

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: P367915

Luminaire Tested: **MSA-SA3B-830-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367915
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-SA3B-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: 8747 lumens
Efficiency: N/A
Efficacy: 69.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

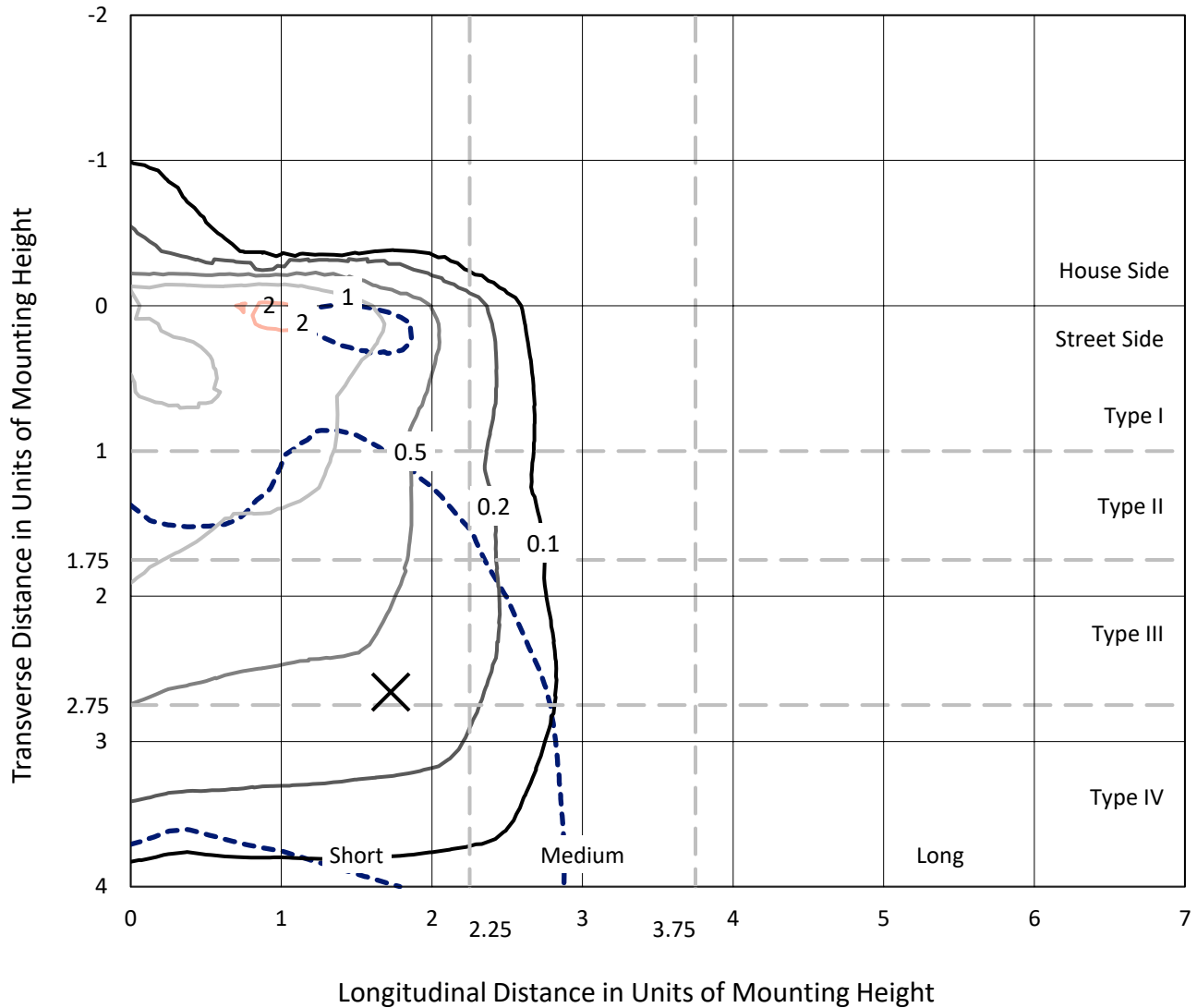
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

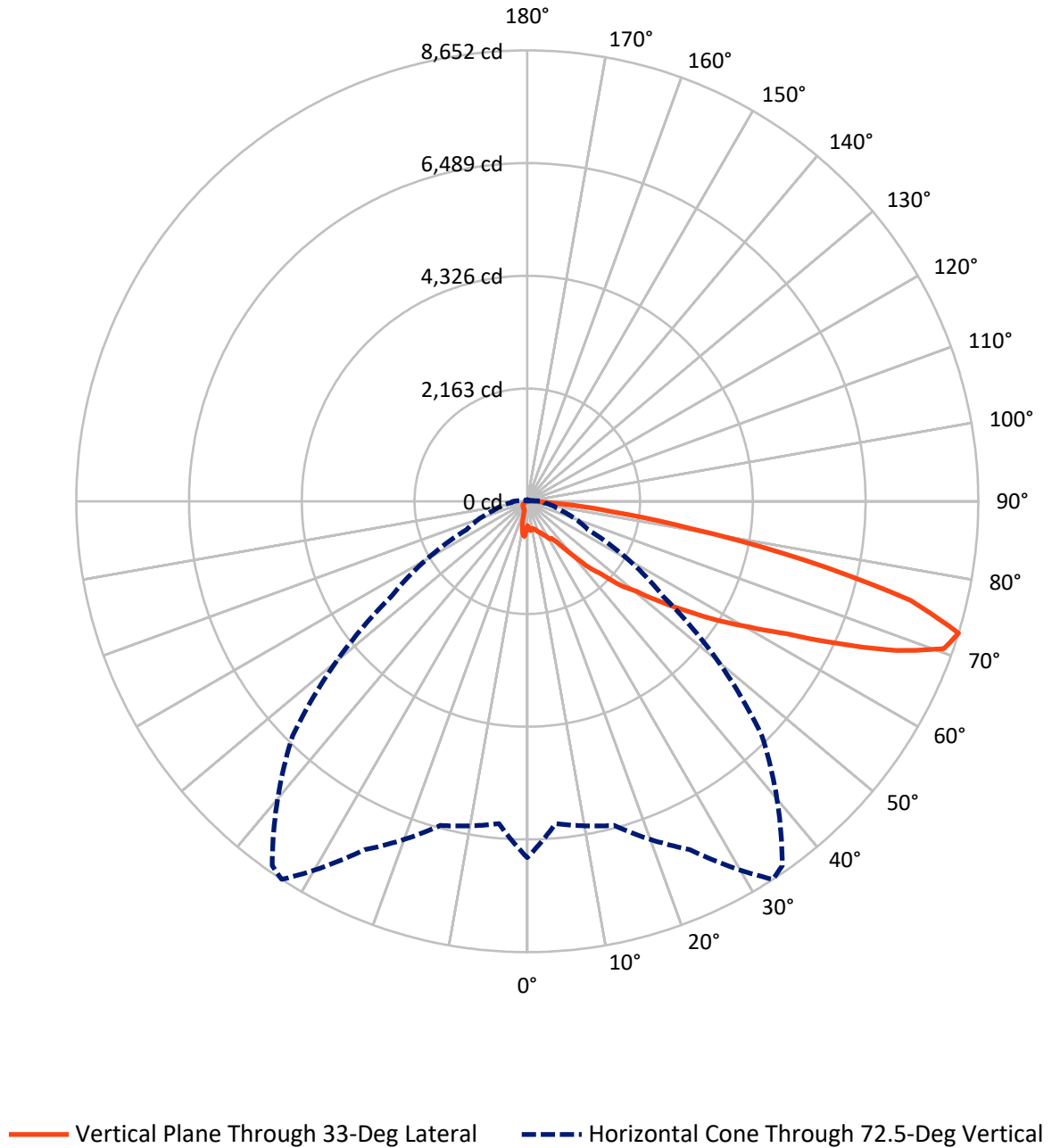
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.2 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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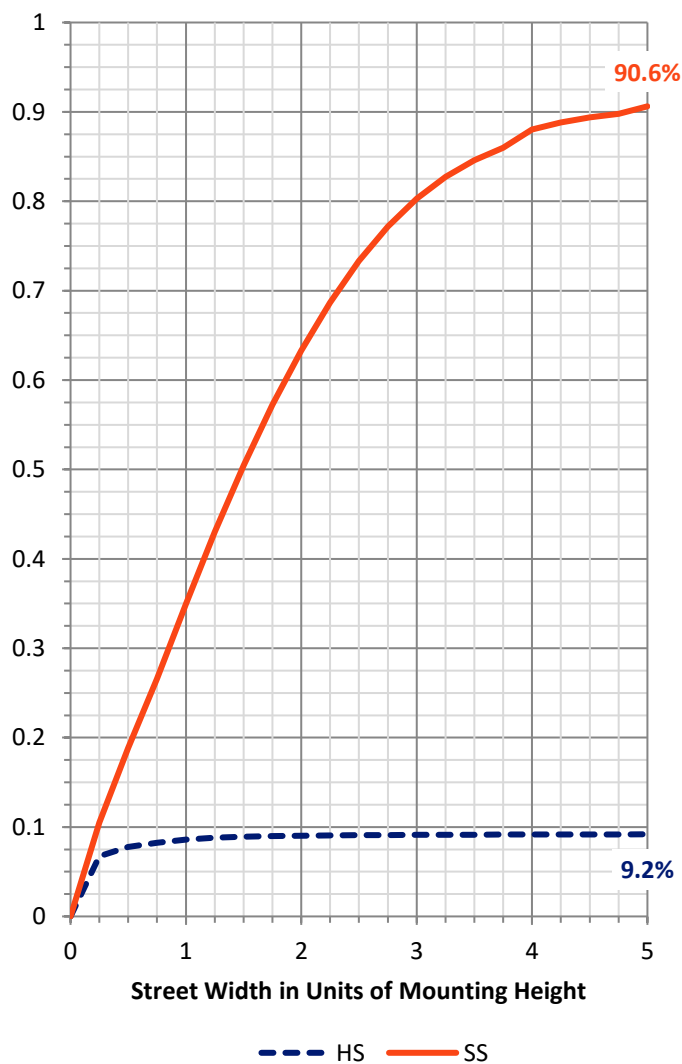
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	808.8	0.0	808.8
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	7938.2	0.0	7938.2
	% Fixture	90.8	0.0	90.8
Total	Lumens	8747.0	0.0	8747.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.2	0.7
10°-20°	179.4	2.1
20°-30°	304.3	3.5
30°-40°	556.9	6.4
40°-50°	1175.4	13.4
50°-60°	1966.5	22.5
60°-70°	2632.3	30.1
70°-80°	1719.5	19.7
80°-90°	152.4	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°	8747.0	100.0
