

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-SA1B-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 P401154 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENC-SA1B-740-U-T4FT-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 450mA 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: 4201.9 lumens
Efficiency: N/A
Efficacy: 99.8 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

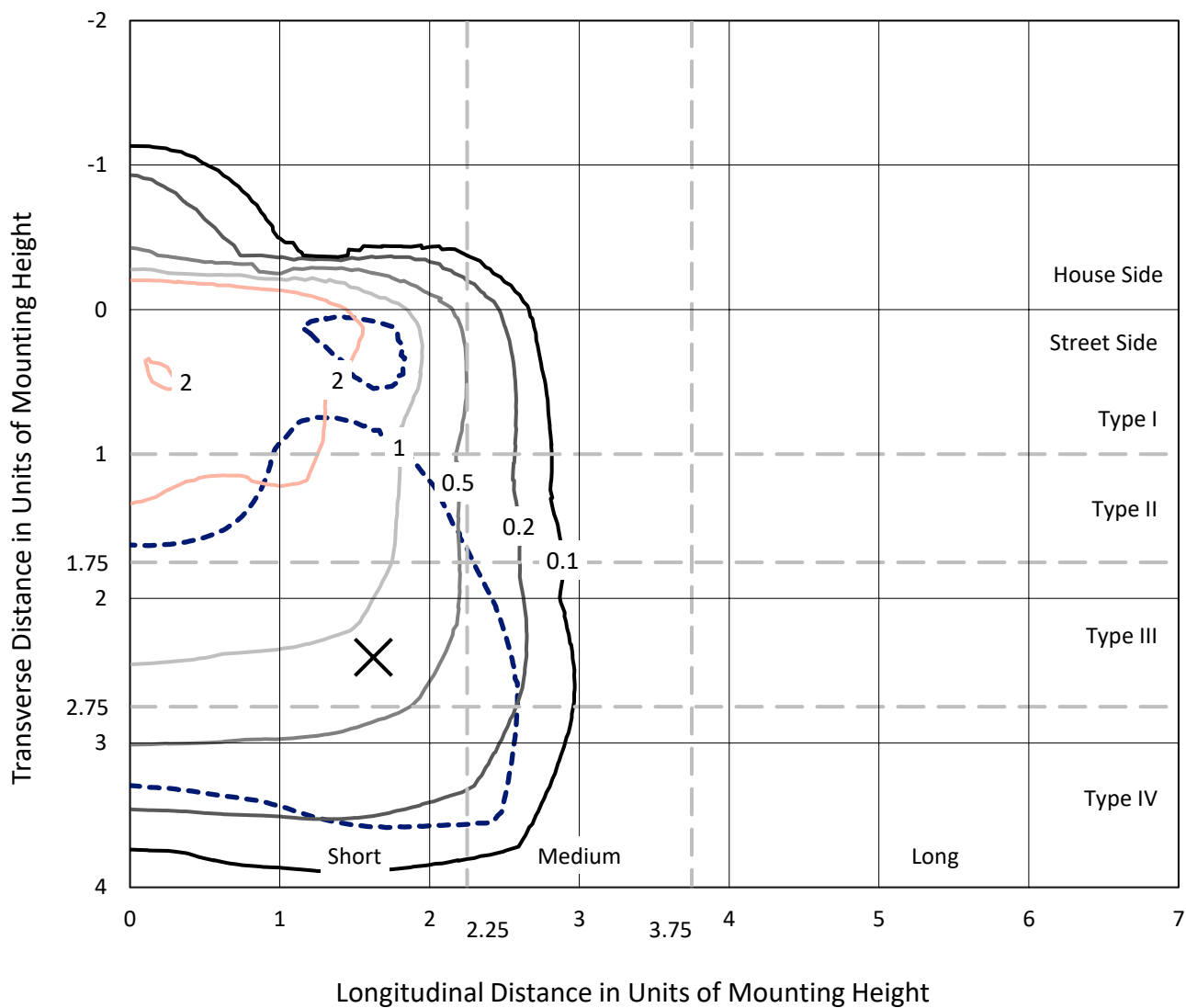
Input Watts (W): 42.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

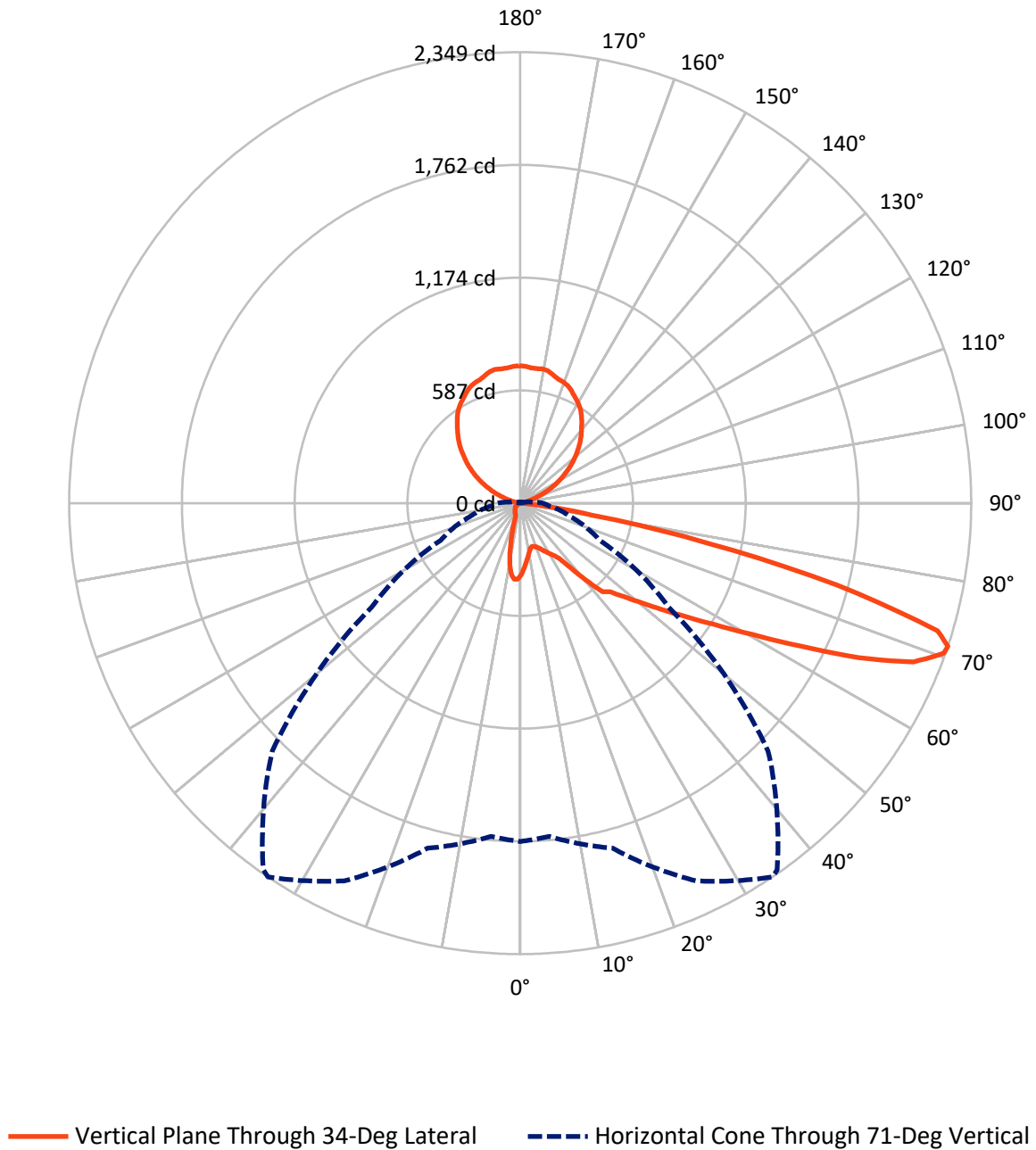
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.8 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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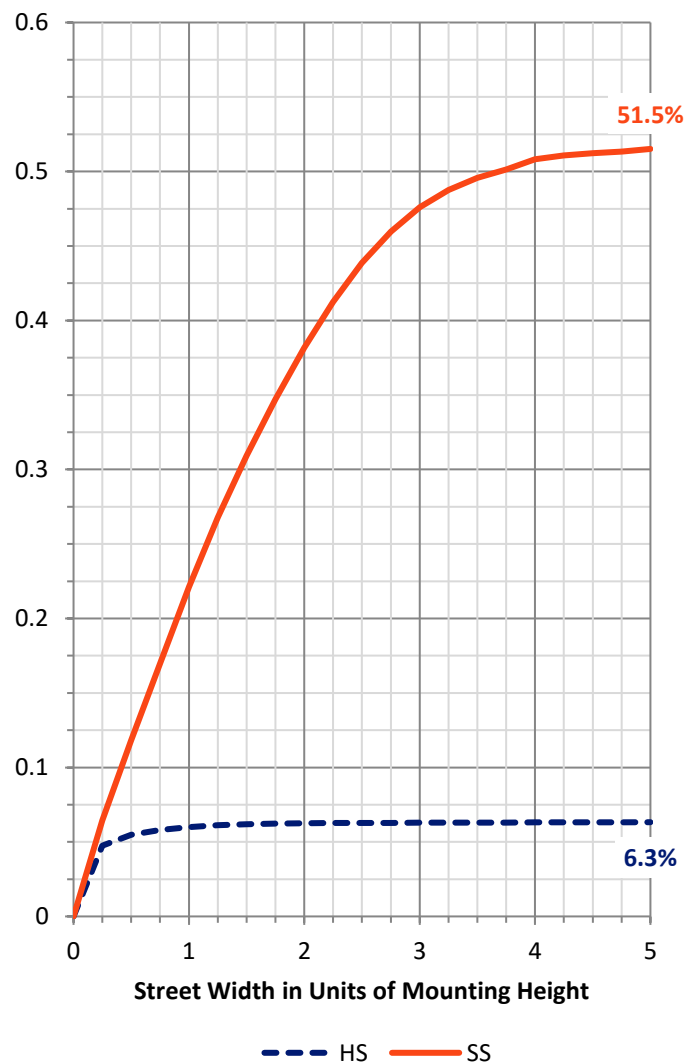
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	268.5	887.0	1155.4
	% Fixture	6.4	21.1	27.5
Street Side	Lumens	2159.5	887.0	3046.5
	% Fixture	51.4	21.1	72.5
Total	Lumens	2428.0	1773.9	4201.9
	% Fixture	57.8	42.2	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	33.2	0.8
10°-20°	76.0	1.8
20°-30°	113.4	2.7
30°-40°	189.5	4.5
40°-50°	342.2	8.1
50°-60°	542.9	12.9
60°-70°	729.5	17.4
