

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: P401947

Luminaire Tested: **ENT-SA1F-830-U-T3-HSS**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401947
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-14)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1F-830-U-T3-HSS
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4754 lumens
Efficiency: N/A
Efficacy: 71.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 66.1
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: 25 FT

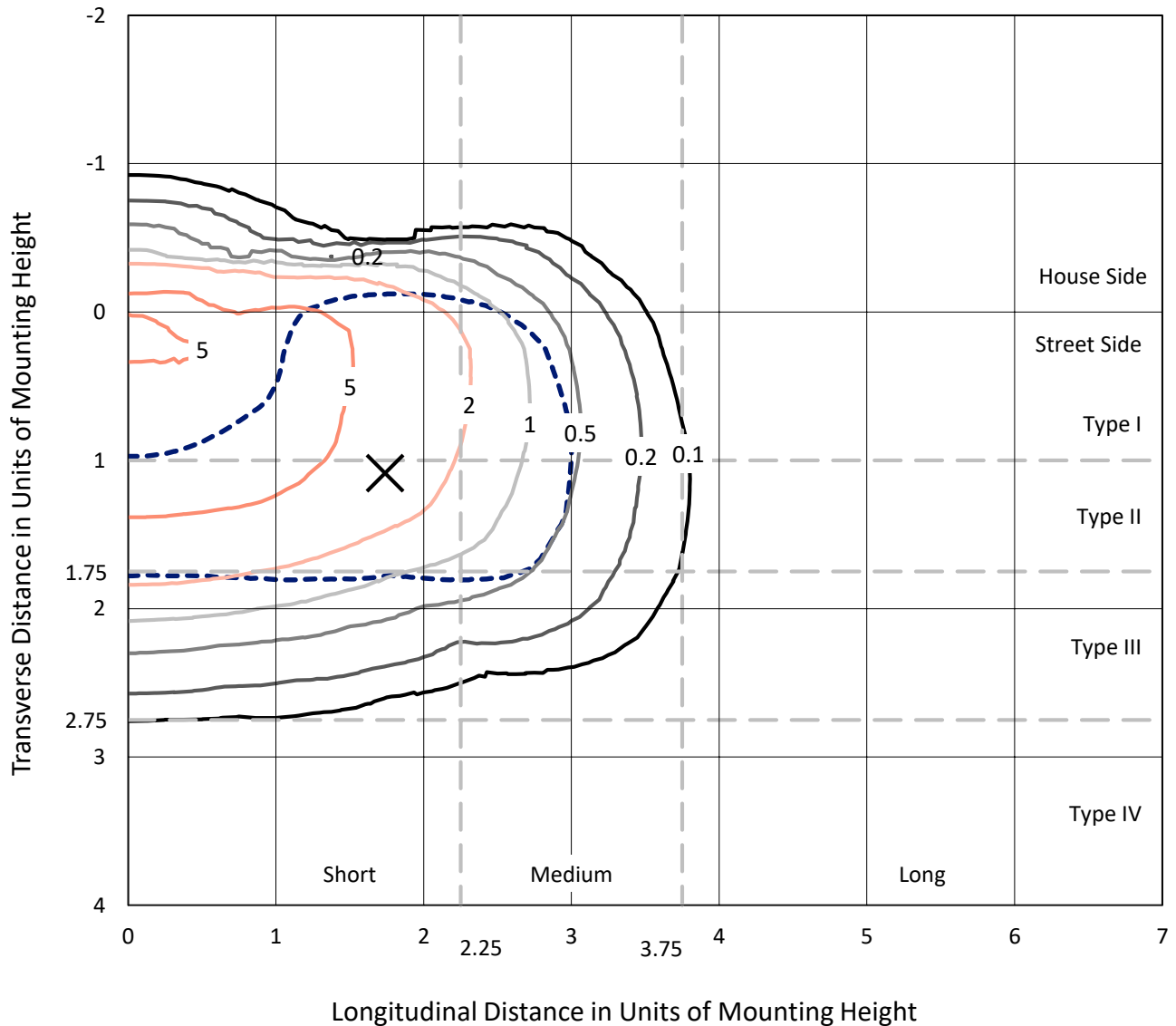


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

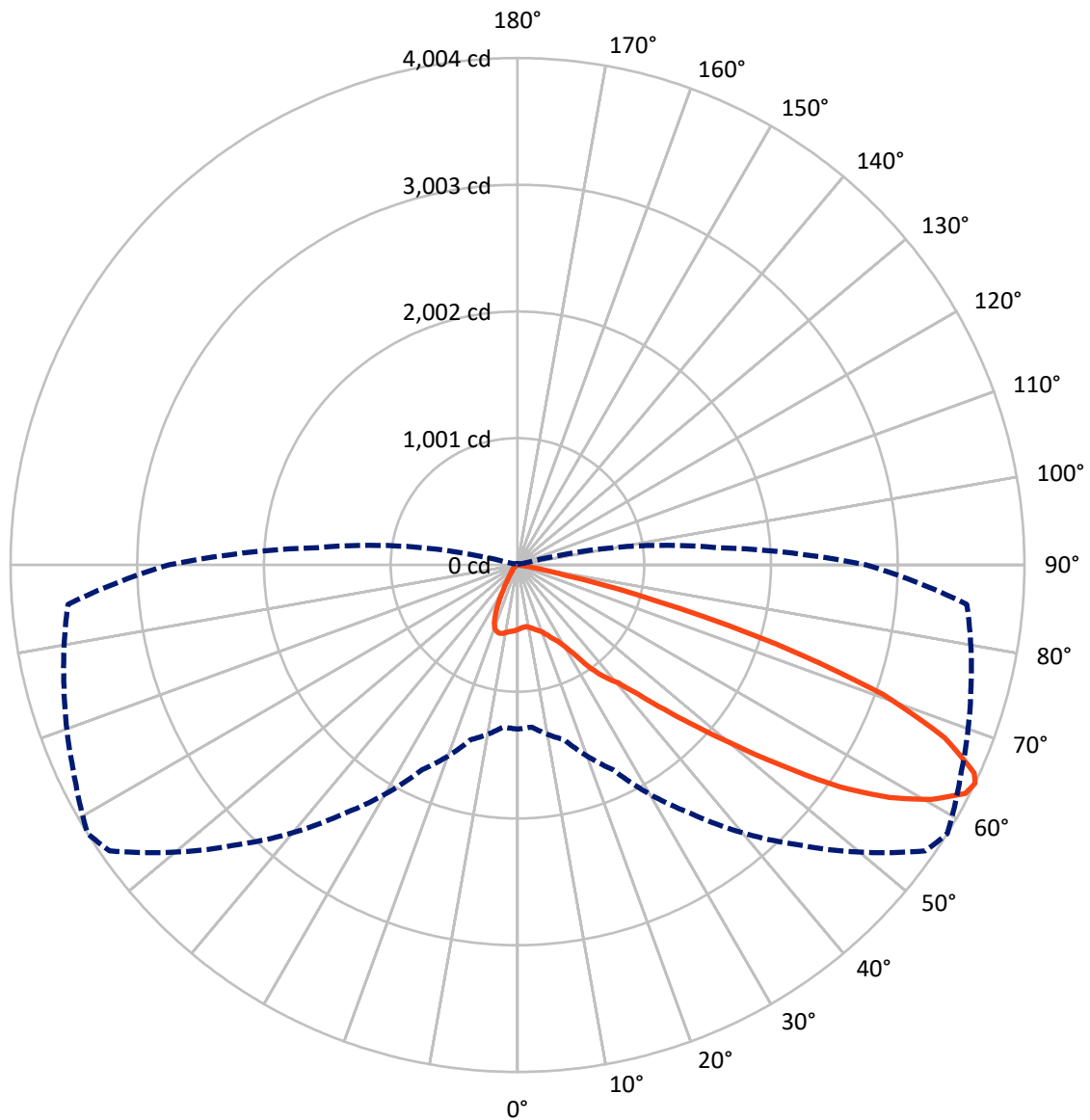


Based on 10 foot mounting height. Maximum calculated value = 7.5 fc
 Type III - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 64-Deg Vertical

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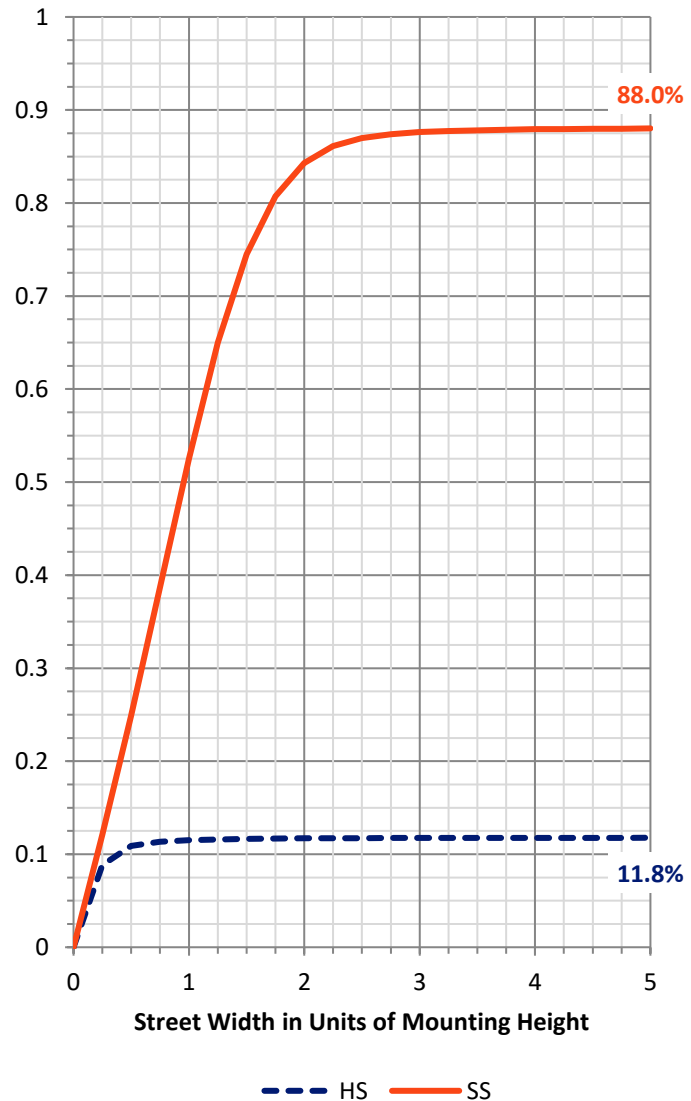
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	566.8	0.0	566.8
	% Fixture	11.9	0.0	11.9
Street Side	Lumens	4187.2	0.0	4187.2
	% Fixture	88.1	0.0	88.1
Total	Lumens	4754.0	0.0	4754.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.1	1.0
10°-20°	140.3	3.0
