

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: P596898

Luminaire Tested: **MSA-SA1D-835-U-SL2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596898
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1D-835-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5616 lumens
Efficiency: N/A
Efficacy: 83.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B1 - U0 - G2

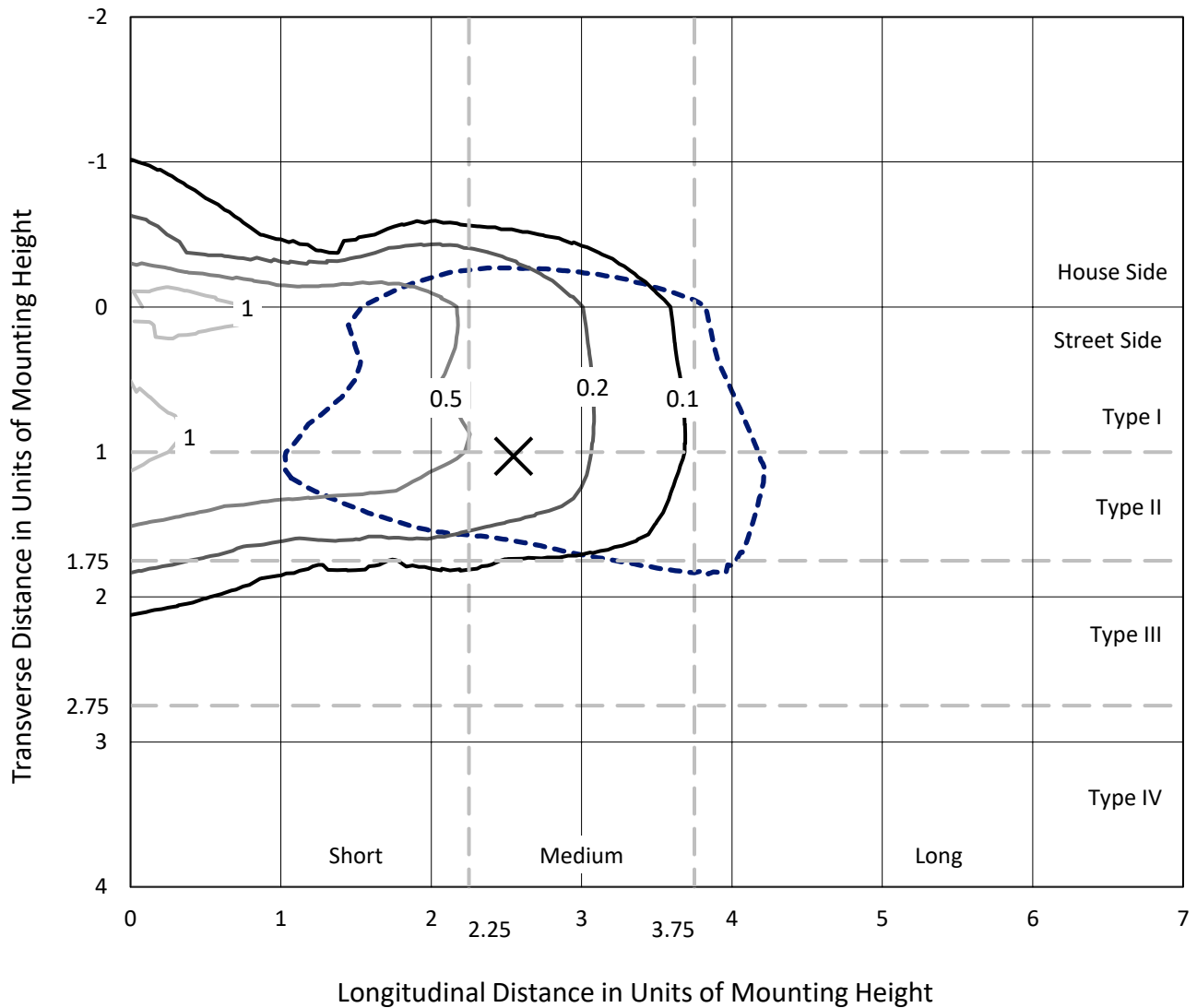
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

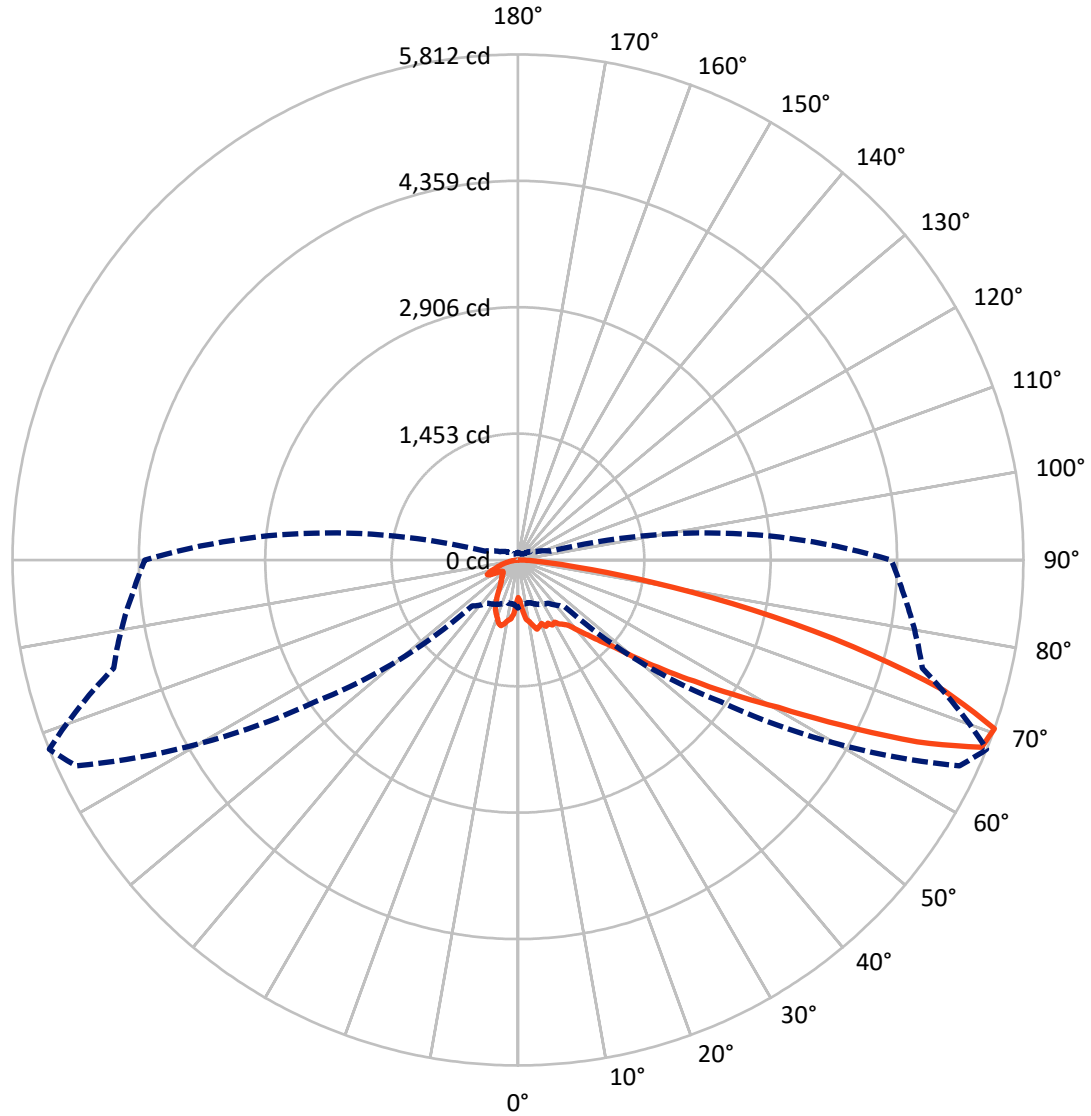
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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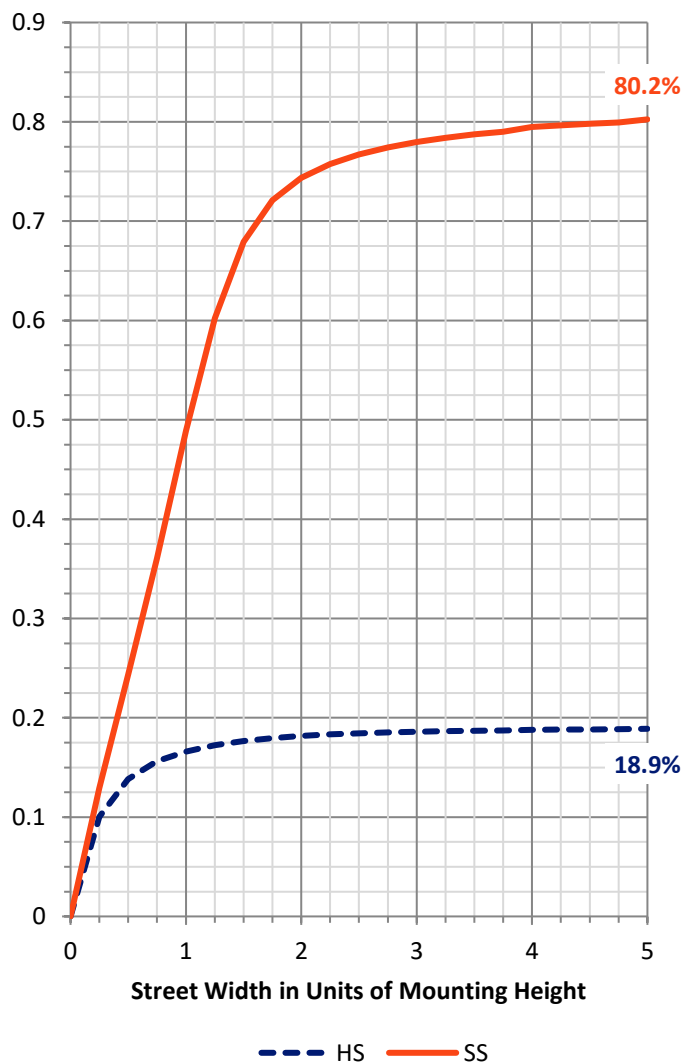
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1072.2	0.0	1072.2
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	4543.8	0.0	4543.8
	% Fixture	80.9	0.0	80.9
Total	Lumens	5616.0	0.0	5616.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	57.5	1.0
10°-20°	187.4	3.3
20°-30°	285.1	5.1
30°-40°	435.5	7.8
40°-50°	748.9	13.3
50°-60°	1239.5	22.1
60°-70°	1528.1	27.2
70°-80°	981.6	17.5
80°-90°	152.3	2.7
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°	5616.0	100.0