70°-80°	387.1	9.2
80°-90°	14.3	0.3
90°-100°	8.4	0.2
100°-110°	58.7	1.4
110°-120°	169.9	4.0
120°-130°	279.4	6.6
130°-140°	344.6	8.2
140°-150°	352.5	8.4
150°-160°	297.0	7.1
160°-170°	195.5	4.7
170°-180°	67.8	1.6
0°-90°	2428.0	57.8
0°-180°	4201.9	100.0

Coefficient of Utilization



REPORT NUMBER:

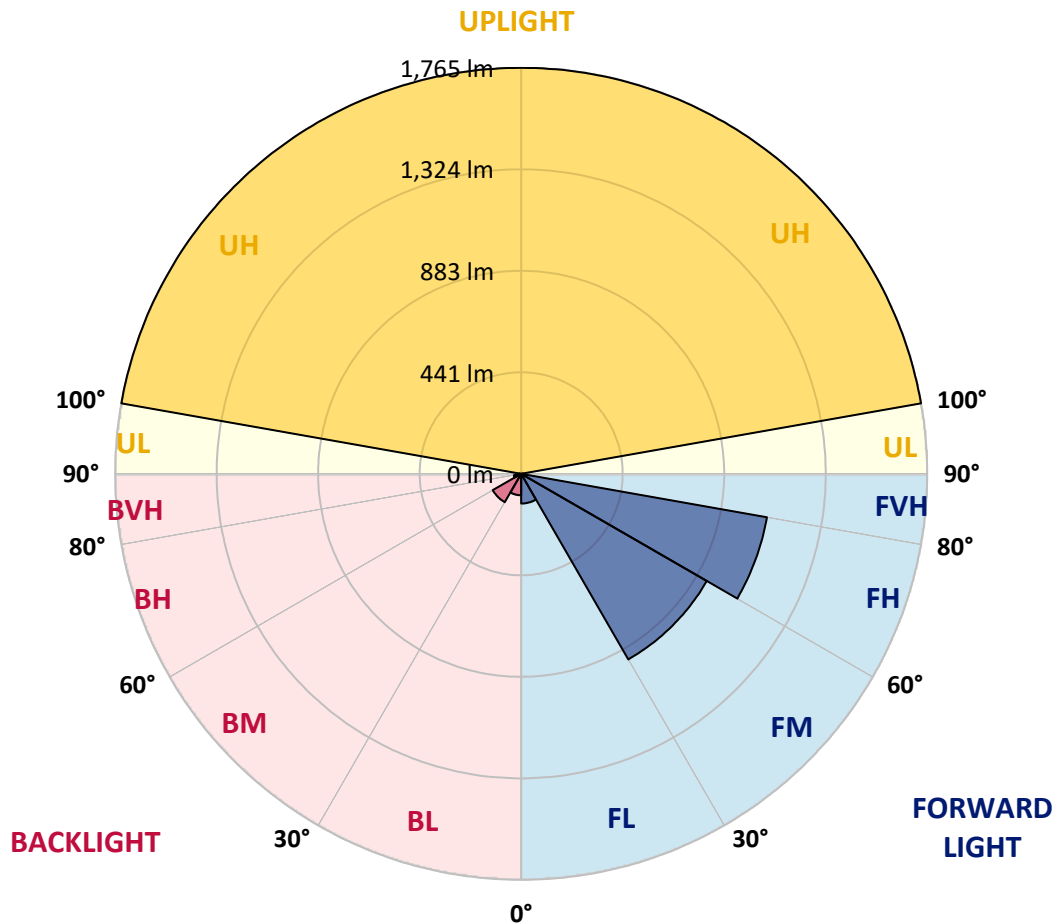
CATALOG NUMBER: ENC-SA1B-740-U-T4FT-HSS-ULG

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	129.2	3.1			
FM	(30°-60°)	932.0	22.2			
FH	(60°-80°)	1085.3	25.8			G1/1800
FVH	(80°-90°)	13.0	0.3			G1/100
BL	(0°-30°)	93.4	2.2	B0/110		
BM	(30°-60°)	142.5	3.4	B0/220		
BH	(60°-80°)	31.3	0.7	B0/110		G0/110
BVH	(80°-90°)	1.3	0.0			G0/10
UL	(90°-100°)	8.4	0.2		U1/10	
UH	(100°-180°)	1765.5	42.0		U5	

BUG Rating: B0-U5-G1

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	376.2	376.2	376.2	376.2	376.2	376.2	376.2	376.2	376.2	376.2	376.2
2.5°	342.6	338.2	342.1	344.0	345.5	347.5	350.4	355.7	361.6	368.4	372.3
5°	298.7	301.2	302.6	308.0	313.3	314.3	323.6	334.3	347.9	361.6	373.3
7.5°	263.1	263.1	267.5	275.8	284.6	285.6	301.6	315.8	335.3	356.2	375.2
10°	234.9	235.9	239.3	247.6	258.8	261.2	279.2	298.7	323.1	350.4	377.2
