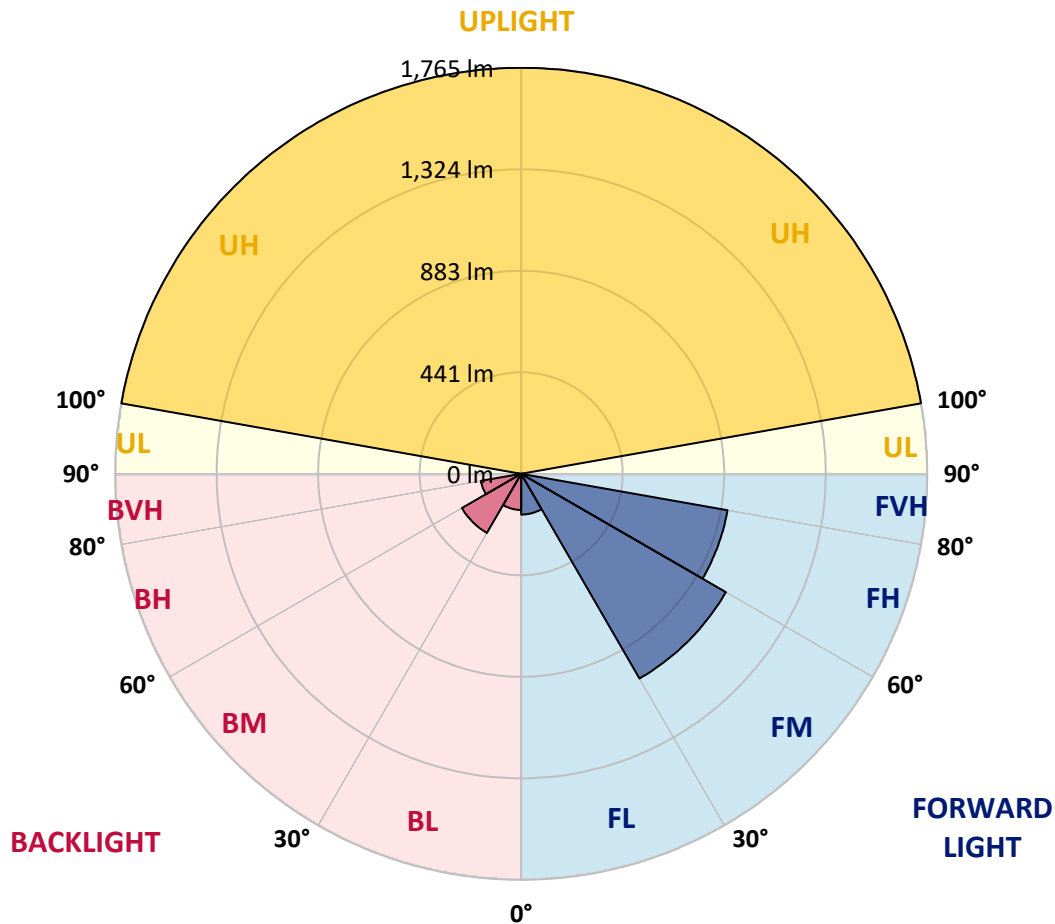
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	177.3	3.9			
FM	(30°-60°)	1027.9	22.6			
FH	(60°-80°)	911.0	20.0			G1/1800
FVH	(80°-90°)	15.1	0.3			G1/100
BL	(0°-30°)	156.9	3.4	B1/500		
BM	(30°-60°)	297.2	6.5	B1/1000		
BH	(60°-80°)	177.5	3.9	B1/500		G1/500
BVH	(80°-90°)	20.0	0.4			G1/100
UL	(90°-100°)	8.4	0.2		U1/10	
UH	(100°-180°)	1765.5	38.7		U5	

BUG Rating: B1-U5-G1

Type III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	334.2	334.2	334.2	334.2	334.2	334.2	334.2	334.2	334.2	334.2	334.2
2.5°	326.0	326.0	327.2	327.6	328.4	329.1	329.9	330.3	331.5	333.0	333.8
5°	323.3	323.7	324.5	324.9	326.0	327.6	328.8	329.5	331.5	334.6	336.5
7.5°	329.5	330.7	331.1	331.5	331.9	333.0	333.0	333.4	335.4	338.5	341.2
10°	339.6	340.4	341.6	342.7	343.9	344.7	342.4	342.7	343.5	346.6	350.5
12.5°	352.5	352.5	352.9	354.4	355.6	357.9	355.6	355.6	355.6	358.3	363.0
15°	366.8	366.1	366.1	367.6	368.0	369.6	368.4	368.4	370.0	372.7	377.3
17.5°	383.2	384.3	383.2	382.4	381.2	382.0	382.8	383.6	386.7	390.9	393.7
20°	406.9	408.8	408.0	404.9	399.9	397.5	400.3	401.8	408.0	413.1	413.5
22.5°	444.6	443.4	442.2	436.8	426.7	420.5	420.9	423.2	432.9	440.7	436.8
25°	479.5	480.7	480.7	472.9	459.7	446.9	448.1	449.2	458.9	465.9	455.4
27.5°	521.9	521.1	520.7	510.2	494.3	481.9	475.3	478.4	485.4	488.1	467.9
30°	565.8	568.9	565.8	551.0	535.9	520.0	506.7	506.0	509.5	509.1	482.6
32.5°	618.7	615.9	614.8	597.7	578.6	557.6	540.9	538.2	536.3	533.6	500.1
35°	659.5	663.0	663.0	648.2	625.7	605.1	579.0	576.7	572.0	563.1	523.1
37.5°	707.7	706.9	709.6	692.5	670.0	650.1	626.0	619.4	608.9	595.7	550.3
40°	754.7	756.6	762.8	742.2	721.6	706.1	671.9	659.9	643.9	631.9	589.9
42.5°	818.8	821.5	823.8	806.7	782.3	768.3	715.4	700.3	691.3	689.0	642.4
45°	896.5	901.2	903.1	887.6	873.6	840.2	770.2	756.2	746.5	756.6	713.9
47.5°	971.1	968.8	977.7	977.3	978.9	938.9	849.1	828.1	818.8	844.4	795.9
50°	1013.1	1016.6	1036.0	1055.8	1083.4	1054.7	940.4	919.4	908.6	940.4	892.2
52.5°	1034.9	1039.5	1065.6	1121.1	1179.8	1166.2	1050.4	1027.1	1017.8	1048.8	995.6
55°	1036.8	1039.5	1074.5	1160.8	1253.3	1257.5	1175.9	1153.8	1140.9	1161.2	1108.3
57.5°	1004.5	996.4	1056.6	1166.6	1300.3	1352.7	1313.9	1297.9	1261.8	1283.6	1248.2
60°	947.0	955.2	1014.3	1142.5	1320.1	1427.0	1452.2	1428.1	1386.2	1395.1	1399.0
62.5°	860.0	870.5	931.9	1086.5	1304.2	1489.9	1580.1	1568.0	1511.7	1507.0	1514.0
65°	736.0	729.8	798.2	964.1	1228.8	1510.9	1705.6	1700.5	1633.3	1578.5	1581.2
67.5°	530.8	525.0	572.8	744.2	1024.8	1432.8	1772.4	1783.7	1706.8	1610.0	1568.0
68°	481.9	473.7	521.5	687.8	972.3	1387.7	1768.9	1788.4	1712.2	1608.0	1551.7
70°	277.5	264.3	310.5	448.8	715.8	1168.1	1697.4	1751.1	1699.4	1570.4	1444.8
72.5°	87.0	87.0	120.1	181.5	351.3	739.1	1452.2	1543.5	1554.4	1427.3	1200.8
