

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: P367783

Luminaire Tested: **MSA-SA3A-830-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367783
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-830-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6980 lumens
Efficiency: N/A
Efficacy: 72.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

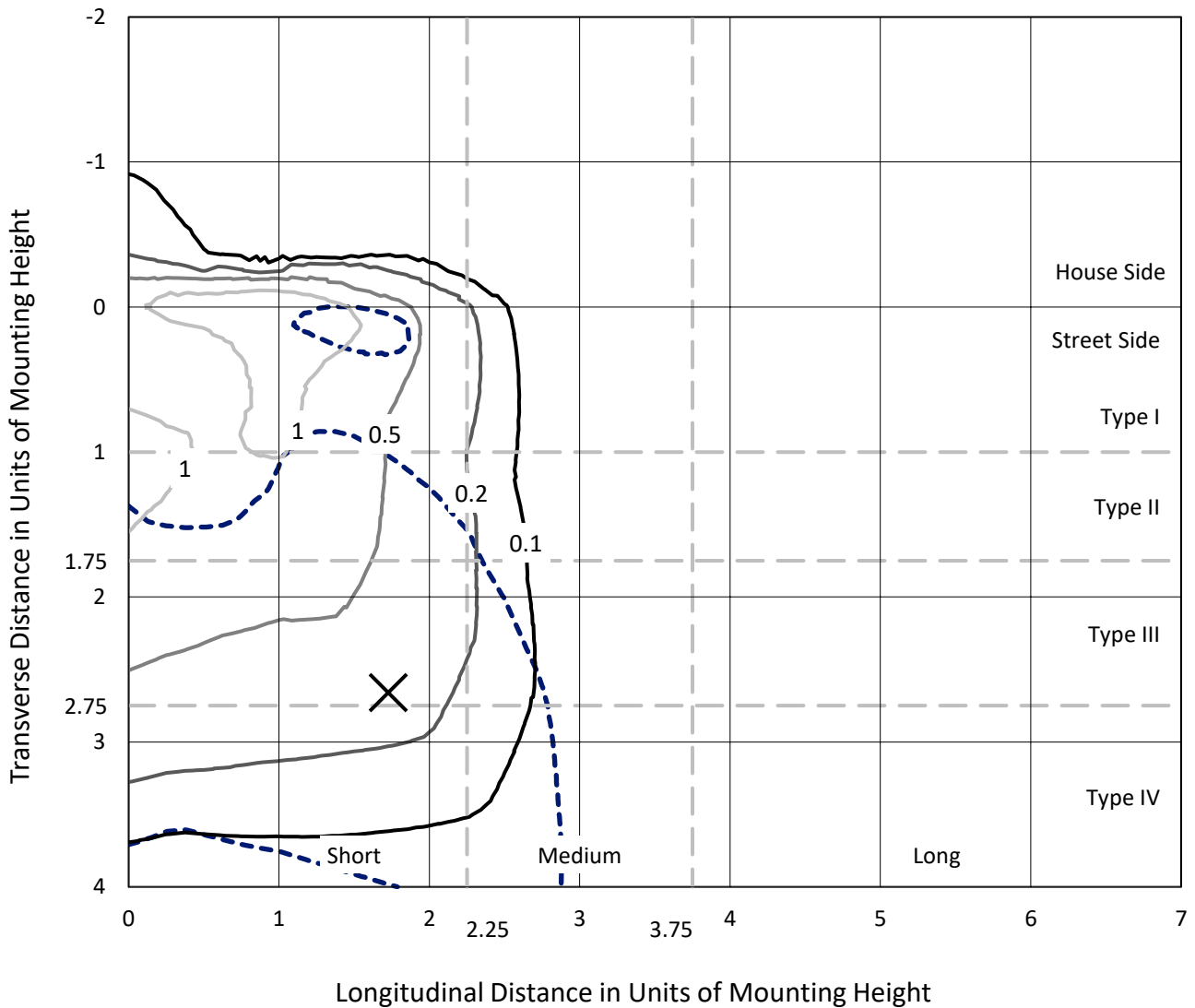
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

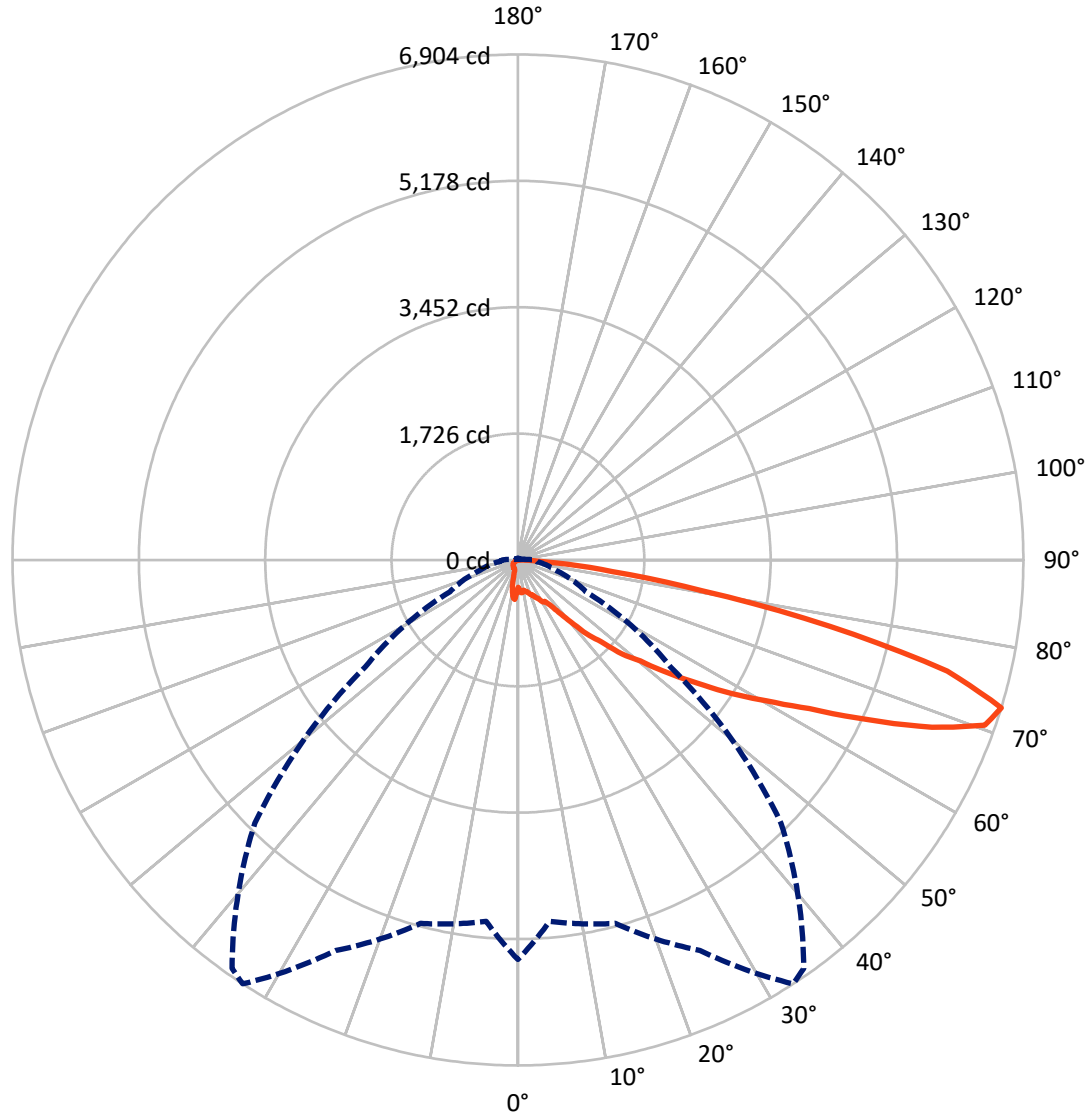
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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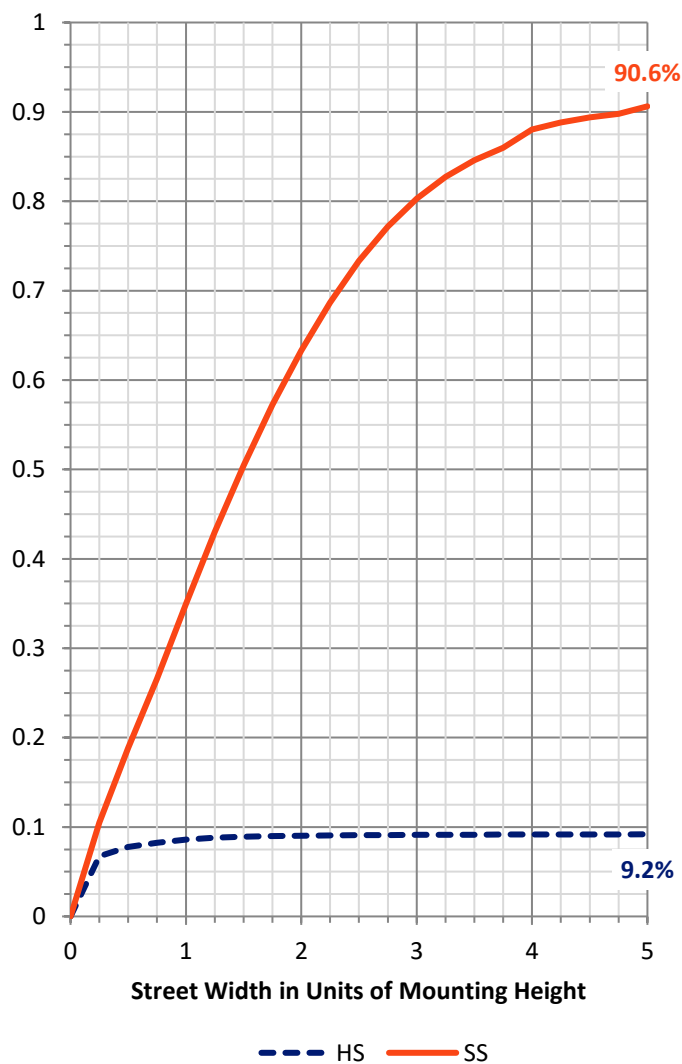
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	645.4	0.0	645.4
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	6334.6	0.0	6334.6
	% Fixture	90.8	0.0	90.8
Total	Lumens	6980.0	0.0	6980.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.1	0.7
10°-20°	143.2	2.1
20°-30°	242.8	3.5
30°-40°	444.4	6.4
40°-50°	938.0	13.4
50°-60°	1569.3	22.5
60°-70°	2100.6	30.1
70°-80°	1372.1	19.7
80°-90°	121.6	1.7
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°	6980.0	100.0