12.5°	225.6	225.1	224.7	230.5	239.8	242.2	262.2	285.6	314.3	347.5	382.1
15°	231.5	230.0	226.6	227.6	233.4	235.9	253.4	276.8	309.0	347.0	390.3
17.5°	240.7	238.8	232.4	230.5	236.8	239.3	253.9	274.4	307.0	349.4	400.1
20°	251.9	250.0	240.2	237.8	244.1	246.1	261.2	278.7	308.0	354.3	413.2
22.5°	268.0	265.6	251.5	248.5	254.9	256.8	272.9	289.0	313.8	363.0	431.3
25°	287.5	284.6	266.6	262.7	270.5	272.4	288.5	303.6	323.6	374.7	454.2
27.5°	309.0	305.5	286.5	278.7	287.5	290.4	305.5	322.1	337.7	389.4	484.4
30°	328.4	324.6	306.0	297.3	306.0	307.5	325.5	344.0	360.6	414.2	528.7
32.5°	382.5	372.8	344.0	318.7	324.6	327.5	349.4	378.6	403.5	443.9	585.8
35°	463.4	455.6	420.6	376.7	356.2	357.2	385.5	422.5	433.7	478.5	656.4
37.5°	541.4	534.6	503.9	463.4	424.4	425.9	430.8	466.4	479.5	538.5	742.7
40°	626.7	616.0	591.6	553.1	526.3	520.0	496.1	520.9	549.7	614.0	836.7
42.5°	666.2	655.9	630.6	633.0	630.1	618.9	571.6	606.2	638.4	723.7	940.5
45°	731.5	711.5	659.3	663.2	659.3	660.3	672.0	722.2	750.0	839.6	1058.0
47.5°	791.9	769.0	714.4	710.5	727.6	736.3	799.2	860.1	862.5	940.5	1150.1
50°	846.9	830.4	780.2	780.7	811.9	821.6	947.3	1002.9	953.7	1018.0	1222.2
52.5°	920.0	896.7	851.8	867.9	916.6	925.4	1095.0	1128.1	1019.5	1088.2	1278.7