0°-180°	5616.0	100.0

Coefficient of Utilization



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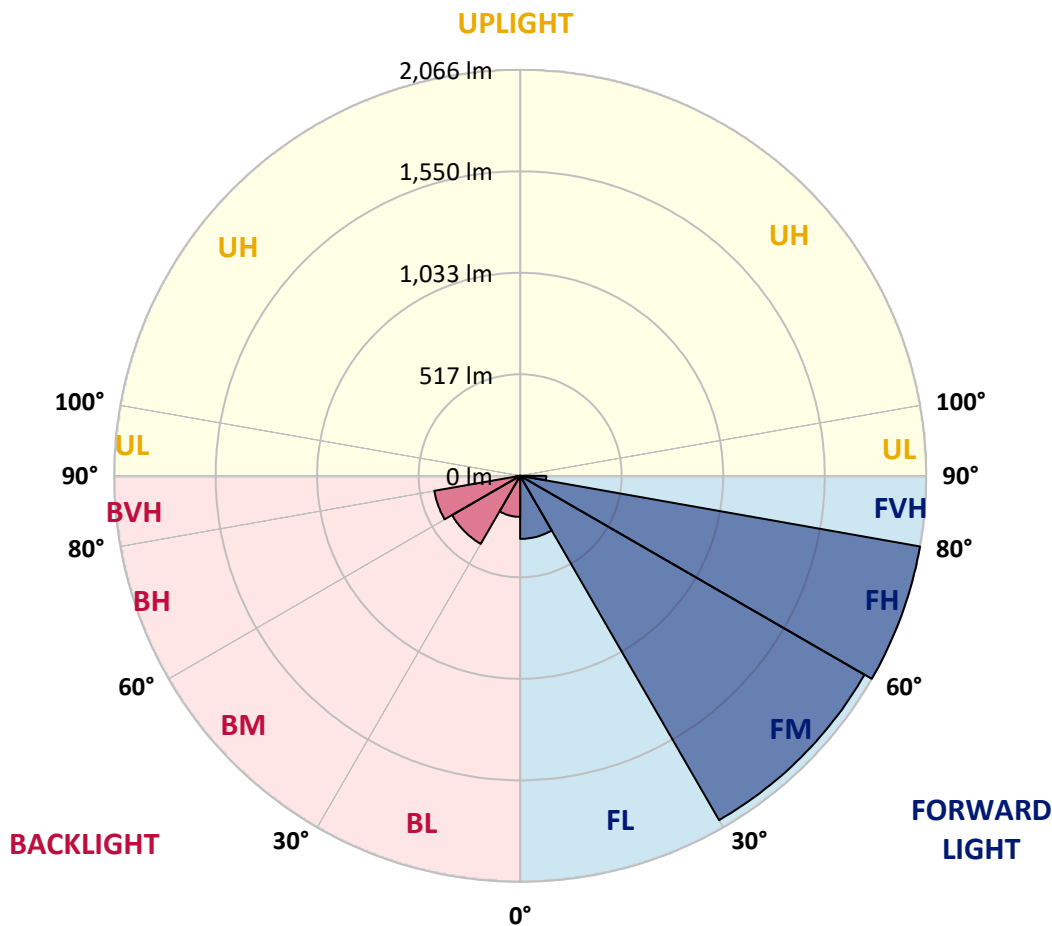
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	321.1	5.7			
FM (30°-60°)	2023.7	36.0			
FH (60°-80°)	2066.3	36.8			G2/5000
FVH (80°-90°)	132.7	2.4			G2/225
BL (0°-30°)	208.9	3.7	B1/500		
BM (30°-60°)	400.2	7.1	B1/1000		
BH (60°-80°)	443.5	7.9	B1/500		G1/500
BVH (80°-90°)	19.5	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6
2.5°	494.8	474.8	454.6	464.4	480.2	494.1	491.2	492.9	473.8	471.3	521.3
5°	582.9	548.6	547.9	548.4	549.8	533.8	572.8	593.0	597.5	618.2	667.3
7.5°	613.5	599.6	585.5	592.5	574.7	576.3	624.3	676.9	689.4	704.4	771.6
10°	607.1	594.0	598.2	599.4	602.7	629.2	660.0	710.5	721.1	769.1	786.5
12.5°	608.1	605.7	625.4	626.2	661.4	709.1	721.3	767.9	772.1	807.4	880.0
15°	640.3	656.5	645.4	651.3	658.1	715.2	732.9	799.6	825.0	870.4	924.9
17.5°	703.0	707.7	674.6	665.9	688.2	705.6	745.8	774.7	801.3	927.9	1003.2
20°	717.6	730.3	690.8	645.9	693.1	717.4	745.3	758.5	779.2	936.4	1043.1
22.5°	780.1	753.8	706.1	667.1	682.6	706.1	726.3	775.9	830.2	912.2	1083.1
