

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: P596856

Luminaire Tested: **MSA-SA1B-835-U-SL3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596856  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1B-835-U-SL3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4097 lumens  
Efficiency: N/A  
Efficacy: 93.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G1

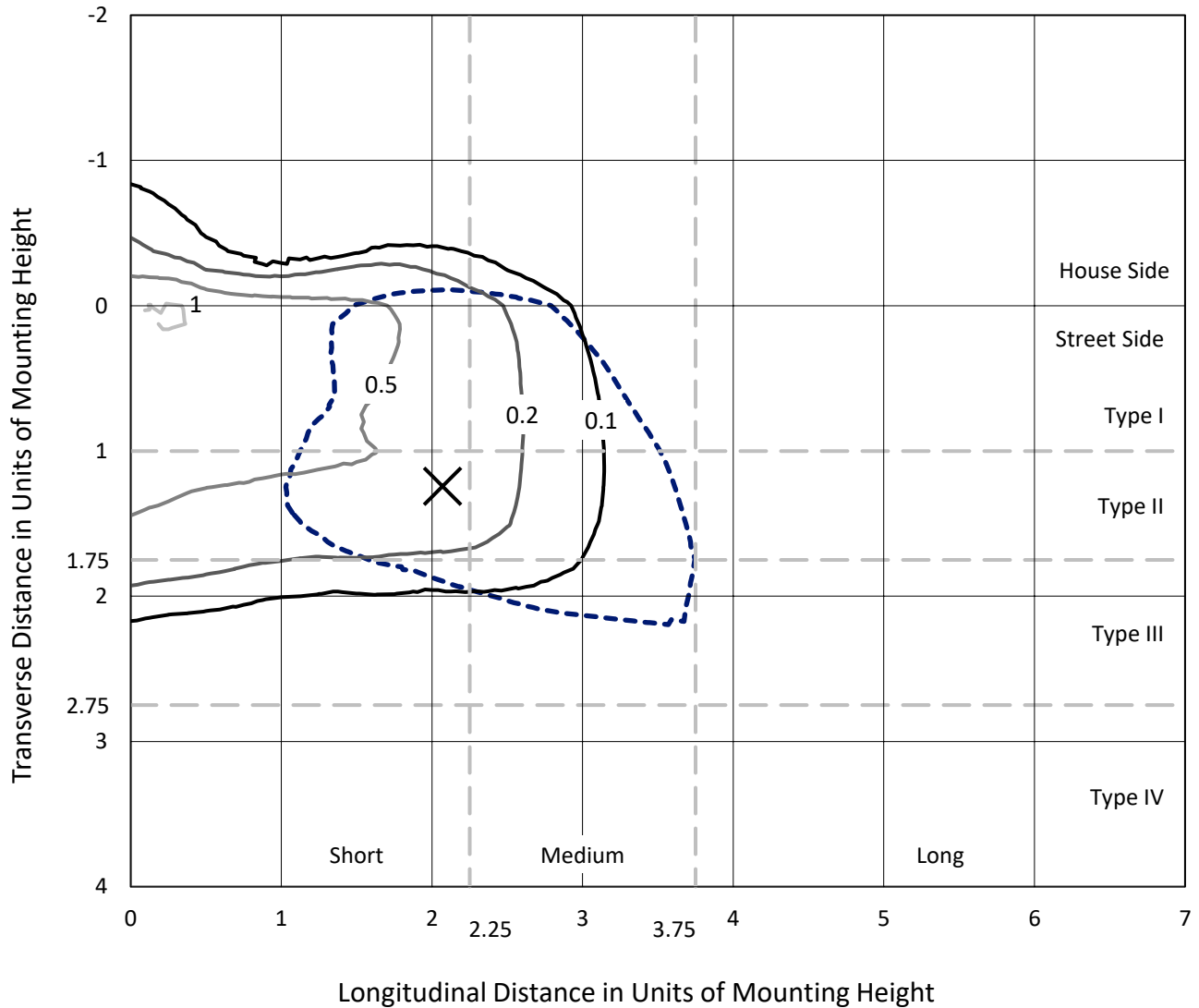
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P596856  
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### Iso-Footcandle Lines of Horizontal Illumination