0°-180°	8747.0	100.0

Coefficient of Utilization

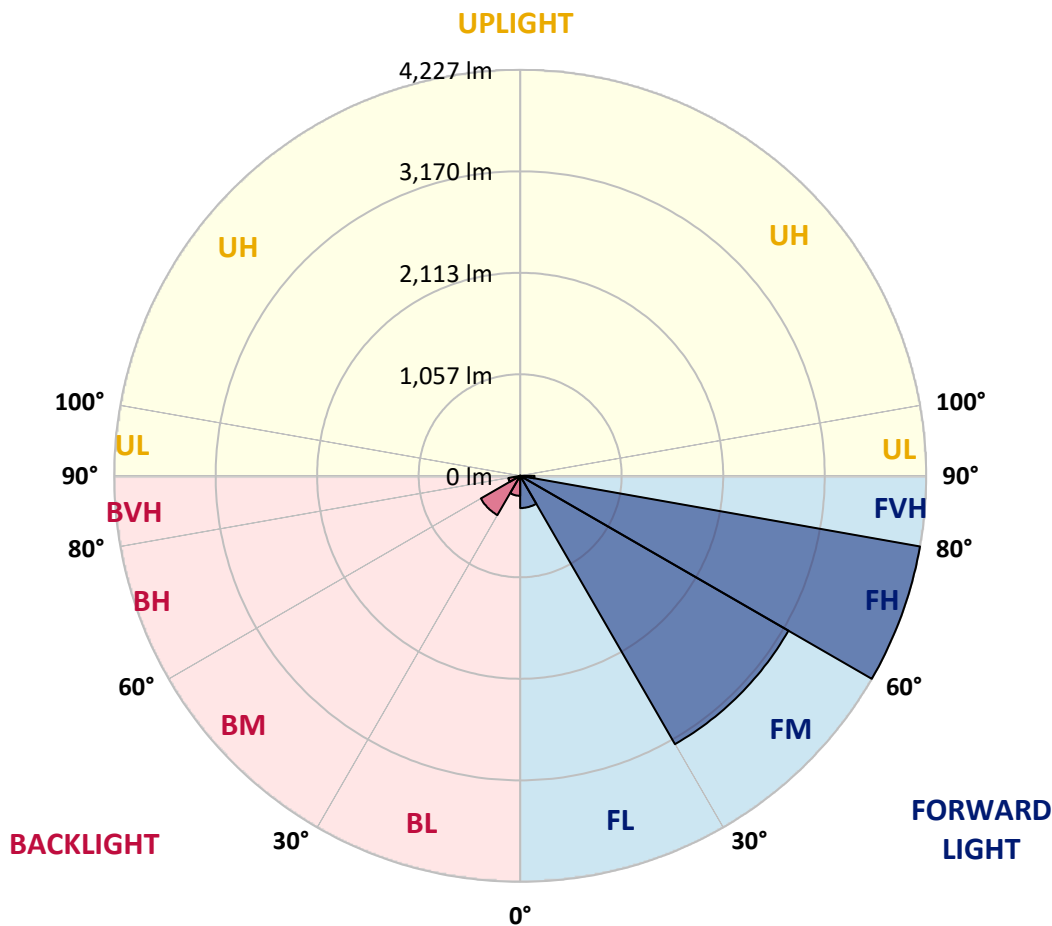


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	335.8	3.8			
FM (30°-60°)	3226.0	36.9			
FH (60°-80°)	4226.9	48.3			G2/5000
FVH (80°-90°)	149.5	1.7			G2/225
BL (0°-30°)	208.2	2.4	B1/500		
BM (30°-60°)	472.8	5.4	B1/1000		
BH (60°-80°)	124.8	1.4	B1/500		G1/500
BVH (80°-90°)	3.0	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°	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2
2.5°	554.6	533.2	502.1	504.1	509.4	513.8	525.5	520.6	511.4	510.9	554.6
5°	587.6	563.8	561.9	564.8	563.3	571.1	561.4	593.0	619.7	651.7	703.2
7.5°	571.6	560.4	546.3	560.9	560.4	556.5	562.9	627.0	691.5	732.3	817.3
10°	525.5	512.8	523.5	528.4	525.0	542.0	584.2	636.7	713.9	799.4	840.6
12.5°	512.3	520.1	524.0	524.0	556.5	565.3	629.9	679.4	771.2	838.7	958.6
15°	563.3	578.4	551.7	545.9	556.1	560.9	632.8	692.5	810.0	933.4	1033.9
17.5°	644.4	643.5	602.2	579.4	595.4	607.0	646.9	716.8	785.8	1007.7	1153.4
20°	700.3	701.3	627.0	579.4	632.3	639.1	683.3	739.1	793.5	1045.1	1231.6
22.5°	772.2	746.4	664.3	618.2	654.2	660.5	709.0	753.2	833.4	1040.7	1331.6
