

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-SA1D-740-U-T2-HSS-ULG**

Issue Date: 3/30/2022

Test Information

Test Method: LM-79-08
Report Number: REPORT IS A COMBINATION OF REPORTS P401506 AND P226775
Test Lab: INNOVATION CENTER
Issue Date: 3/30/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1D-740-U-T2-HSS-ULG
Description: ENTRI LED LUMINAIRE WITH UPLIGHT
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6045.9 lumens
Efficiency: N/A
Efficacy: 101.1 lumens/watt
Luminous Opening: Rectangular w/ Sides (W: 0.5' x L: 0.5' x H: 0.1')
IES Classification: Type II - Medium
BUG Rating: B0 - U5 - G1

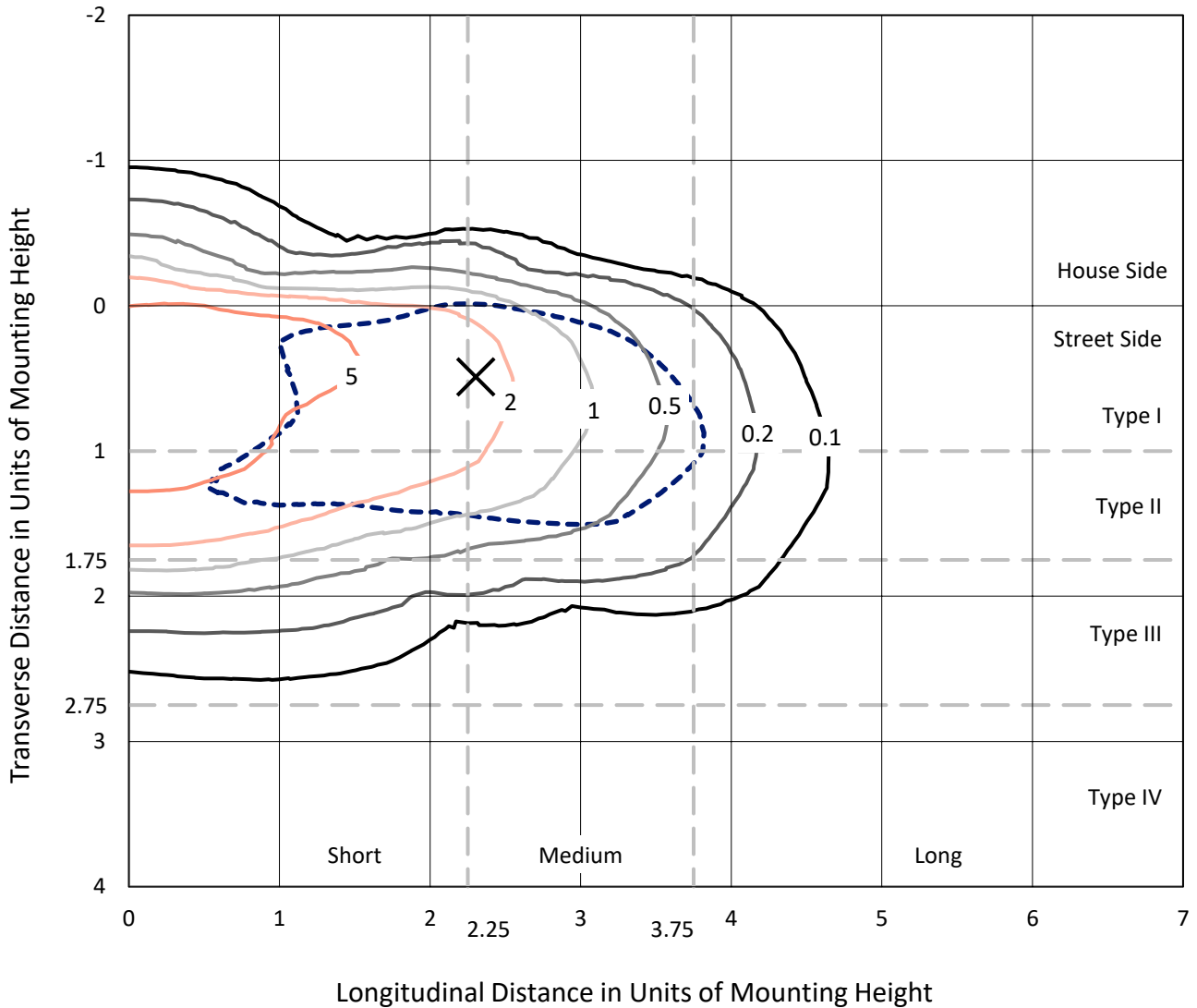
Input Watts (W): 59.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

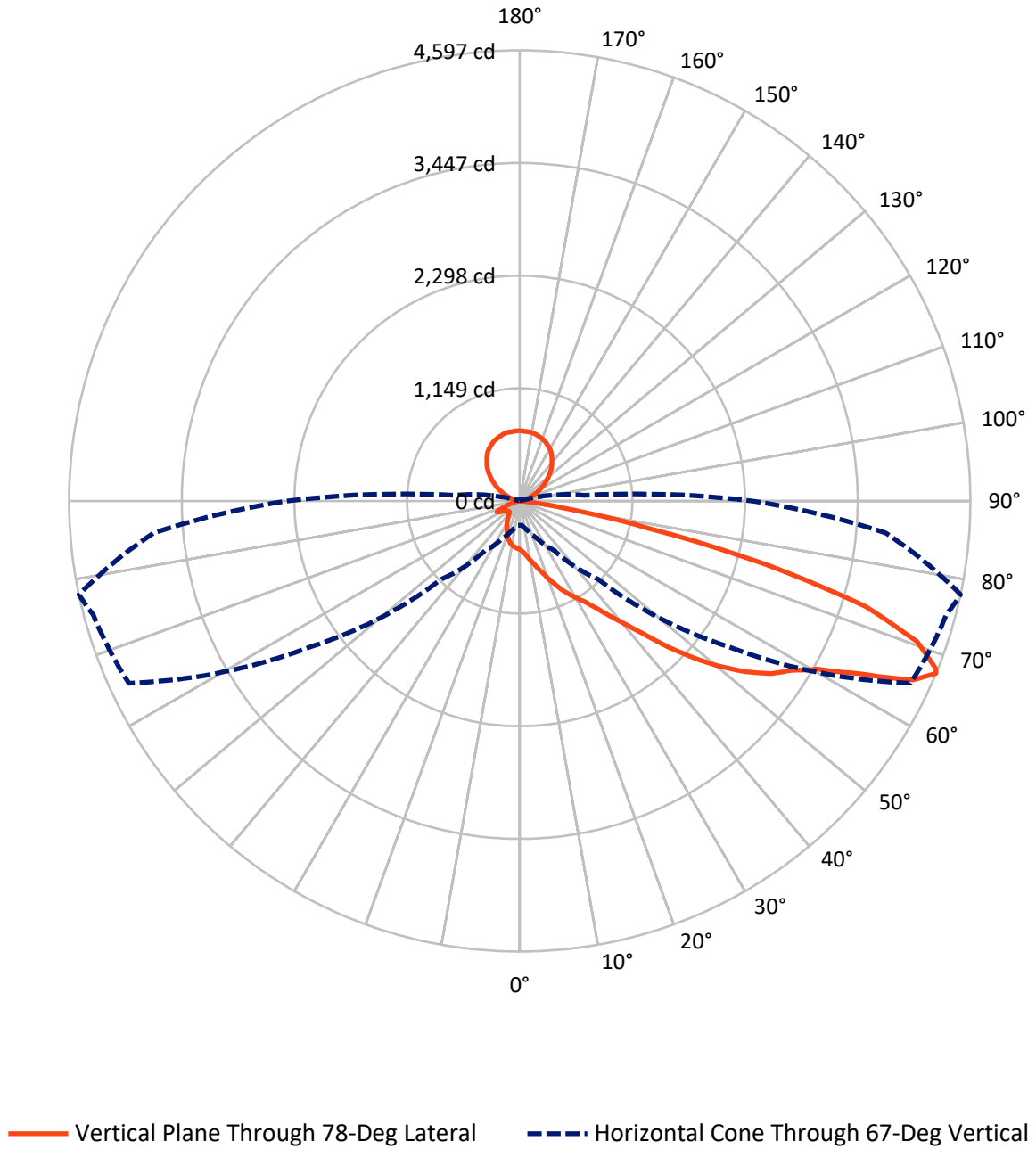
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.7 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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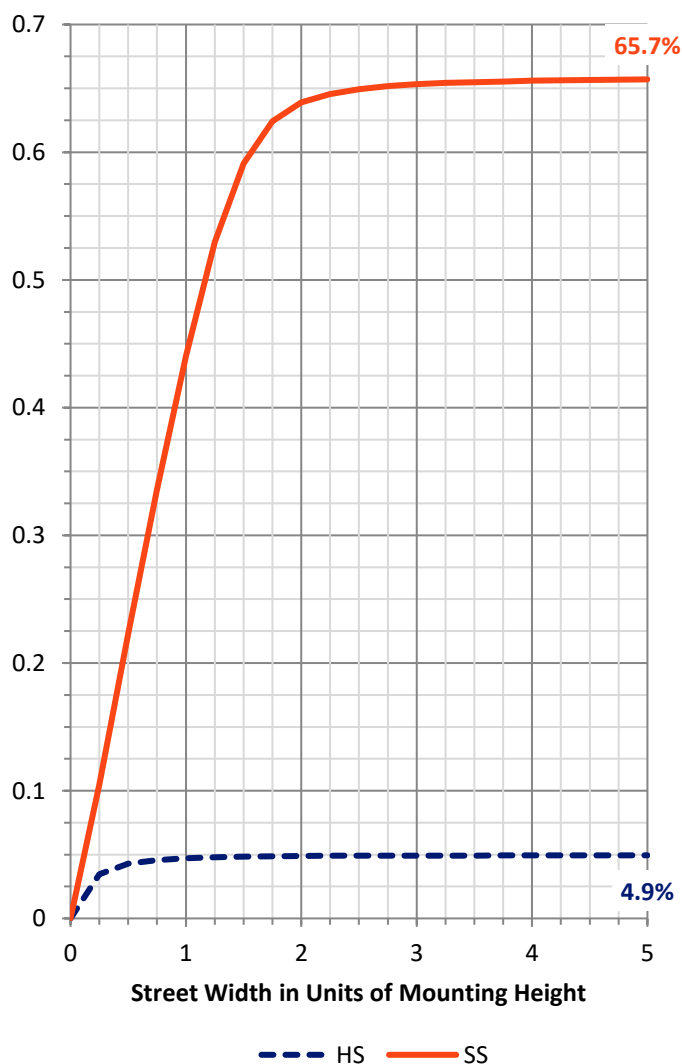
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	301.4	887.0	1188.3
	% Fixture	5.0	14.7	19.7
Street Side	Lumens	3970.6	887.0	4857.6
	% Fixture	65.7	14.7	80.3
Total	Lumens	4272.0	1773.9	6045.9
	% Fixture	70.7	29.3	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	47.8	0.8
10°-20°	137.0	2.3
20°-30°	242.0	4.0
30°-40°	426.6	7.1
40°-50°	733.2	12.1
50°-60°	1103.7	18.3
60°-70°	1086.1	18.0
70°-80°	474.6	7.8
80°-90°	21.0	0.3