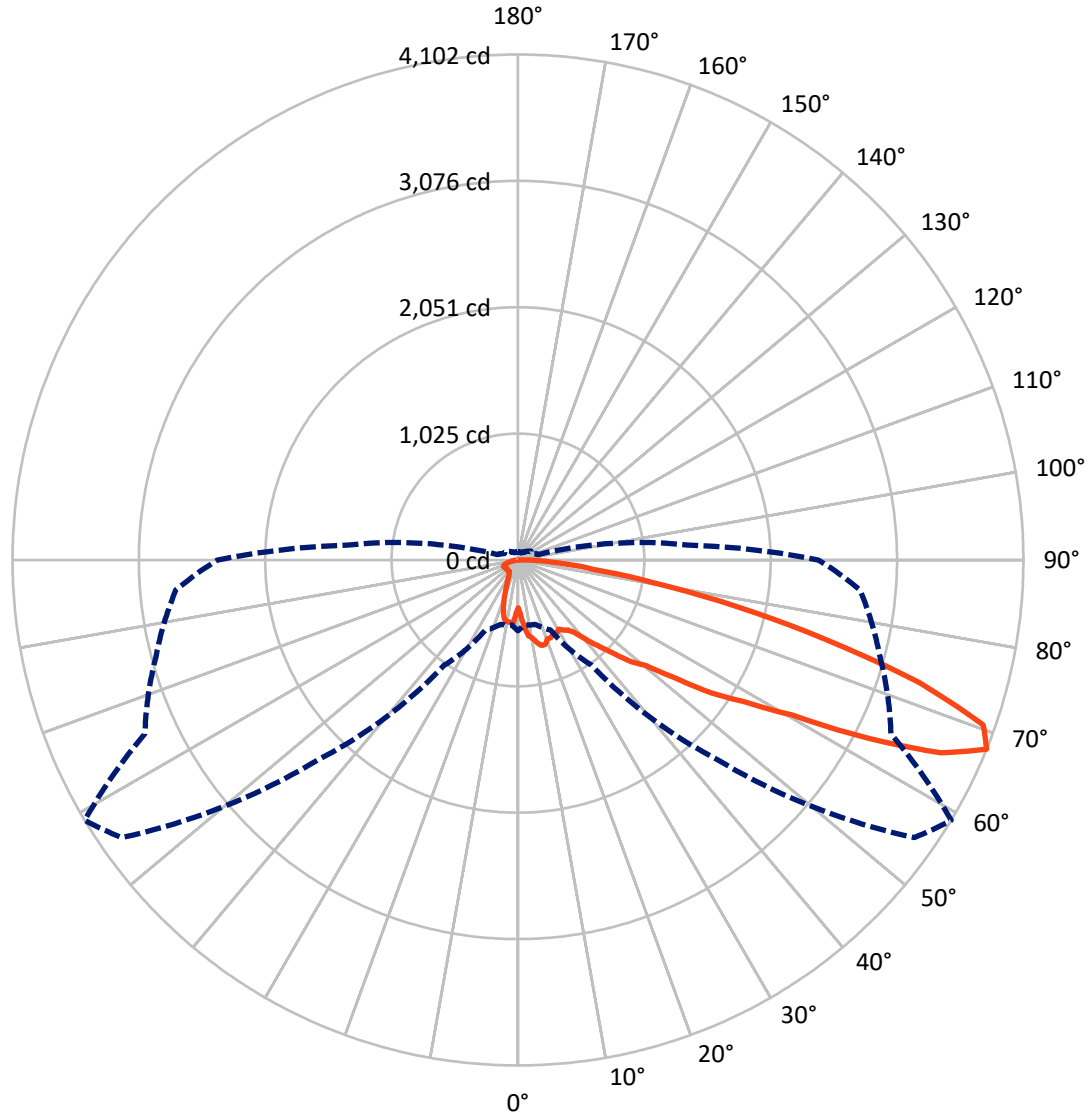
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc  
 Type III - Short - N/A