0°-180°	6980.0	100.0

Coefficient of Utilization



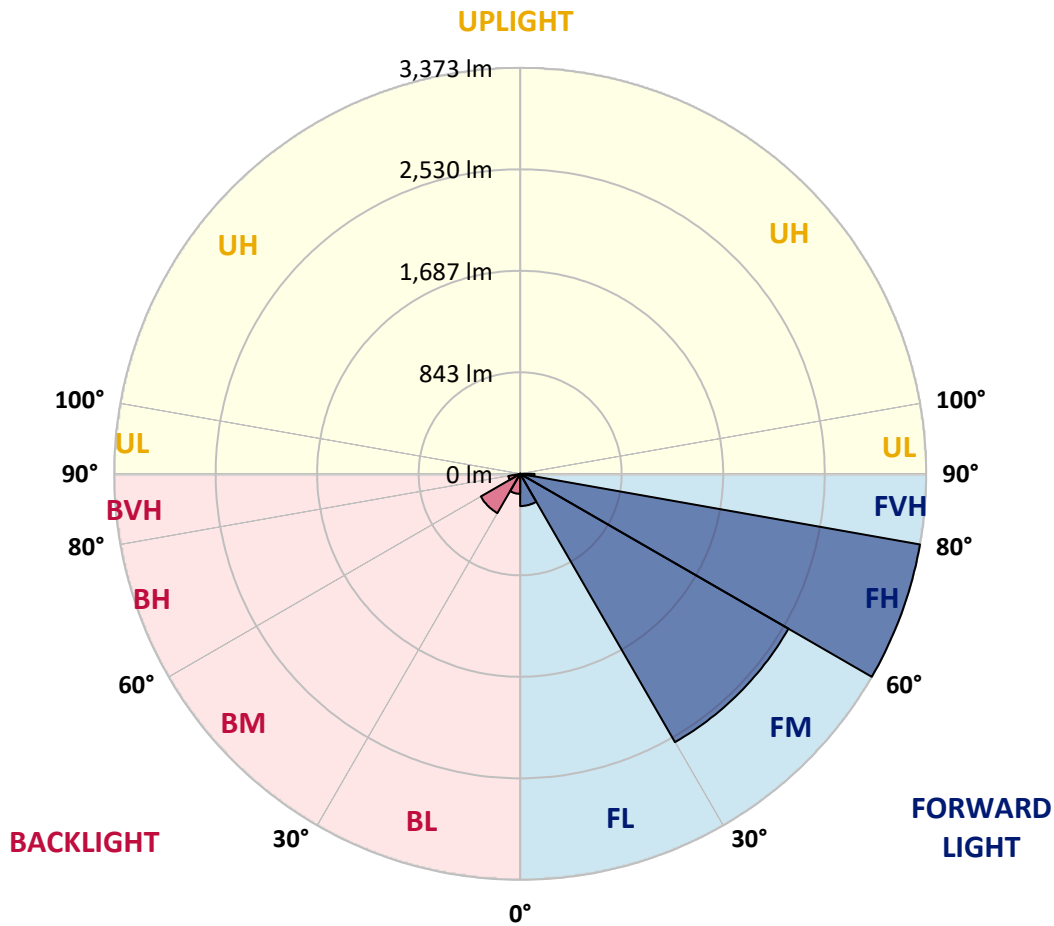
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	267.9	3.8			
FM (30°-60°)	2574.3	36.9			
FH (60°-80°)	3373.0	48.3			G2/5000
FVH (80°-90°)	119.3	1.7			G2/225
BL (0°-30°)	166.1	2.4	B1/500		
BM (30°-60°)	377.3	5.4	B1/1000		
BH (60°-80°)	99.6	1.4	B0/110		G0/110
BVH (80°-90°)	2.4	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3
2.5°	442.6	425.5	400.7	402.3	406.5	410.0	419.3	415.4	408.1	407.7	442.6
5°	468.9	449.9	448.4	450.7	449.5	455.7	448.0	473.2	494.5	520.1	561.1
7.5°	456.1	447.2	436.0	447.6	447.2	444.1	449.1	500.3	551.8	584.4	652.2
10°	419.3	409.2	417.8	421.6	418.9	432.5	466.2	508.1	569.7	637.9	670.8
12.5°	408.8	415.0	418.1	418.1	444.1	451.1	502.6	542.2	615.4	669.3	765.0
15°	449.5	461.5	440.2	435.6	443.7	447.6	505.0	552.6	646.4	744.8	825.1
17.5°	514.3	513.5	480.5	462.3	475.1	484.4	516.2	572.0	627.0	804.1	920.4
20°	558.8	559.6	500.3	462.3	504.6	510.0	545.3	589.8	633.2	834.0	982.8
22.5°	616.2	595.6	530.1	493.3	522.0	527.0	565.8	601.1	665.0	830.5	1062.6