25°	830.9	814.4	711.0	678.9	711.0	702.2	746.4	813.0	876.1	1110.2	1390.4
27.5°	922.2	894.1	744.0	749.8	747.9	754.2	764.4	866.4	951.4	1113.6	1526.4
30°	1007.2	990.7	817.8	817.8	836.7	824.6	831.9	955.2	1024.2	1192.2	1679.3
32.5°	1095.1	1096.1	904.7	858.6	843.5	893.6	942.6	998.5	1112.1	1327.2	1913.4
35°	1327.7	1308.3	1071.3	956.2	944.1	941.2	1019.8	1170.9	1268.0	1503.0	2228.6
37.5°	1796.4	1728.9	1429.7	1177.7	1132.0	1116.5	1205.8	1360.8	1457.4	1761.4	2749.7
40°	2277.1	2153.3	1821.1	1537.0	1388.9	1321.9	1425.8	1557.4	1729.3	2047.0	3231.9
42.5°	2699.2	2546.2	2115.9	1924.6	1731.8	1702.6	1605.0	1819.2	2117.9	2462.7	3704.4
45°	3110.5	2809.4	2378.2	2226.6	1992.6	2009.1	1976.1	2161.6	2521.4	2918.2	4123.5
47.5°	3393.6	3123.1	2699.6	2503.0	2409.2	2312.6	2574.8	2767.6	2880.8	3207.6	4485.8
50°	3698.6	3424.7	2976.0	2838.5	2715.2	2812.8	3153.2	3179.0	3169.7	3477.6	4732.5
52.5°	4092.5	3769.5	3293.1	3137.7	3207.6	3304.7	3697.6	3702.5	3426.6	3704.9	4910.3
55°	4456.7	4098.8	3715.6	3568.9	3715.1	3797.2	4232.8	4073.0	3576.2	3859.3	4997.7
57.5°	4970.0	4555.7	4277.5	4019.1	4315.4	4236.7	4703.4	4465.9	3744.2	3961.8	4965.6