75°	54.4	54.4	62.6	85.9	139.9	313.6	1001.8	1140.9	1235.0	1201.6	875.5
77.5°	36.9	36.1	41.6	53.2	78.1	100.6	502.9	617.9	755.4	820.3	512.2
80°	20.2	20.6	25.6	31.9	44.3	46.6	147.7	208.7	332.6	389.8	194.3
82.5°	11.7	11.3	12.4	14.0	19.4	20.2	42.4	52.1	87.0	80.8	52.1
85°	0.0	0.4	0.4	0.4	0.8	1.9	5.4	8.2	13.2	18.3	12.8
87.5°	0.0	0.0	0.0	0.0	0.4	0.4	0.8	0.8	0.8	0.8	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°	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	7.5	8.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	11.7	10.2	9.2	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	28.7	26.6	23.5	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	50.2	48.1	43.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	73.0	71.6	66.5	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.9	96.2	92.1	89.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.1	123.8	121.7	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	152.0	153.4	152.4	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	184.0	186.2	183.1	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	217.1	219.9	214.8	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	252.9	255.7	250.6	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	286.6	289.5	284.4	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	320.8	322.2	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.2	353.9	353.9	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	386.9	389.7	389.7	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	422.0	425.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	454.7	458.3	457.3	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	484.5	485.9	486.9	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	512.1	513.5	515.6	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	541.0	545.2	545.2	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	570.6	574.9	573.9	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	594.9	598.4	599.4	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	611.6	613.8	616.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	626.0	628.1	632.2	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	641.9	645.5	650.6	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	660.0	662.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	675.0	679.2	676.2	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	683.6	686.4	685.4	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	689.0	692.5	695.6	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	695.4	699.7	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	702.7	704.8	709.9	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	705.7	707.9	709.9	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	707.4	711.0	712.0	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	711.5	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