25°	663.1	649.9	567.3	541.8	567.3	560.4	595.6	648.7	699.1	885.9	1109.5
27.5°	735.9	713.4	593.7	598.3	596.8	601.8	610.0	691.4	759.2	888.6	1218.0
30°	803.7	790.6	652.6	652.6	667.7	658.0	663.8	762.3	817.3	951.4	1340.1
32.5°	873.9	874.7	722.0	685.2	673.1	713.1	752.2	796.8	887.4	1059.1	1526.9
35°	1059.5	1044.0	854.9	763.0	753.4	751.0	813.8	934.3	1011.8	1199.4	1778.4
37.5°	1433.5	1379.6	1140.9	939.8	903.3	890.9	962.2	1085.9	1163.0	1405.6	2194.2
40°	1817.1	1718.3	1453.2	1226.5	1108.3	1054.9	1137.8	1242.8	1380.0	1633.4	2579.0
42.5°	2153.9	2031.8	1688.5	1535.8	1381.9	1358.7	1280.8	1451.7	1690.0	1965.2	2956.1
45°	2482.1	2241.9	1897.7	1776.8	1590.0	1603.2	1576.9	1724.9	2012.1	2328.7	3290.5
47.5°	2708.1	2492.2	2154.3	1997.3	1922.5	1845.4	2054.7	2208.5	2298.8	2559.6	3579.6
50°	2951.4	2732.9	2374.8	2265.1	2166.7	2244.6	2516.2	2536.8	2529.4	2775.1	3776.5
52.5°	3265.7	3008.0	2627.8	2503.8	2559.6	2637.2	2950.7	2954.5	2734.4	2956.5	3918.3
55°	3556.4	3270.8	2965.0	2848.0	2964.6	3030.1	3377.7	3250.2	2853.8	3079.7	3988.1
57.5°	3966.0	3635.4	3413.4	3207.2	3443.6	3380.8	3753.2	3563.7	2987.9	3161.5	3962.5
60°	4483.7	4094.7	3872.2	3654.0	3907.5	3950.1	4119.8	3720.3	3039.8	3188.2	3808.7