25°	815.6	800.3	757.8	715.9	702.8	703.5	742.5	786.9	805.7	947.7	1091.1
27.5°	901.4	876.9	781.3	773.3	723.7	685.2	745.1	814.2	847.1	920.0	1130.1
30°	1008.8	990.2	864.7	854.1	778.5	711.2	778.0	834.4	829.7	938.1	1157.1
32.5°	1095.8	1126.8	1000.1	916.7	862.8	798.4	767.7	830.9	877.7	980.1	1202.9
35°	1219.9	1249.0	1105.6	1049.2	932.4	838.9	839.8	879.3	908.2	1029.3	1254.2
37.5°	1434.7	1409.1	1293.7	1204.6	1129.9	990.2	948.4	934.5	957.8	1089.4	1354.6
40°	1589.6	1568.0	1432.1	1381.3	1235.9	1154.8	1040.1	1026.9	1068.0	1151.5	1436.6
42.5°	1773.2	1734.6	1608.2	1566.3	1414.3	1268.1	1152.4	1159.9	1179.9	1268.5	1547.5
45°	1960.0	1866.5	1794.8	1791.5	1690.0	1488.1	1332.7	1326.6	1327.3	1440.8	1672.1
47.5°	2108.3	2024.2	1942.2	1903.1	1851.9	1868.6	1594.5	1522.8	1501.2	1614.3	1859.0
50°	2208.7	2111.9	2019.0	2009.9	2146.6	2236.7	1840.4	1763.8	1777.2	1862.5	2108.1
52.5°	2210.8	2095.9	1999.0	2063.2	2385.5	2514.3	2263.9	2049.8	2092.6	2150.6	2433.2
55°	2057.1	1937.9	1874.9	2021.1	2478.8	2843.5	2859.1	2508.1	2458.8	2480.2	2821.7
57.5°	1733.0	1612.6	1576.0	1751.1	2301.8	3161.1	3577.8	3055.8	2911.0	2821.7	3219.9
60°	1304.5	1200.4	1177.6	1289.2	1908.3	3067.8	4159.8	3737.4	3442.4	3203.2	3619.2