90°-100°	8.4	0.1
100°-110°	58.7	1.0
110°-120°	169.9	2.8
120°-130°	279.4	4.6
130°-140°	344.6	5.7
140°-150°	352.5	5.8
150°-160°	297.0	4.9
160°-170°	195.5	3.2
170°-180°	67.8	1.1
0°-90°	4272.0	70.7
0°-180°	6045.9	100.0

Coefficient of Utilization

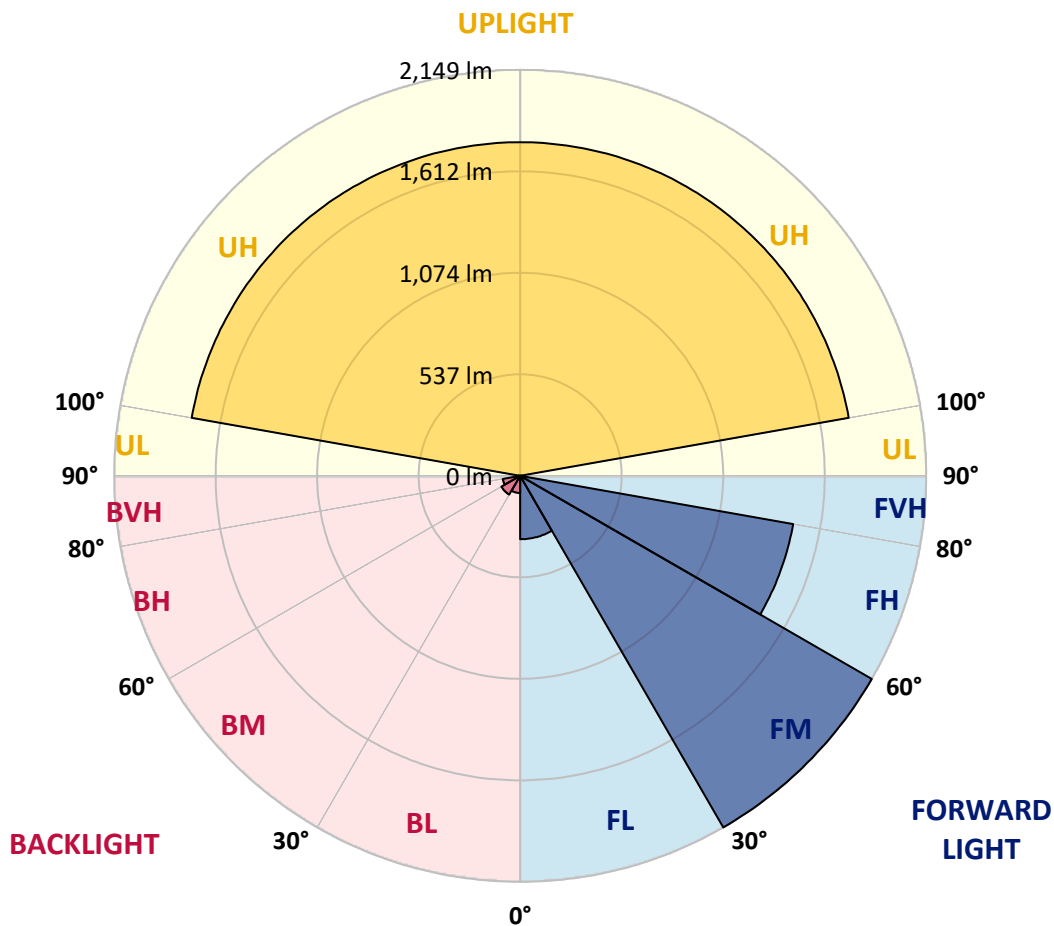


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	335.7	5.6			
FM (30°-60°)	2148.9	35.5			
FH (60°-80°)	1467.2	24.3			G1/1800
FVH (80°-90°)	18.9	0.3			G1/100
BL (0°-30°)	91.1	1.5	B0/110		
BM (30°-60°)	114.7	1.9	B0/220		
BH (60°-80°)	93.5	1.5	B0/110		G0/110
BVH (80°-90°)	2.2	0.0			G0/10
UL (90°-100°)	8.4	0.1		U1/10	
UH (100°-180°)	1765.5	29.2		U5	

BUG Rating: B0-U5-G1
 Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0
2.5°	569.0	571.4	568.2	565.8	559.4	551.4	543.4	531.3	518.5	513.7	505.6
5°	638.9	638.9	638.9	632.4	626.8	611.6	593.1	574.7	550.6	541.8	523.3
7.5°	675.8	676.6	679.0	679.0	675.8	665.4	645.3	624.4	588.3	576.3	546.6
10°	679.8	683.0	689.4	699.1	706.3	711.9	699.9	677.4	634.0	619.6	576.3
12.5°	669.4	671.0	681.4	699.1	722.3	745.6	746.4	732.8	684.6	664.5	612.4
15°	645.3	647.7	662.9	691.0	727.2	768.9	793.0	789.0	744.0	720.7	652.5
17.5°	606.8	609.2	628.4	670.2	723.1	784.1	835.5	855.6	802.6	780.1	693.4
20°	605.2	606.0	613.2	644.5	707.1	793.0	877.2	924.6	874.0	849.9	741.6
22.5°	707.9	701.5	685.4	665.4	692.6	790.6	915.0	997.6	962.3	924.6	797.0
25°	822.7	825.1	807.4	760.1	725.5	786.5	943.9	1080.3	1045.0	1007.3	854.0