20°-30°	252.0	5.3
30°-40°	441.8	9.3
40°-50°	807.8	17.0
50°-60°	1381.9	29.1
60°-70°	1340.6	28.2
70°-80°	332.0	7.0
80°-90°	9.5	0.2
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	4754.0	100.0
0°-180°	4754.0	100.0



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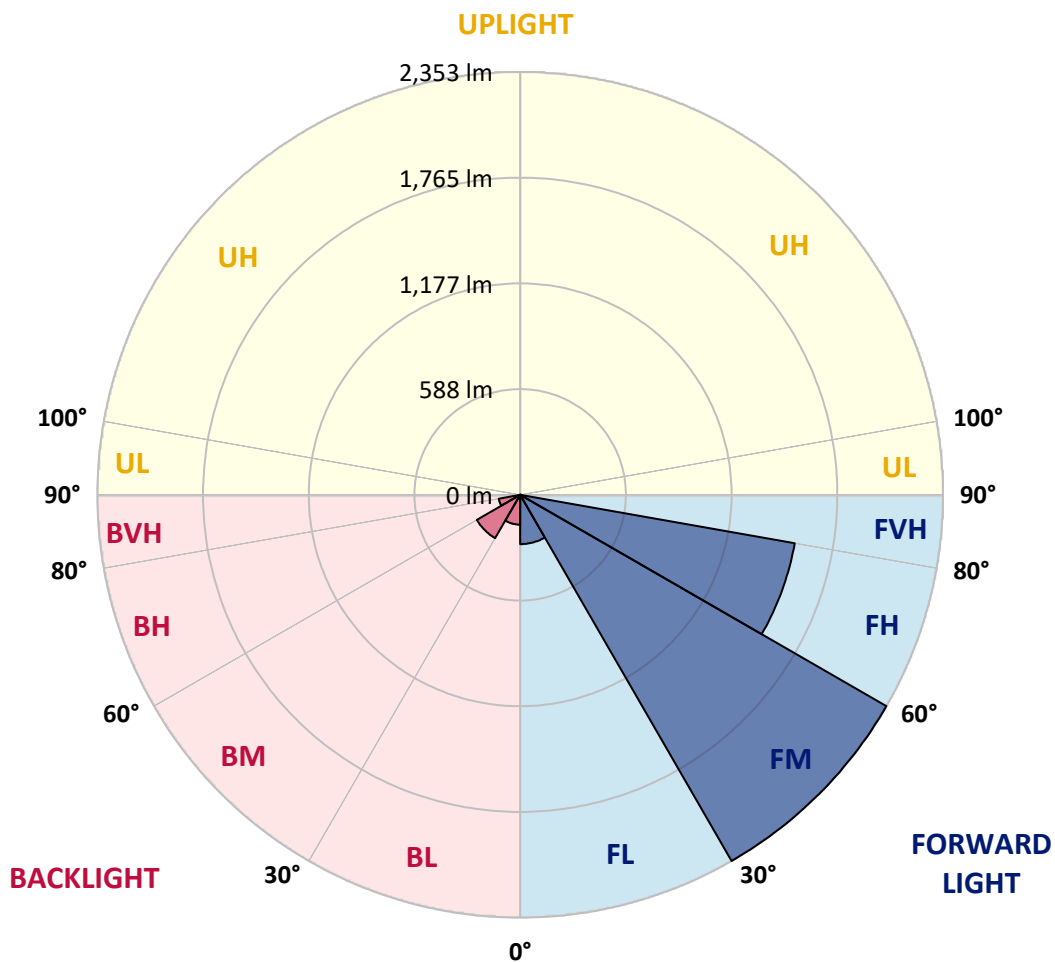
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	274.5	5.8			
FM	(30°-60°)	2353.1	49.5			
FH	(60°-80°)	1551.6	32.6			G1/1800
FVH	(80°-90°)	8.0	0.2			G0/10
BL	(0°-30°)	166.0	3.5	B1/500		
BM	(30°-60°)	278.4	5.9	B1/1000		
BH	(60°-80°)	121.0	2.5	B1/500		G1/500
BVH	(80°-90°)	1.4	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	509.2	509.2	509.2	509.2	509.2	509.2	509.2	509.2	509.2	509.2	509.2
2.5°	488.1	488.1	489.9	490.8	493.4	496.0	499.6	500.4	502.2	506.6	508.4
5°	461.7	462.6	464.4	468.8	474.9	482.0	490.8	493.4	500.4	509.2	515.4
7.5°	451.2	452.1	454.7	460.0	467.9	478.4	489.0	492.5	502.2	516.3	525.1
10°	449.4	449.4	452.9	460.9	470.5	483.7	495.2	499.6	512.8	529.5	543.5
12.5°	449.4	449.4	453.8	463.5	474.9	491.6	507.5	513.6	528.6	549.7	567.3
15°	457.3	459.1	461.7	467.9	481.1	499.6	521.5	528.6	547.1	572.6	594.5
17.5°	513.6	511.9	503.1	495.2	492.5	508.4	534.7	544.4	571.7	604.2	628.0