62.5°	978.2	903.5	869.2	885.2	1320.5	2764.3	4542.0	4598.6	4180.9	3619.7	4009.4
65°	794.9	734.5	704.0	683.3	821.2	2137.5	4472.9	5323.5	5043.6	4057.1	4313.0
67.5°	664.0	610.4	596.3	616.5	649.2	1240.1	3932.3	5728.9	5748.0	4488.6	4490.5
70°	551.2	511.5	506.3	563.6	606.6	748.4	2840.3	5601.5	5811.7	4812.3	4448.9
72.5°	425.9	404.5	403.8	493.8	602.7	637.9	1691.4	4839.1	5121.4	4708.8	4041.8
75°	295.4	280.6	291.9	405.9	588.8	647.1	965.3	3769.1	3980.5	4007.0	3237.7
77.5°	203.3	190.9	203.1	293.6	525.8	662.6	675.3	2725.3	2748.8	2687.0	1854.5
80°	141.5	132.8	142.2	207.8	409.2	655.8	574.9	1715.8	1574.3	1199.2	593.7
82.5°	87.7	85.1	95.4	148.1	288.2	596.5	544.8	885.4	676.0	330.9	212.0
85°	46.1	42.3	55.5	96.6	180.3	468.2	510.5	404.0	260.9	117.5	85.1
87.5°	13.6	12.2	21.4	39.0	76.4	209.9	292.2	171.3	97.3	34.6	26.6
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°	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6	430.6
2.5°	524.9	522.3	487.5	491.9	499.5	501.3	501.1	488.4	475.0	512.4	511.2
5°	668.5	645.2	627.8	624.0	602.7	581.3	588.8	586.2	582.9	599.8	601.9
7.5°	771.9	739.7	719.5	667.5	618.2	575.4	589.0	593.2	584.8	615.3	624.5