27.5°	943.0	939.0	923.8	880.4	822.7	815.4	964.7	1146.9	1124.4	1078.7	904.5
30°	1060.2	1057.0	1045.8	1001.6	939.0	890.1	980.8	1207.1	1199.9	1149.3	945.5
32.5°	1194.3	1199.9	1185.4	1127.6	1051.4	991.2	1015.3	1270.5	1291.4	1229.6	988.0
35°	1350.0	1350.0	1320.3	1267.3	1188.6	1104.4	1084.3	1340.3	1407.8	1341.1	1055.4
37.5°	1478.4	1488.8	1471.2	1394.9	1321.1	1232.8	1189.4	1426.2	1551.4	1484.0	1146.1
40°	1579.5	1597.2	1598.0	1522.5	1454.3	1396.5	1336.3	1547.4	1732.0	1645.3	1254.5
42.5°	1673.4	1676.6	1690.3	1646.9	1578.7	1563.5	1501.7	1691.1	1957.5	1855.6	1398.9
45°	1793.0	1799.4	1791.4	1759.3	1700.7	1720.8	1686.3	1873.3	2211.1	2125.3	1569.1
47.5°	1968.8	1984.0	1972.0	1914.2	1842.8	1880.5	1855.6	2054.6	2497.7	2393.3	1753.7
50°	2133.3	2145.3	2158.2	2139.7	2068.3	2032.2	2001.7	2246.5	2743.3	2655.0	1935.1
52.5°	2151.0	2162.2	2232.8	2297.8	2345.2	2250.5	2155.0	2440.7	2970.4	2896.6	2101.2
55°	2036.2	2043.4	2161.4	2289.8	2507.3	2539.4	2380.5	2632.5	3160.6	3110.1	2212.8
57.5°	1716.8	1747.2	1915.0	2111.6	2467.2	2711.2	2700.7	2855.6	3284.2	3260.9	2356.4
60°	1127.6	1161.4	1362.0	1659.8	2171.8	2665.4	3052.3	3190.3	3457.6	3483.3	2608.4
62.5°	584.3	623.6	800.2	1064.2	1573.9	2321.1	3171.9	3740.1	3789.9	3877.3	3057.9
65°	333.9	341.9	430.2	623.6	974.4	1662.2	3028.2	4284.3	4227.3	4404.6	3631.7
67°	248.0	248.0	309.8	423.8	617.2	1130.1	2582.7	4399.0	4502.6	4596.5	3747.3