REPORT NUMBER: P596856  
CATALOG NUMBER: MSA-SA1B-835-U-SL3

### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P596856

CATALOG NUMBER: MSA-SA1B-835-U-SL3

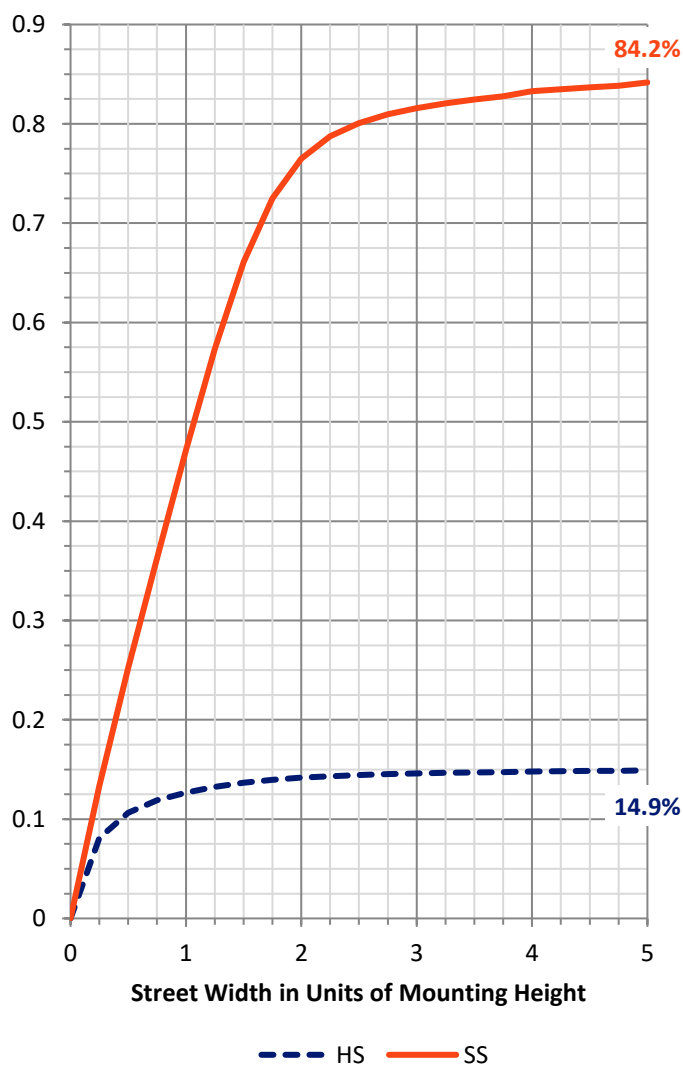
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	616.7	0.0	616.7
	% Fixture	15.1	0.0	15.1
<b>Street Side</b>	Lumens	3480.3	0.0	3480.3
	% Fixture	84.9	0.0	84.9
<b>Total</b>	Lumens	4097.0	0.0	4097.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	50.6	1.2
10°-20°	149.8	3.7
20°-30°	214.0	5.2
30°-40°	315.3	7.7
40°-50°	532.7	13.0
50°-60°	927.0	22.6
60°-70°	1181.3	28.8
70°-80°	625.5	15.3
80°-90°	100.6	2.5
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°	4097.0	100.0
0°-180°	4097.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P596856