10°	799.1	773.8	751.9	685.2	657.9	633.0	596.1	554.0	548.4	530.7	532.8
12.5°	869.4	865.9	791.4	732.6	697.1	647.5	567.9	516.9	473.1	475.3	462.6
15°	924.9	926.8	837.2	755.0	659.8	584.1	490.3	426.8	381.9	373.0	363.8
17.5°	999.4	995.6	841.0	728.2	607.6	496.6	381.7	318.7	311.2	316.4	308.4
20°	1031.8	998.7	817.0	661.6	526.0	377.2	288.4	255.0	269.6	290.3	290.7
22.5°	1061.0	1004.3	804.6	608.1	417.4	274.3	231.5	225.4	242.6	270.5	272.9
25°	1059.8	1030.4	782.2	554.0	323.7	214.1	201.2	205.7	226.1	255.3	256.9
27.5°	1113.2	1010.4	724.2	483.0	243.7	183.3	186.6	194.9	204.5	232.2	237.6
30°	1112.7	1047.6	695.0	396.8	195.8	168.1	176.5	183.6	191.6	216.9	220.0
32.5°	1139.0	1023.4	677.4	308.6	175.6	164.3	166.4	173.5	185.0	202.1	204.3
35°	1170.7	1050.9	621.0	245.1	168.1	161.0	162.6	166.6	177.2	193.0	195.1
37.5°	1272.5	1056.0	598.7	206.6	167.6	159.6	159.4	161.5	173.5	187.8	194.1
40°	1312.2	1103.3	533.5	193.0	165.9	159.6	156.3	157.5	167.4	185.7	190.6
42.5°	1407.4	1119.0	485.4	188.3	165.9	156.8	151.6	153.5	165.0	181.2	189.0
45°	1505.4	1141.4	428.0	187.3	165.7	156.5	146.7	150.9	160.3	173.9	182.4
47.5°	1645.1	1221.8	370.7	184.5	163.8	157.7	145.5	145.3	153.5	165.2	173.2