60°	5618.8	5131.2	4852.5	4579.1	4896.7	4950.1	5162.8	4662.1	3809.3	3995.3	4772.8
62.5°	6278.8	5788.3	5421.6	5236.1	5596.5	5772.3	5588.2	4759.7	3731.1	3929.8	4336.2
65°	7097.6	6469.6	6041.3	5932.5	6600.3	6858.6	6091.3	4783.5	3580.1	3568.9	3486.4
67.5°	7658.5	7047.1	6654.2	6836.3	7642.9	7663.8	6543.0	4790.8	3071.6	2794.3	2288.3
70°	7791.5	7136.9	6961.1	7497.2	8474.8	8212.1	6688.7	4421.7	2278.1	1658.4	1046.1
72.5°	6839.7	6209.3	6438.1	7372.4	8651.6	8531.2	6366.7	3190.1	1282.6	663.4	321.0
75°	4195.4	3814.2	4829.6	6250.6	7594.4	7516.7	4967.1	1648.2	516.7	265.2	120.0
77.5°	1824.5	1694.4	2520.4	4147.3	5457.1	5387.6	2910.4	607.0	267.1	186.5	60.7
80°	603.6	585.7	954.8	1963.9	3196.5	3135.3	1226.2	252.5	190.4	149.6	34.0
82.5°	143.3	142.3	333.1	903.8	1628.3	1577.3	376.4	139.4	137.9	118.0	18.0
85°	35.9	36.9	92.3	369.6	661.4	583.2	98.1	69.4	97.1	80.1	9.2
87.5°	0.0	0.0	23.8	52.9	100.0	62.6	10.7	18.5	27.2	28.7	4.9
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°	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2	465.2
2.5°	564.3	559.0	515.3	525.9	542.5	541.0	551.7	543.4	536.1	572.1	568.7
5°	717.8	688.6	675.0	694.0	683.8	660.0	679.9	676.5	670.7	682.8	692.0