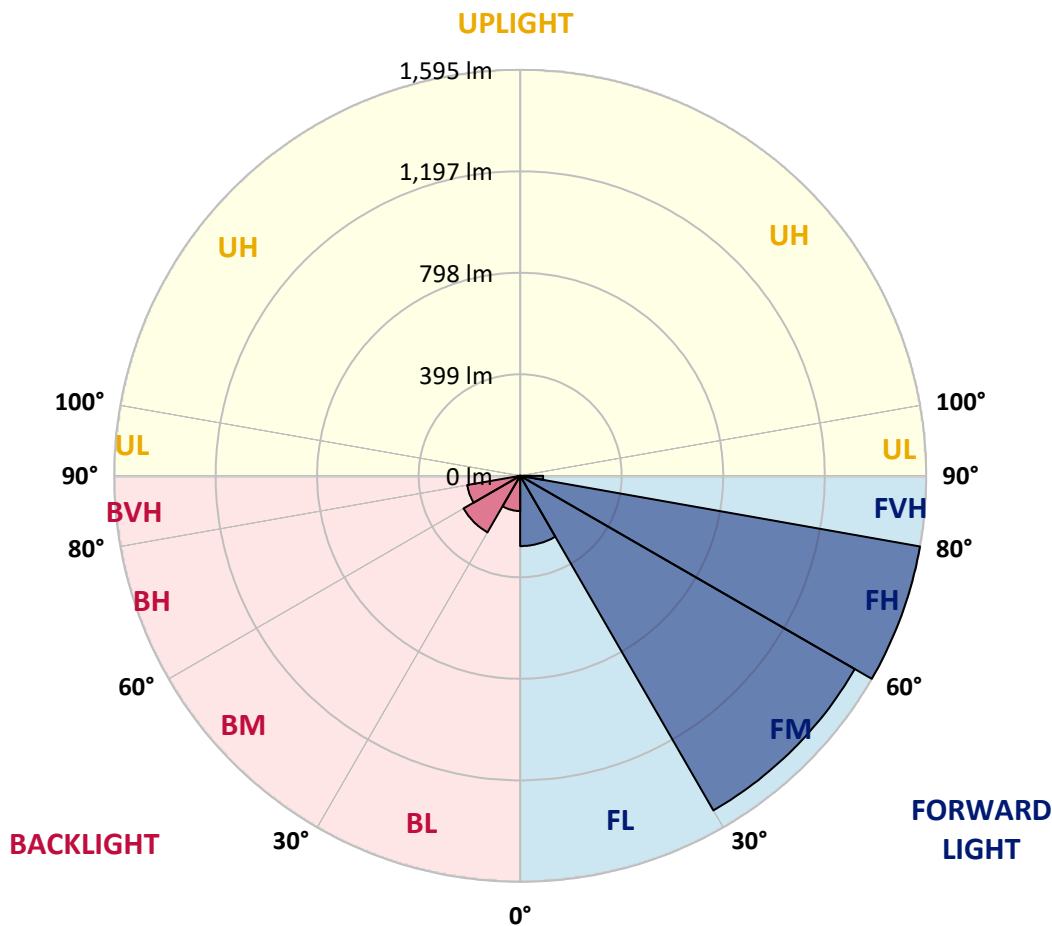
CATALOG NUMBER: MSA-SA1B-835-U-SL3

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	276.1	6.7			
FM (30°-60°)	1518.3	37.1			
FH (60°-80°)	1595.5	38.9			G1/1800
FVH (80°-90°)	90.4	2.2			G1/100
BL (0°-30°)	138.3	3.4	B1/500		
BM (30°-60°)	256.8	6.3	B1/1000		
BH (60°-80°)	211.4	5.2	B1/500		G1/500
BVH (80°-90°)	10.2	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-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	387.7	387.7	387.7	387.7	387.7	387.7	387.7	387.7	387.7	387.7	387.7
2.5°	484.0	461.5	437.5	444.3	458.0	464.2	457.5	450.9	442.4	432.3	466.7
5°	587.0	553.5	548.6	548.5	543.6	524.1	549.1	547.4	557.5	567.9	594.6
7.5°	616.3	603.8	590.3	596.7	572.2	571.2	610.1	621.2	640.6	634.2	670.2
10°	601.2	587.2	594.3	591.7	593.9	619.6	643.4	644.1	664.9	685.4	662.3
12.5°	574.7	575.7	604.0	603.0	639.4	687.2	694.3	688.7	722.8	708.9	728.7
15°	593.6	606.3	599.1	605.2	619.6	680.4	700.2	720.3	752.6	765.1	745.3
17.5°	623.8	630.6	598.6	595.3	625.0	653.8	703.0	720.2	725.2	814.3	786.3
20°	611.0	624.7	593.4	553.3	602.6	640.8	689.3	684.0	708.5	818.1	794.8
22.5°	647.4	624.7	584.9	556.4	573.8	608.9	650.0	684.2	713.2	795.7	807.1
25°	654.4	643.6	606.4	578.1	572.2	584.7	643.4	665.8	714.8	826.2	800.5
27.5°	696.7	680.6	604.9	605.7	576.4	554.4	622.6	669.6	732.5	807.3	816.7
30°	749.3	737.0	642.0	645.5	604.9	564.3	636.8	651.1	742.7	836.8	837.0
32.5°	788.7	810.4	715.1	667.9	653.5	623.1	614.9	679.0	730.7	890.3	871.7
35°	859.7	876.6	771.4	733.5	684.7	650.5	674.3	697.4	780.6	960.6	923.3
37.5°	991.2	971.7	875.9	816.3	798.1	748.8	762.0	745.9	834.7	1039.6	1024.3