50°	1872.8	1347.3	326.2	181.0	164.1	156.8	143.1	139.9	145.3	155.6	163.4
52.5°	2189.9	1561.2	308.8	179.1	162.2	153.0	139.1	134.0	137.0	145.3	152.8
55°	2558.0	1850.0	326.0	179.1	158.4	147.1	133.5	127.4	129.0	134.7	142.0
57.5°	2988.1	2208.9	409.0	176.5	153.7	140.1	126.7	119.6	120.1	125.0	131.6
60°	3437.3	2609.9	594.9	174.4	150.4	132.3	118.7	111.4	110.7	115.4	121.3
62.5°	3887.1	2979.9	790.4	179.3	149.5	125.7	110.2	102.9	102.7	106.9	111.9
65°	4244.9	3232.8	839.1	199.3	155.6	118.2	101.5	94.7	94.3	97.8	103.2
67.5°	4420.5	3269.4	637.4	224.2	168.5	111.2	93.1	86.7	86.3	90.0	94.7
70°	4290.5	3018.9	393.5	226.8	167.8	102.9	84.4	79.0	78.0	82.0	85.6
72.5°	3809.6	2640.7	299.0	200.7	145.3	91.2	75.7	71.0	69.6	73.1	76.4
75°	3057.7	2096.6	239.5	161.9	114.5	76.9	67.0	62.5	60.9	64.2	67.0
77.5°	1781.2	1179.4	175.1	126.5	86.5	62.8	57.1	53.1	51.2	54.8	56.9
80°	579.1	393.0	110.0	90.7	63.2	49.1	46.3	43.5	41.6	44.0	44.7
82.5°	208.0	146.2	60.9	55.7	42.1	35.3	35.0	33.4	31.0	32.0	32.0
85°	92.1	66.8	36.2	29.9	25.1	18.8	22.1	20.9	18.6	18.1	17.4
87.5°	25.9	22.1	13.2	10.1	8.2	3.1	7.1	6.3	5.2	4.7	3.3
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)