7.5°	832.9	806.2	794.0	754.2	696.4	650.8	658.0	641.0	625.0	644.0	663.4
10°	870.7	856.2	854.7	777.0	722.6	656.6	578.4	510.9	492.9	469.1	479.8
12.5°	973.7	982.4	927.6	836.7	731.9	605.1	466.2	370.5	331.7	306.4	307.9
15°	1058.2	1088.8	1009.2	846.0	644.0	461.4	310.3	224.4	200.1	193.8	191.8
17.5°	1184.0	1213.6	1034.4	780.4	519.1	312.7	199.6	174.8	176.3	180.7	179.7
20°	1277.2	1272.9	1012.6	664.3	382.7	204.9	167.1	163.7	171.4	184.1	181.1
22.5°	1367.1	1337.0	999.0	557.0	247.7	164.6	161.2	160.7	168.0	180.2	183.6
25°	1431.2	1436.0	976.1	436.1	180.2	153.0	155.9	160.3	167.5	180.7	178.7
27.5°	1614.7	1478.8	880.9	316.6	152.0	146.7	153.9	162.7	165.1	181.6	182.1
30°	1733.7	1640.0	818.8	213.2	140.3	135.5	150.1	161.7	164.6	186.0	187.5
32.5°	1941.1	1709.4	746.9	158.3	130.6	132.1	141.3	156.9	170.5	193.3	194.3
35°	2199.0	1932.3	616.8	142.3	127.2	124.8	129.2	147.1	169.5	194.3	199.1
37.5°	2689.9	2065.9	489.0	137.9	127.2	122.9	127.2	137.9	166.6	204.0	214.2
40°	3018.7	2337.8	352.6	136.9	124.8	120.9	122.4	133.1	158.3	198.1	213.2
42.5°	3423.7	2452.5	259.8	134.5	122.4	116.6	117.5	131.1	150.1	186.0	197.2