20°	622.7	621.8	606.0	567.3	533.0	524.2	555.0	566.4	606.0	649.1	666.7
22.5°	754.6	759.0	734.4	682.5	612.1	567.3	584.9	600.7	651.7	703.6	714.2
25°	885.7	890.9	868.1	803.0	716.8	638.5	626.2	640.3	698.3	750.2	745.8
27.5°	1040.5	1036.1	1013.2	939.3	839.0	734.4	681.6	684.3	729.1	787.2	773.1
30°	1153.9	1147.8	1125.8	1075.6	981.5	861.9	760.8	752.9	766.0	830.3	815.3
32.5°	1257.7	1262.1	1245.4	1178.5	1089.7	993.0	879.5	858.4	853.1	907.6	883.0
35°	1360.6	1359.7	1353.6	1294.6	1207.6	1116.1	1021.1	1006.2	1004.4	1057.2	990.3
37.5°	1483.7	1477.6	1466.1	1406.3	1336.8	1249.8	1148.6	1124.9	1120.5	1131.0	1052.8
40°	1615.6	1623.6	1605.1	1542.6	1467.0	1401.9	1260.3	1224.3	1194.4	1225.1	1175.0
42.5°	1811.8	1817.9	1785.4	1742.3	1644.7	1584.0	1440.6	1391.4	1377.3	1423.9	1367.6
45°	2058.0	2046.6	2024.6	1994.7	1913.8	1821.5	1671.9	1625.3	1610.4	1690.4	1598.1
47.5°	2249.8	2248.0	2248.9	2242.7	2230.4	2119.6	1941.9	1910.3	1895.3	2010.5	1908.5
50°	2371.1	2378.2	2408.1	2484.6	2540.9	2494.3	2285.8	2247.1	2235.7	2355.3	2217.2
52.5°	2462.6	2479.3	2529.4	2680.7	2861.0	2876.9	2704.5	2649.9	2623.6	2657.0	2465.2