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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	334.2	334.2	334.2	334.2	334.2	334.2	334.2	334.2	334.2	334.2	334.2
2.5°	334.6	335.8	337.7	339.3	340.0	339.3	342.0	341.6	342.4	342.4	343.1
5°	338.1	339.6	343.1	345.1	347.0	347.8	350.9	351.7	353.2	354.0	353.6
7.5°	343.1	345.1	349.4	352.9	355.6	357.5	362.6	364.9	367.2	368.0	368.8
10°	352.5	355.2	359.8	364.1	368.0	370.7	375.0	378.1	380.4	381.2	382.0
12.5°	364.9	368.0	373.8	379.7	383.9	385.5	385.1	384.3	384.3	383.9	384.3
15°	379.3	382.4	389.8	395.2	395.6	390.5	383.6	380.1	379.3	379.3	379.7
17.5°	396.0	399.9	404.5	407.6	400.3	387.8	379.7	376.2	375.4	375.0	374.2
20°	415.0	417.4	418.9	415.0	398.7	384.3	375.0	370.0	366.1	365.7	364.1
22.5°	435.2	434.5	432.5	418.5	394.4	376.2	363.3	354.0	349.0	348.6	347.0
25°	450.0	446.9	441.1	419.3	386.7	363.0	344.7	329.9	323.3	320.2	321.0
27.5°	459.7	453.1	443.0	415.4	373.1	342.7	317.1	297.7	288.0	286.4	287.6
30°	471.4	460.9	444.6	405.7	353.6	314.4	281.0	261.5	256.1	253.4	254.1
32.5°	485.4	471.8	449.6	390.9	329.1	281.4	245.2	231.6	225.4	220.3	221.9
35°	503.6	486.5	457.8	370.0	298.1	246.4	219.6	207.1	195.9	190.4	190.8
37.5°	525.0	505.6	464.8	345.5	264.3	220.0	197.4	182.6	168.7	158.2	156.2
40°	559.2	543.3	470.6	318.3	232.0	198.2	175.6	158.9	145.7	135.2	134.1
42.5°	616.3	588.7	471.0	285.6	204.4	179.5	157.8	139.5	124.7	115.8	115.4
45°	683.6	640.8	462.8	250.7	180.3	160.9	141.8	121.2	112.7	106.9	106.1
47.5°	763.2	700.7	445.0	218.0	159.7	142.6	125.5	113.1	106.9	102.6	102.6
50°	854.2	771.0	427.1	190.0	139.9	127.9	116.2	109.6	104.9	101.0	100.6
52.5°	956.7	854.2	421.2	161.7	123.6	114.2	113.1	106.9	103.0	100.3	99.5
55°	1079.2	947.4	426.7	139.5	110.8	108.8	111.1	106.1	103.4	99.1	97.9
57.5°	1220.6	1038.4	420.9	120.9	101.8	103.8	108.8	106.1	103.8	98.3	96.8
60°	1353.9	1119.6	381.2	105.3	93.3	97.5	105.7	102.6	99.1	97.9	97.2
62.5°	1425.4	1146.0	303.9	93.3	86.7	91.3	100.6	96.8	94.4	97.2	97.5
65°	1426.2	1116.1	223.4	84.3	81.2	85.9	95.6	94.4	96.0	102.2	103.4
67.5°	1346.9	1025.1	157.8	76.2	75.8	81.6	97.9	105.7	106.9	113.1	113.1
68°	1319.7	1002.6	146.5	75.0	74.6	81.6	99.9	107.6	108.4	114.2	113.9
70°	1170.5	847.5	106.1	70.3	72.7	87.4	110.4	113.1	108.4	115.0	114.6
72.5°	914.8	626.8	79.3	65.3	69.2	86.3	111.1	108.4	101.4	103.0	101.0
75°	618.3	399.5	65.3	59.8	61.4	73.1	101.0	102.2	94.0	92.5	90.2
77.5°	323.7	187.3	52.9	53.2	54.8	63.3	90.2	92.9	85.5	80.8	80.1
80°	119.3	74.2	43.1	47.0	47.8	55.6	77.3	81.6	74.6	71.1	70.3
82.5°	43.5	36.9	35.8	41.2	40.4	47.4	67.6	70.7	63.3	59.8	57.9
85°	12.0	13.6	22.5	32.3	31.5	36.9	54.4	57.1	50.9	42.0	40.8
87.5°	0.8	2.7	8.9	19.0	19.8	22.9	39.2	43.1	37.7	31.1	30.7
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-T3-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)