67.5°	222.3	234.4	287.3	390.9	553.8	1002.4	2416.6	4368.5	4520.2	4578.8	3707.2
70°	152.5	160.5	206.3	280.1	373.2	521.7	1584.3	3863.7	4354.9	4295.5	3359.7
72.5°	91.5	94.7	136.4	201.5	278.5	279.3	864.4	2932.7	3690.3	3689.5	2744.1
75°	57.0	60.2	80.3	134.8	195.0	175.0	399.7	1995.3	2650.2	2598.8	1838.7
77.5°	32.1	36.9	48.2	73.8	123.6	111.6	168.5	1118.0	1431.8	1343.5	913.4
80°	12.8	15.2	27.3	35.3	69.8	66.6	69.0	393.3	579.5	522.5	305.8
82.5°	3.2	4.0	9.6	16.9	27.3	27.3	21.7	107.5	137.2	127.6	78.7
85°	0.0	0.0	0.8	0.8	0.8	1.6	5.6	12.0	14.4	16.9	12.8
87.5°	0.0	0.0	0.0	0.8	0.8	0.8	1.6	2.4	2.4	2.4	2.4
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°	4.1	4.1	5.1	6.1	6.1	6.1	7.2	7.2	6.1	6.1	6.1
95°	5.1	5.1	6.1	7.2	7.2	7.2	7.2	8.2	7.2	7.2	7.2
97.5°	7.2	7.2	8.2	8.2	9.2	9.2	12.3	10.2	9.2	8.9	8.2
100°	8.2	8.2	9.2	10.2	12.3	21.5	29.7	26.6	23.5	22.3	19.4
102.5°	11.3	11.3	13.3	18.4	27.6	40.9	51.1	48.1	43.0	42.0	39.9
105°	21.5	22.5	27.6	36.8	49.1	64.4	73.7	71.6	66.5	65.3	62.4
107.5°	41.9	43.0	50.1	59.3	74.7	90.0	97.2	96.2	92.1	91.1	89.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
110°	67.5	69.6	75.7	89.0	104.3	116.6	122.8	123.8	121.7	120.8	118.7
112.5°	101.3	101.3	108.4	123.8	137.1	146.3	151.4	153.4	152.4	151.8	150.4
115°	143.2	142.2	150.4	162.6	171.9	178.0	183.1	186.2	183.1	182.5	181.1
117.5°	188.2	188.2	193.3	201.5	206.6	209.7	215.8	219.9	214.8	214.2	212.8
120°	230.2	228.1	231.2	238.3	242.4	248.6	251.6	255.7	250.6	250.0	248.6