62.5°	5010.4	4619.0	4326.4	4178.4	4465.9	4606.2	4459.3	3798.2	2977.4	3135.9	3460.3
65°	5663.8	5162.7	4820.9	4734.1	5266.9	5473.1	4860.8	3817.2	2856.9	2848.0	2782.1
67.5°	6111.4	5623.5	5310.0	5455.3	6099.0	6115.6	5221.2	3823.0	2451.1	2229.9	1826.0
70°	6217.6	5695.2	5554.9	5982.7	6762.8	6553.2	5337.5	3528.5	1817.9	1323.4	834.7
72.5°	5458.0	4955.0	5137.5	5883.1	6903.9	6807.8	5080.5	2545.7	1023.5	529.4	256.2
75°	3347.9	3043.7	3854.0	4987.9	6060.2	5998.2	3963.7	1315.3	412.3	211.6	95.7
77.5°	1456.0	1352.1	2011.3	3309.5	4354.7	4299.3	2322.5	484.4	213.1	148.8	48.4
80°	481.7	467.4	761.9	1567.2	2550.7	2501.9	978.5	201.5	151.9	119.4	27.1
82.5°	114.3	113.5	265.8	721.2	1299.4	1258.7	300.3	111.2	110.1	94.2	14.3
85°	28.7	29.5	73.6	294.9	527.8	465.4	78.3	55.4	77.5	63.9	7.4
87.5°	0.0	0.0	19.0	42.2	79.8	50.0	8.5	14.7	21.7	22.9	3.9
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°	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3	371.3
2.5°	450.3	446.0	411.2	419.7	432.9	431.7	440.2	433.6	427.8	456.5	453.8
5°	572.8	549.5	538.7	553.8	545.6	526.7	542.5	539.8	535.2	544.9	552.2
