

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: P596932

Luminaire Tested: **MSA-SA2A-835-U-T3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596932  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-835-U-T3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6543 lumens  
Efficiency: N/A  
Efficacy: 99.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

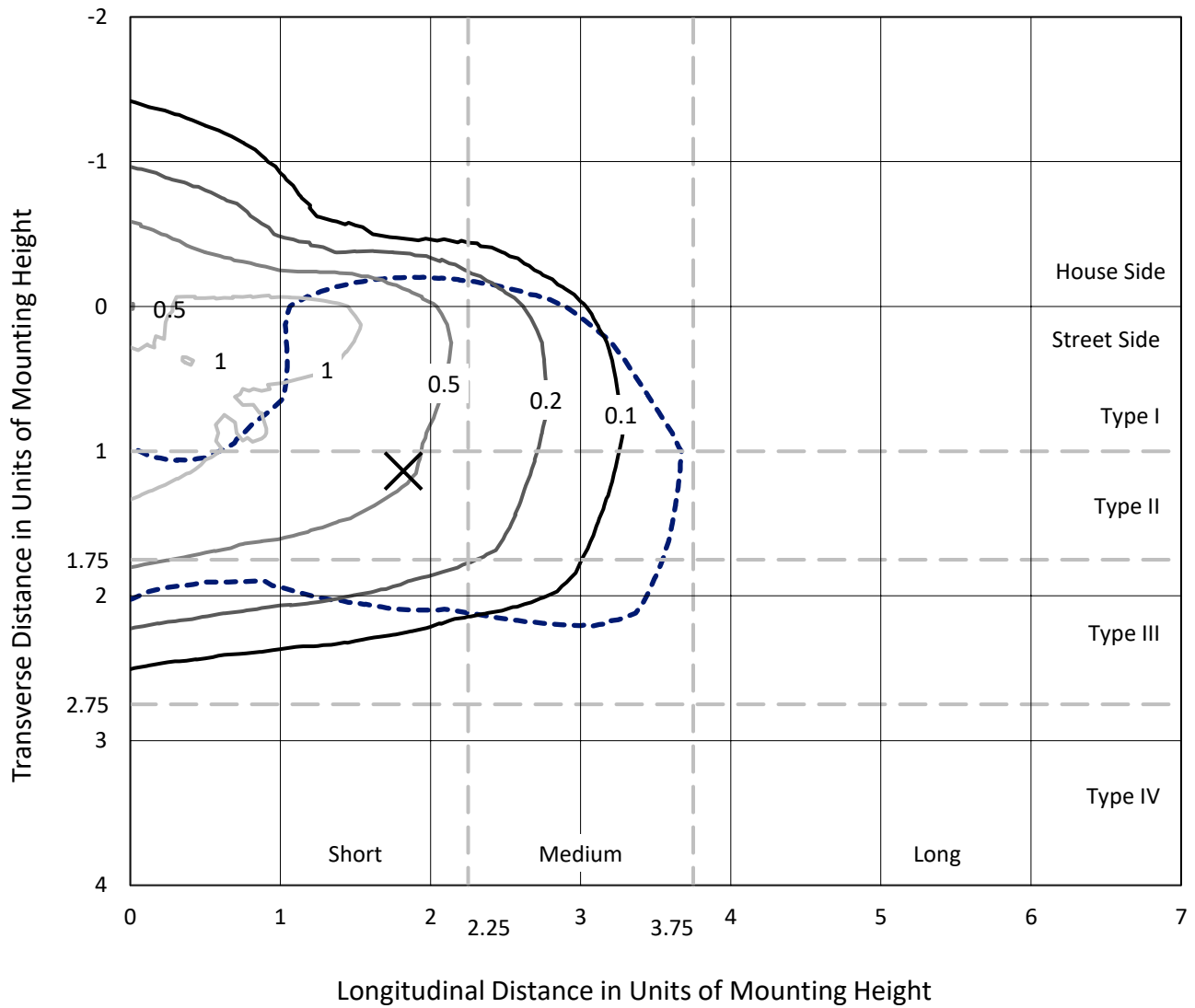
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P596932  
 CATALOG NUMBER: MSA-SA2A-835-U-T3