55°	2509.2	2517.1	2593.7	2817.0	3099.4	3212.8	3140.7	3095.0	2988.6	2925.2	2756.4
57.5°	2400.2	2387.8	2519.8	2803.9	3222.5	3483.7	3514.5	3462.6	3292.0	3242.7	3109.9
60°	2114.3	2109.0	2257.7	2598.9	3115.2	3547.0	3791.5	3759.0	3602.4	3485.5	3360.6
62.5°	1613.0	1621.8	1779.2	2126.6	2732.6	3365.0	3945.4	3971.8	3805.6	3631.5	3546.2
64°	1295.5	1285.0	1429.2	1782.8	2397.5	3122.2	3934.0	4003.5	3867.2	3708.0	3562.9
65°	1087.9	1065.1	1203.2	1523.3	2114.3	2946.3	3853.1	3964.8	3871.6	3726.5	3502.2
67.5°	572.6	584.9	643.8	925.2	1427.4	2227.8	3469.6	3638.5	3676.3	3474.0	3051.9
70°	256.8	258.6	296.4	472.3	789.8	1445.0	2790.7	3064.2	3085.3	2854.0	2211.1
72.5°	85.3	86.2	131.0	189.1	331.6	669.3	1884.8	2133.7	2179.4	1850.5	1199.6
75°	52.8	54.5	69.5	102.0	153.9	233.9	955.1	1124.0	1133.7	820.6	436.2
77.5°	33.4	35.2	42.2	60.7	84.4	88.8	313.1	379.1	429.2	295.5	135.4
80°	21.1	21.1	27.3	36.9	44.0	37.8	85.3	112.6	135.4	99.4	45.7
82.5°	7.9	7.9	14.1	20.2	18.5	13.2	22.9	29.9	51.9	49.3	22.0
85°	0.0	0.0	0.9	1.8	0.9	1.8	4.4	6.2	9.7	14.1	7.0
87.5°	0.0	0.0	0.0	0.0	0.9	0.9	1.8	1.8	1.8	1.8	1.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	509.2	509.2	509.2	509.2	509.2	509.2	509.2	509.2	509.2	509.2	509.2