122.5°	269.0	266.0	267.0	273.1	277.2	283.4	285.4	289.5	284.4	283.8	282.3
125°	304.8	300.7	302.8	305.9	312.0	317.1	320.2	322.2	317.1	317.1	317.1
127.5°	337.6	336.6	336.6	340.6	346.8	347.8	352.9	353.9	353.9	353.6	352.9
130°	371.3	369.3	370.3	374.4	378.5	380.5	385.7	389.7	389.7	389.1	387.7
132.5°	405.1	403.0	402.0	410.2	413.3	414.3	420.4	425.5	423.5	423.5	423.5
135°	438.8	435.8	435.8	441.9	445.0	447.0	453.2	458.3	457.3	458.2	460.3
137.5°	470.6	467.5	469.5	470.6	474.6	478.7	483.9	485.9	486.9	488.5	492.0
140°	499.2	496.1	498.2	500.2	502.3	508.4	511.5	513.5	515.6	517.1	520.7
142.5°	529.9	526.8	528.9	529.9	533.0	537.0	539.1	545.2	545.2	545.5	546.3
145°	562.6	558.5	556.5	559.6	562.6	563.6	568.8	574.9	573.9	573.0	570.8
147.5°	588.2	585.1	584.1	587.2	587.2	588.2	593.3	598.4	599.4	598.5	596.4
150°	608.7	605.6	606.6	606.6	606.6	606.6	610.7	613.8	616.8	617.8	619.9
152.5°	625.0	622.0	622.0	623.0	624.0	624.0	625.0	628.1	632.2	633.7	637.3
155°	643.4	639.3	639.3	641.4	644.5	642.4	640.4	645.5	650.6	651.2	652.6
157.5°	660.8	657.8	657.8	658.8	660.8	659.8	658.8	662.9	664.9	664.9	664.9
160°	678.2	675.1	674.1	671.1	670.0	670.0	673.1	679.2	676.2	675.9	675.1
162.5°	688.4	684.4	684.4	680.3	676.2	678.2	682.3	686.4	685.4	684.8	683.3
165°	696.6	693.6	691.5	691.5	688.4	688.4	687.4	692.5	695.6	695.0	693.6
167.5°	705.8	702.8	699.7	701.7	703.8	700.7	693.6	699.7	703.8	703.8	703.8