55°	987.8	975.1	942.0	965.9	1040.4	1063.3	1245.1	1224.6	1065.8	1150.5	1306.0
57.5°	1098.9	1086.7	1077.9	1090.1	1190.0	1218.8	1397.1	1292.8	1101.8	1192.0	1293.3
60°	1284.1	1271.9	1245.6	1256.8	1386.9	1401.5	1516.5	1362.0	1115.9	1203.7	1243.6
62.5°	1512.6	1497.5	1455.1	1506.8	1637.4	1636.9	1640.3	1398.6	1097.9	1169.1	1112.5
65°	1718.8	1697.8	1675.9	1781.1	1940.0	1918.1	1771.9	1403.0	1040.9	1001.9	860.6
67.5°	1868.8	1860.6	1872.7	2037.0	2208.0	2186.1	1899.5	1342.5	866.4	723.2	531.7
70°	1863.0	1845.9	1923.4	2185.6	2341.1	2323.0	1894.2	1103.3	578.0	383.0	222.7
71°	1762.1	1742.6	1860.6	2171.0	2348.8	2331.8	1826.0	943.9	457.1	270.5	146.7
72.5°	1361.6	1420.5	1608.1	2014.6	2273.8	2251.9	1640.3	722.7	289.5	156.4	73.6
75°	576.0	608.2	954.6	1438.1	1705.6	1694.4	1105.7	333.8	133.0	70.7	28.3
77.5°	148.1	146.2	292.4	616.9	993.1	1010.7	509.7	114.5	69.2	50.2	16.1
80°	28.8	31.2	83.3	214.4	379.1	389.4	166.2	50.2	46.3	39.5	8.3
82.5°	2.9	3.4	14.6	66.3	127.2	122.8	36.5	19.0	28.3	26.8	3.9
85°	0.0	0.0	0.5	0.5	0.5	0.5	0.5	1.9	6.8	7.3	1.0
87.5°	0.0	0.0	0.5	0.5	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°	376.2	376.2	376.2	376.2	376.2	376.2	376.2	376.2	376.2	376.2	376.2