2.5°	511.0	512.8	516.3	517.1	518.0	515.4	518.0	515.4	517.1	517.1	517.1
5°	518.9	521.5	524.2	525.1	524.2	518.0	519.8	515.4	514.5	514.5	514.5
7.5°	529.5	532.1	536.5	533.9	528.6	519.8	518.9	512.8	510.1	510.1	511.0
10°	548.8	551.4	553.2	547.9	537.4	524.2	514.5	501.3	495.2	492.5	492.5
12.5°	573.4	576.1	575.2	566.4	547.1	519.8	492.5	467.0	448.5	441.5	434.5
15°	599.8	603.3	601.6	583.1	546.2	497.8	445.0	385.2	348.3	324.5	320.1
17.5°	630.6	634.1	625.3	591.9	533.0	451.2	350.9	270.0	216.4	196.1	195.2
20°	668.4	666.7	645.6	592.8	509.2	365.0	234.8	168.9	146.0	140.7	139.8
22.5°	711.5	703.6	664.9	587.5	444.1	248.0	151.3	133.7	131.0	129.3	129.3
25°	736.1	722.1	671.9	572.6	342.1	158.3	128.4	124.9	121.4	117.9	117.0
27.5°	755.5	734.4	674.6	523.3	227.8	121.4	116.1	112.6	107.3	102.0	101.1
30°	790.7	759.0	679.0	437.1	139.8	103.8	101.1	95.0	87.1	81.8	80.0
32.5°	854.0	808.3	696.6	327.2	102.0	91.5	84.4	76.5	67.7	62.4	62.4
35°	921.7	854.9	705.4	215.5	88.8	80.0	69.5	59.8	51.9	47.5	46.6
37.5°	984.2	921.7	702.7	131.9	79.2	68.6	57.2	47.5	40.5	36.9	36.9
40°	1111.7	1038.7	666.7	90.6	69.5	58.0	46.6	36.9	32.5	29.9	29.9
42.5°	1293.7	1167.1	586.6	77.4	60.7	48.4	36.9	30.8	27.3	24.6	24.6