170°	714.0	711.0	707.9	707.9	708.9	706.9	701.7	704.8	709.9	710.5	712.0
172.5°	715.0	713.0	711.0	708.9	705.8	705.8	704.8	707.9	709.9	710.5	712.0
175°	716.1	714.0	713.0	711.0	706.9	705.8	705.8	711.0	712.0	711.4	709.9
177.5°	723.2	721.2	716.1	715.0	713.0	711.0	709.9	715.0	717.1	716.2	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°	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0	496.0
2.5°	499.2	493.6	482.4	470.3	458.3	448.7	440.6	429.4	427.8	427.8	427.8
5°	509.6	496.8	471.1	445.4	419.8	396.5	379.6	366.0	353.9	349.9	353.1
7.5°	524.9	501.6	456.7	411.7	371.6	338.7	314.6	295.4	286.5	281.7	277.7
10°	545.0	508.8	437.4	371.6	321.0	281.7	256.0	237.6	228.7	223.1	223.9
12.5°	566.6	514.5	413.3	328.3	272.1	236.0	214.3	199.0	184.6	175.8	178.2
15°	588.3	518.5	383.6	288.1	234.4	202.3	171.8	144.5	134.8	133.2	132.4
17.5°	612.4	517.7	350.7	250.4	202.3	157.3	126.8	123.6	122.8	122.8	122.0
20°	637.3	513.7	313.0	219.1	170.2	119.6	114.8	113.2	110.8	110.0	109.2
22.5°	664.5	506.4	278.5	191.8	126.8	109.2	102.7	97.9	93.9	91.5	92.3
25°	689.4	492.8	244.8	166.1	108.4	97.9	89.1	81.9	77.9	74.6	75.4
27.5°	706.3	468.7	215.9	134.0	99.5	86.7	76.2	69.0	63.4	61.0	61.0
30°	707.9	434.2	190.2	110.0	90.7	76.2	65.0	57.0	53.8	52.2	51.4
32.5°	706.3	398.9	171.0	101.1	82.7	66.6	55.4	49.8	46.6	44.9	44.9
35°	714.3	362.8	153.3	93.1	73.8	58.6	49.0	43.3	40.9	39.3	39.3
37.5°	738.4	337.9	134.8	85.1	65.8	51.4	44.1	39.3	36.9	35.3	35.3