40°	1067.2	1050.4	949.5	916.5	844.3	850.5	834.1	845.9	907.1	1123.6	1118.8
42.5°	1142.2	1119.6	1034.4	1011.5	939.4	908.9	911.8	950.0	1018.8	1259.4	1243.3
45°	1216.4	1158.5	1121.2	1127.3	1092.6	1029.9	1034.2	1070.2	1140.7	1414.6	1377.5
47.5°	1273.1	1225.4	1196.2	1188.7	1171.6	1255.4	1217.9	1232.5	1263.6	1552.8	1538.8
50°	1380.6	1324.9	1286.8	1276.1	1334.4	1451.1	1374.7	1343.3	1409.4	1731.5	1724.2
52.5°	1552.6	1483.2	1419.8	1419.1	1503.5	1579.2	1633.0	1578.9	1603.2	1914.5	1935.3
55°	1702.8	1622.4	1565.5	1596.9	1717.1	1763.4	1946.2	1903.9	1883.4	2099.2	2158.7
57.5°	1758.9	1665.0	1627.8	1674.2	1851.3	2089.5	2282.7	2171.2	2151.3	2308.2	2433.1
60°	1635.8	1536.5	1538.8	1626.1	1932.9	2328.9	2650.6	2556.0	2439.0	2568.5	2690.4
62.5°	1285.1	1195.3	1253.9	1386.7	1864.5	2561.5	3143.7	3183.6	2767.6	2784.3	2833.1
65°	873.5	811.3	864.1	994.1	1512.2	2688.4	3613.3	3773.4	3066.9	2925.6	2894.7
67.5°	574.8	530.9	541.2	627.6	1041.0	2291.9	3927.4	4101.8	3340.5	3041.6	2786.0
70°	445.2	409.7	405.2	450.5	617.4	1592.2	3741.2	4006.5	3507.2	2932.9	2428.4
72.5°	349.3	322.4	324.8	368.4	478.1	883.4	2895.0	3407.0	3256.2	2529.4	1865.7
75°	272.4	250.4	262.7	312.5	442.2	549.0	1997.5	2585.8	2517.4	1873.0	1064.1
77.5°	197.7	183.5	201.0	266.2	415.6	471.0	1243.4	1804.0	1612.7	961.7	365.1
80°	129.7	121.7	136.1	217.0	376.9	453.3	768.4	1105.4	796.9	270.1	138.2
82.5°	76.4	72.9	84.9	146.9	303.0	424.8	512.5	614.3	326.1	114.2	73.4
85°	40.1	37.5	50.3	84.4	208.9	387.9	403.5	367.7	157.5	49.7	35.1
87.5°	13.4	13.0	21.4	32.6	79.0	205.9	215.3	174.7	64.9	14.4	7.6
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P596856  
 CATALOG NUMBER: MSA-SA1B-835-U-SL3