2.5°	375.2	379.6	384.5	387.9	391.3	391.8	396.7	395.7	397.2	397.6	397.2
5°	379.6	385.5	394.7	399.6	401.5	398.1	397.2	391.8	389.9	387.4	385.0
7.5°	384.5	391.8	402.5	405.0	398.1	385.5	375.2	362.1	349.9	342.1	343.1
10°	389.9	399.1	407.9	401.5	384.0	359.1	330.4	301.2	275.3	265.6	269.0
12.5°	396.7	407.9	411.8	394.2	360.1	309.9	257.8	213.4	186.6	170.6	168.6
15°	406.9	418.1	413.7	382.5	322.1	243.7	178.8	134.0	108.2	99.9	95.5
17.5°	419.6	430.3	413.7	361.6	268.0	174.5	108.7	81.4	73.1	71.1	71.6
20°	435.2	445.4	411.8	329.9	206.6	107.2	72.6	67.2	67.2	67.2	66.8
22.5°	456.1	461.5	408.9	288.0	142.3	72.6	64.3	63.8	64.3	64.3	64.3
25°	481.5	480.5	403.5	237.8	89.7	61.9	61.4	61.4	61.9	62.4	62.4
27.5°	515.1	504.9	394.2	177.9	63.4	57.5	58.5	59.5	60.4	61.4	61.4
30°	561.9	537.0	379.1	120.4	53.6	53.1	55.1	58.0	59.5	60.4	60.4
32.5°	612.1	570.2	353.3	77.0	49.2	48.7	50.7	55.1	59.0	59.9	59.9
35°	675.4	605.7	314.8	55.6	46.3	45.3	47.3	51.2	57.0	59.9	59.9
37.5°	742.2	643.7	258.8	46.8	43.4	42.4	43.9	46.8	53.6	59.0	59.5
40°	813.3	677.4	194.4	43.4	40.4	40.0	40.4	43.4	48.7	56.0	57.5
42.5°	885.0	705.6	136.0	40.0	38.0	37.0	38.0	40.0	44.8	51.2	52.1