45°	1497.8	1308.7	467.9	69.5	52.8	40.5	30.8	25.5	22.0	21.1	21.1
47.5°	1765.2	1480.2	343.9	62.4	45.7	34.3	25.5	21.1	19.3	18.5	18.5
50°	1999.1	1619.2	234.8	54.5	40.5	29.0	22.0	19.3	17.6	16.7	16.7
52.5°	2211.9	1715.9	154.8	47.5	36.1	23.7	20.2	17.6	16.7	15.8	15.8
55°	2462.6	1789.8	104.7	41.3	31.7	22.0	19.3	17.6	15.8	15.8	15.0
57.5°	2675.4	1833.8	74.8	35.2	28.1	20.2	18.5	16.7	15.0	14.1	14.1
60°	2799.5	1781.9	54.5	30.8	24.6	18.5	16.7	15.0	14.1	13.2	13.2
62.5°	2833.8	1681.6	42.2	26.4	21.1	16.7	15.0	13.2	12.3	11.4	11.4
64°	2754.6	1574.3	36.1	22.9	18.5	15.0	14.1	12.3	10.6	8.8	8.8
65°	2642.9	1474.9	32.5	21.1	16.7	14.1	13.2	11.4	8.8	7.0	7.0
67.5°	2202.3	1175.9	26.4	17.6	13.2	12.3	10.6	8.8	6.2	4.4	4.4
70°	1563.8	822.3	20.2	14.1	11.4	11.4	9.7	7.0	3.5	1.8	1.8
72.5°	827.6	427.4	16.7	11.4	8.8	8.8	7.9	4.4	2.6	1.8	0.9
75°	289.4	140.7	14.1	9.7	7.9	6.2	5.3	3.5	2.6	1.8	0.9
77.5°	88.0	46.6	12.3	9.7	7.0	5.3	6.2	5.3	5.3	3.5	2.6
80°	28.1	16.7	7.0	6.2	7.0	7.0	6.2	5.3	6.2	4.4	3.5
82.5°	10.6	6.2	2.6	3.5	3.5	4.4	4.4	3.5	2.6	0.9	0.0
85°	3.5	2.6	1.8	2.6	2.6	2.6	1.8	1.8	0.9	0.0	0.0
87.5°	1.8	1.8	1.8	1.8	1.8	1.8	0.9	0.9	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

(END OF REPORT)