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	387.7	387.7	387.7	387.7	387.7	387.7	387.7	387.7	387.7	387.7	387.7
2.5°	471.4	464.4	424.5	430.0	435.3	432.7	431.1	413.0	411.3	437.0	434.9
5°	593.9	565.1	531.1	529.5	507.1	484.2	488.7	481.4	483.5	494.1	495.2
7.5°	658.7	622.8	590.3	537.5	492.7	456.4	462.2	460.4	455.7	479.7	486.1
10°	657.5	625.5	588.9	525.0	494.8	465.3	429.9	396.4	386.5	374.7	375.7
12.5°	700.9	672.6	592.7	527.6	486.6	435.8	369.5	332.8	297.8	297.1	288.2
15°	714.4	693.6	600.9	512.7	429.5	356.6	288.0	248.3	222.9	217.9	210.4
17.5°	748.6	716.0	576.1	464.4	363.2	278.8	216.5	188.7	186.6	190.1	186.3
20°	750.9	697.9	531.3	393.1	291.8	211.3	176.6	162.7	170.1	178.7	178.3
22.5°	749.0	675.2	492.5	332.3	219.3	169.8	154.7	151.6	158.5	171.2	172.7
25°	729.5	667.7	444.1	272.9	178.0	145.5	141.3	143.2	151.9	166.8	166.8
27.5°	749.8	637.3	383.3	222.1	149.7	129.5	132.5	137.3	143.8	160.8	163.9
30°	743.2	647.4	334.4	178.8	131.9	118.4	125.0	129.9	137.2	154.9	156.4
32.5°	761.0	620.5	293.2	150.4	120.3	114.1	115.6	122.2	131.8	145.7	148.4
35°	788.0	630.4	246.0	135.2	114.6	109.0	112.0	117.2	126.7	140.3	142.5
37.5°	874.5	629.9	213.4	126.9	113.5	108.0	109.4	113.0	124.1	136.5	141.7
40°	930.1	666.0	183.7	125.0	112.3	107.5	106.3	110.2	119.1	133.7	137.3
42.5°	1034.4	688.0	170.8	124.3	112.2	104.5	103.3	108.0	116.7	130.2	135.8
45°	1144.6	719.5	160.6	124.0	111.6	104.0	100.3	106.3	113.5	126.6	133.0
47.5°	1274.3	786.0	154.9	122.7	110.6	104.7	99.3	102.3	110.4	123.4	129.9
50°	1444.1	874.0	156.1	121.0	112.2	104.9	97.7	99.1	106.6	119.3	125.9
52.5°	1650.6	1010.3	163.9	121.7	113.2	104.0	97.1	96.4	102.8	113.9	120.5
55°	1899.4	1203.7	187.3	125.0	113.2	103.8	96.0	92.9	97.7	106.8	113.2
57.5°	2199.5	1427.6	233.2	126.6	112.3	102.8	93.8	88.2	91.1	98.6	104.7
60°	2457.4	1608.4	280.4	127.6	114.1	100.3	89.2	82.3	84.2	89.9	95.3
62.5°	2588.8	1659.1	294.6	126.7	118.8	98.8	83.9	76.0	76.2	81.1	85.9
65°	2613.4	1591.5	237.5	125.9	124.8	98.6	80.0	70.7	69.4	72.9	77.1
67.5°	2437.7	1381.5	171.4	124.0	125.5	97.6	77.4	66.3	63.2	65.6	69.1
70°	2069.8	1112.5	143.9	120.1	117.2	92.4	72.9	61.8	57.6	59.4	62.0
72.5°	1543.1	823.1	125.5	112.0	102.1	79.0	66.0	56.8	52.4	53.6	55.6
75°	857.3	439.1	105.0	97.4	83.3	63.9	56.3	50.3	46.5	47.0	49.1
77.5°	284.7	162.0	77.1	77.3	63.0	49.3	46.4	43.1	40.1	40.3	42.0
80°	129.0	89.6	55.2	55.6	43.9	35.8	35.6	34.5	32.6	32.1	33.3
82.5°	74.8	54.3	37.8	36.1	28.3	23.3	25.9	25.3	24.8	22.9	23.3
85°	36.8	29.2	19.8	18.8	15.6	11.6	13.9	14.4	13.9	11.8	11.6
87.5°	9.0	9.5	4.9	4.5	2.6	1.2	2.1	2.1	2.6	1.7	0.9
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)