7.5°	664.6	643.3	633.6	601.8	555.7	519.3	525.1	511.5	498.8	513.9	529.4
10°	694.8	683.2	682.1	620.0	576.6	523.9	461.5	407.7	393.3	374.4	382.9
12.5°	777.0	784.0	740.2	667.7	584.0	482.9	372.0	295.7	264.7	244.5	245.7
15°	844.4	868.8	805.3	675.1	513.9	368.2	247.6	179.0	159.7	154.6	153.1
17.5°	944.8	968.4	825.4	622.8	414.3	249.6	159.3	139.5	140.7	144.2	143.4
20°	1019.2	1015.7	808.0	530.1	305.4	163.5	133.3	130.6	136.8	146.9	144.5
22.5°	1090.9	1066.9	797.2	444.5	197.6	131.4	128.7	128.3	134.1	143.8	146.5
25°	1142.1	1145.9	778.9	348.0	143.8	122.1	124.4	127.9	133.7	144.2	142.6
27.5°	1288.5	1180.0	703.0	252.7	121.3	117.0	122.8	129.8	131.8	144.9	145.3
30°	1383.5	1308.7	653.4	170.1	112.0	108.1	119.7	129.0	131.4	148.4	149.6
32.5°	1549.0	1364.1	596.0	126.3	104.2	105.4	112.8	125.2	136.0	154.2	155.0
35°	1754.7	1542.0	492.2	113.5	101.5	99.6	103.1	117.4	135.2	155.0	158.9
37.5°	2146.5	1648.6	390.2	110.1	101.5	98.0	101.5	110.1	132.9	162.8	170.9
40°	2408.9	1865.6	281.3	109.3	99.6	96.5	97.7	106.2	126.3	158.1	170.1
42.5°	2732.1	1957.0	207.3	107.3	97.7	93.0	93.8	104.6	119.7	148.4	157.3