45°	3755.4	2536.0	204.5	133.5	116.6	114.6	116.6	129.7	142.3	159.8	170.0
47.5°	4007.5	2633.1	164.1	127.2	115.1	114.6	112.2	121.4	129.2	133.5	140.3
50°	4192.0	2611.3	136.0	117.5	110.2	113.2	108.8	110.2	112.2	109.8	117.5
52.5°	4305.2	2532.6	113.2	105.9	104.4	106.8	101.5	97.1	93.7	91.8	96.6
55°	4346.4	2374.8	96.2	90.8	94.2	95.2	90.8	83.0	77.2	74.3	78.2
57.5°	4268.3	2134.4	83.5	75.3	83.0	83.0	77.2	69.0	62.2	57.3	61.2
60°	4070.1	1868.7	74.3	62.6	70.9	71.4	64.6	55.8	50.5	45.6	48.1
62.5°	3701.0	1579.3	65.1	54.4	61.2	61.7	53.4	45.2	41.3	35.9	37.9
65°	2962.9	1207.8	55.4	48.1	52.9	51.5	44.2	38.4	33.5	28.7	29.6
67.5°	1923.1	745.5	48.1	43.7	44.7	43.2	37.4	33.5	28.2	24.3	24.8
70°	861.0	321.0	42.3	39.3	38.9	36.4	31.6	31.1	27.7	24.3	24.3
72.5°	265.6	120.9	36.4	35.5	33.5	30.6	27.7	29.6	27.2	23.3	22.8
75°	104.9	55.4	30.1	30.1	29.1	25.3	24.8	26.7	25.3	21.4	20.4
77.5°	54.9	35.0	24.8	25.7	25.3	19.4	22.3	24.3	23.3	18.0	15.1
80°	32.5	21.4	18.5	20.9	20.4	13.6	17.0	15.5	11.2	5.3	1.5
82.5°	18.0	9.7	8.3	12.1	12.1	4.9	8.7	7.8	4.4	0.0	0.0
85°	8.7	6.8	6.3	6.8	4.9	1.5	4.4	4.4	2.4	0.0	0.0
87.5°	4.4	3.9	2.9	2.4	1.9	0.0	1.5	1.9	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)