45°	963.9	736.8	90.6	37.0	36.1	35.1	36.1	37.5	40.9	44.3	44.8
47.5°	1021.4	748.0	62.4	33.6	33.1	33.6	34.1	35.1	37.0	37.5	37.0
50°	1059.4	742.2	44.8	30.2	30.7	32.2	32.2	32.6	32.6	31.2	30.7
52.5°	1087.2	720.7	34.6	25.8	28.8	30.2	30.2	29.2	28.3	26.3	25.8
55°	1090.1	672.5	27.3	22.4	25.8	28.3	27.8	25.8	23.9	21.9	21.9
57.5°	1053.1	599.4	22.4	19.0	22.4	24.9	23.9	21.9	19.5	18.0	18.0
60°	993.1	524.3	19.0	16.1	18.5	21.0	19.5	18.0	15.6	14.1	14.1
62.5°	882.5	450.3	15.6	13.2	15.1	16.6	16.1	14.6	12.2	11.2	10.7
65°	676.4	342.6	11.7	10.2	11.7	13.6	12.7	11.2	9.7	8.3	7.8
67.5°	406.4	206.1	9.3	7.8	9.3	10.7	9.7	8.3	6.8	5.8	5.8
70°	172.0	88.2	7.3	5.8	6.8	8.3	7.8	6.8	5.4	4.9	4.9
71°	117.0	62.9	6.3	5.4	6.3	7.8	7.3	6.3	5.4	4.9	4.9
72.5°	59.9	32.2	5.4	4.4	5.8	6.8	6.8	5.8	4.9	4.9	4.9
75°	21.4	13.6	4.4	3.9	4.9	4.9	5.4	5.4	5.4	5.4	4.9
77.5°	12.2	8.3	3.9	3.9	3.9	4.4	5.4	5.8	6.3	6.3	5.8
80°	6.8	4.4	2.4	2.9	3.9	4.4	5.4	5.8	6.8	6.8	6.3
82.5°	3.4	1.5	0.5	1.5	2.4	3.9	4.4	4.9	5.8	5.4	5.4
85°	0.5	0.0	0.0	0.5	1.5	1.9	2.9	3.9	4.9	4.9	4.4
87.5°	0.0	0.0	0.0	0.0	0.5	1.0	1.5	2.4	3.4	3.9	3.4
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-SA1B-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)