45°	2996.8	2023.7	163.2	106.6	93.0	91.5	93.0	103.5	113.5	127.5	135.6
47.5°	3197.9	2101.2	131.0	101.5	91.8	91.5	89.5	96.9	103.1	106.6	112.0
50°	3345.2	2083.8	108.5	93.8	88.0	90.3	86.8	88.0	89.5	87.6	93.8
52.5°	3435.5	2021.0	90.3	84.5	83.3	85.3	81.0	77.5	74.8	73.2	77.1
55°	3468.4	1895.0	76.7	72.5	75.2	76.0	72.5	66.3	61.6	59.3	62.4
57.5°	3406.0	1703.2	66.7	60.1	66.3	66.3	61.6	55.0	49.6	45.7	48.8
60°	3247.9	1491.2	59.3	50.0	56.6	57.0	51.5	44.6	40.3	36.4	38.4
62.5°	2953.4	1260.3	51.9	43.4	48.8	49.2	42.6	36.0	32.9	28.7	30.2
65°	2364.3	963.8	44.2	38.4	42.2	41.1	35.3	30.6	26.7	22.9	23.6
67.5°	1534.6	594.9	38.4	34.9	35.7	34.5	29.8	26.7	22.5	19.4	19.8
70°	687.1	256.2	33.7	31.4	31.0	29.1	25.2	24.8	22.1	19.4	19.4
72.5°	212.0	96.5	29.1	28.3	26.7	24.4	22.1	23.6	21.7	18.6	18.2
75°	83.7	44.2	24.0	24.0	23.3	20.2	19.8	21.3	20.2	17.1	16.3
77.5°	43.8	27.9	19.8	20.5	20.2	15.5	17.8	19.4	18.6	14.3	12.0
80°	26.0	17.1	14.7	16.7	16.3	10.9	13.6	12.4	8.9	4.3	1.2
82.5°	14.3	7.8	6.6	9.7	9.7	3.9	7.0	6.2	3.5	0.0	0.0
85°	7.0	5.4	5.0	5.4	3.9	1.2	3.5	3.5	1.9	0.0	0.0
87.5°	3.5	3.1	2.3	1.9	1.6	0.0	1.2	1.6	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)