40°	771.3	317.0	112.4	77.0	57.8	46.6	40.1	36.1	32.9	31.3	31.3
42.5°	829.1	309.0	93.9	69.0	50.6	41.7	36.9	32.1	28.9	27.3	27.3
45°	915.0	313.0	85.9	61.8	45.7	37.7	32.9	28.1	24.9	24.1	24.1
47.5°	1009.7	329.9	80.3	55.4	41.7	35.3	29.7	24.9	21.7	20.9	20.9
50°	1115.6	356.4	75.4	49.0	37.7	32.1	26.5	21.7	19.3	18.5	18.5
52.5°	1216.7	390.1	70.6	44.1	35.3	28.9	23.3	19.3	17.7	16.9	16.9
55°	1293.8	411.7	66.6	40.9	32.9	26.5	20.9	18.5	16.1	15.2	15.2
57.5°	1401.3	447.8	61.8	36.9	29.7	24.1	19.3	16.9	14.4	14.4	14.4
60°	1619.6	545.0	54.6	33.7	26.5	21.7	18.5	15.2	13.6	12.8	12.8
62.5°	2012.9	705.5	47.4	31.3	23.3	19.3	16.1	13.6	12.0	10.4	10.4
65°	2391.7	772.1	40.1	27.3	20.9	16.9	14.4	12.0	8.8	7.2	7.2
67°	2370.9	660.5	33.7	23.3	17.7	15.2	12.0	9.6	6.4	4.0	4.0
67.5°	2314.7	614.8	32.9	22.5	16.9	14.4	12.0	8.8	5.6	3.2	3.2
70°	1967.2	430.2	25.7	17.7	14.4	12.8	9.6	6.4	3.2	1.6	1.6
72.5°	1598.0	341.1	20.1	14.4	12.0	9.6	8.0	4.0	2.4	0.8	0.8
75°	1130.1	209.5	17.7	12.8	9.6	7.2	6.4	4.0	2.4	1.6	0.8
77.5°	557.8	96.3	14.4	11.2	8.8	7.2	5.6	4.8	4.0	3.2	1.6
80°	163.7	31.3	9.6	8.0	8.0	7.2	6.4	5.6	4.8	4.0	2.4
82.5°	36.9	11.2	3.2	4.0	5.6	5.6	5.6	4.0	3.2	1.6	0.8
85°	4.8	2.4	2.4	2.4	3.2	3.2	2.4	1.6	1.6	0.0	0.0
87.5°	1.6	1.6	1.6	2.4	2.4	2.4	1.6	0.8	0.8	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°	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: ENT-SA1D-740-U-T2-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)