### Iso-Footcandle Lines of Horizontal Illumination

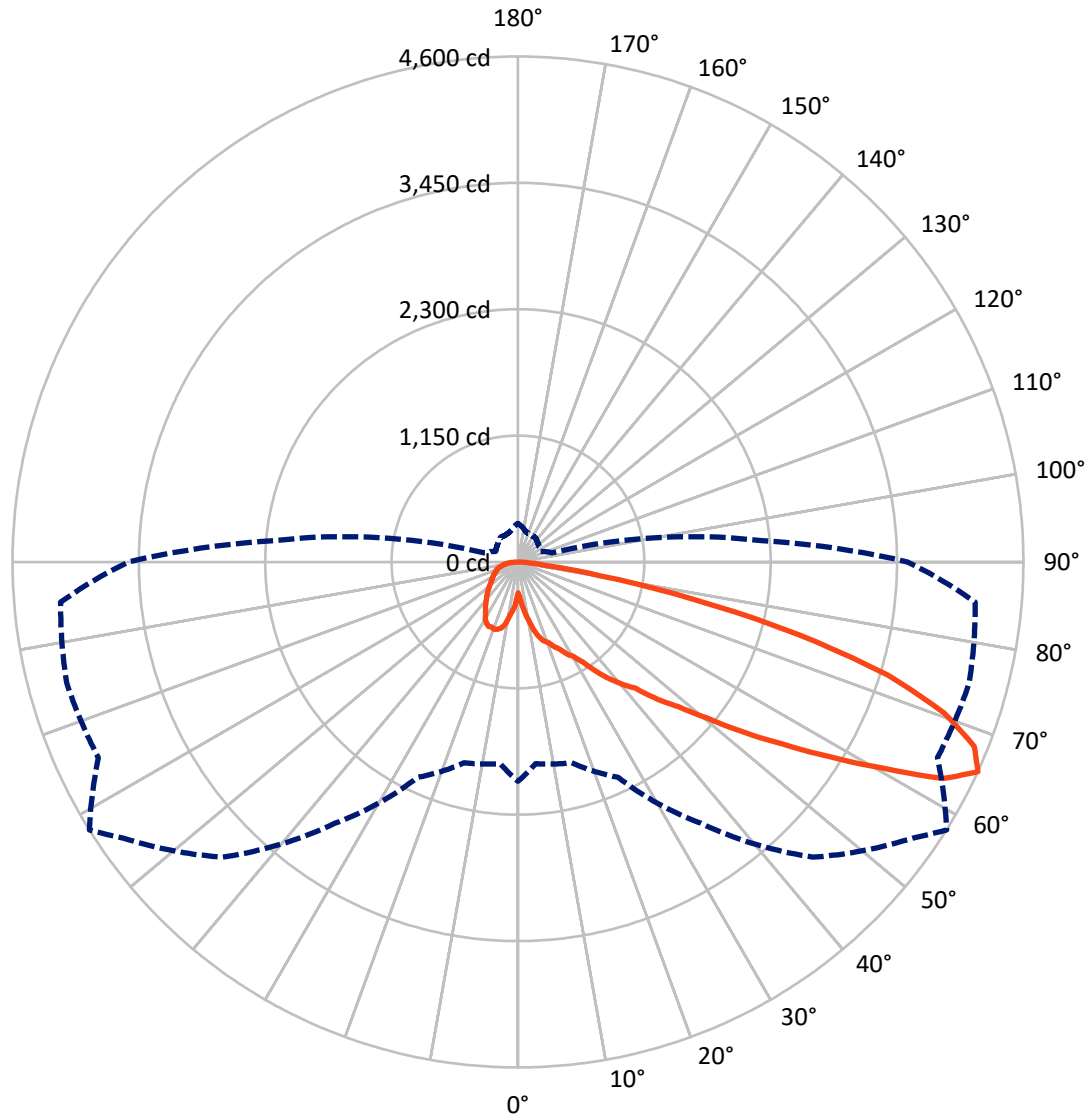
✕ Max cd  
 - - - 1/2 Max cd



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

REPORT NUMBER: P596932  
CATALOG NUMBER: MSA-SA2A-835-U-T3

### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral    - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P596932  
 CATALOG NUMBER: MSA-SA2A-835-U-T3

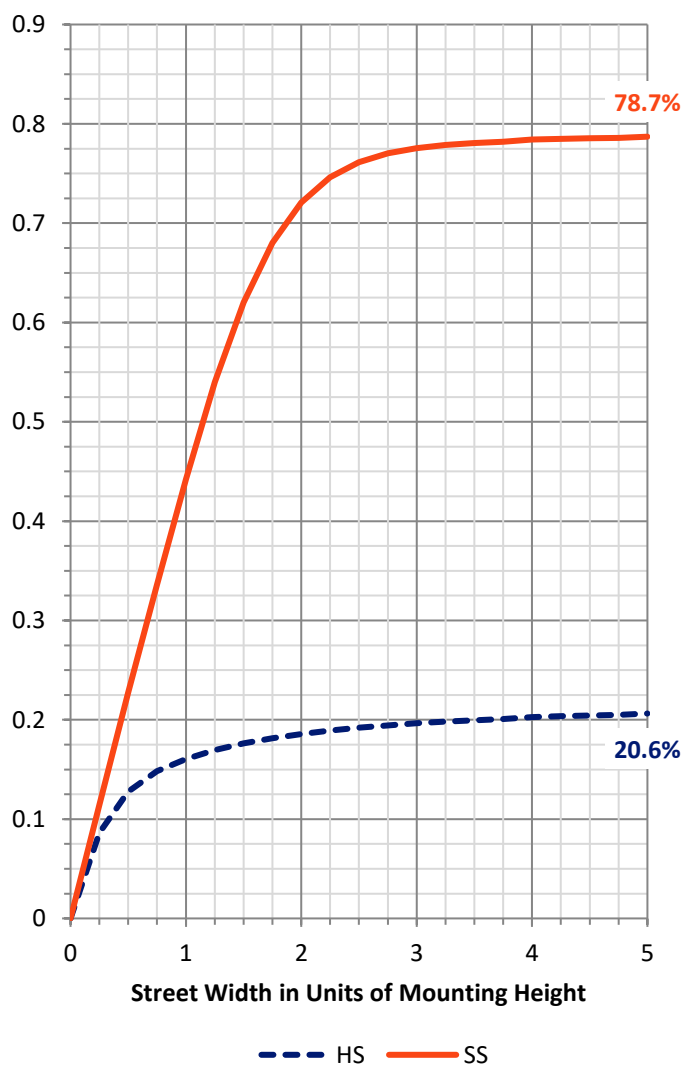
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1378.1	0.0	1378.1
	% Fixture	21.1	0.0	21.1
<b>Street Side</b>	Lumens	5164.8	0.0	5164.8
	% Fixture	78.9	0.0	78.9
<b>Total</b>	Lumens	6543.0	0.0	6543.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	42.8	0.7
10°-20°	186.7	2.9
20°-30°	358.3	5.5
30°-40°	591.5	9.0
40°-50°	983.2	15.0
50°-60°	1623.8	24.8
60°-70°	1821.6	27.8
70°-80°	828.2	12.7
80°-90°	106.8	1.6
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°	6543.0	100.0
0°-180°	6543.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P596932

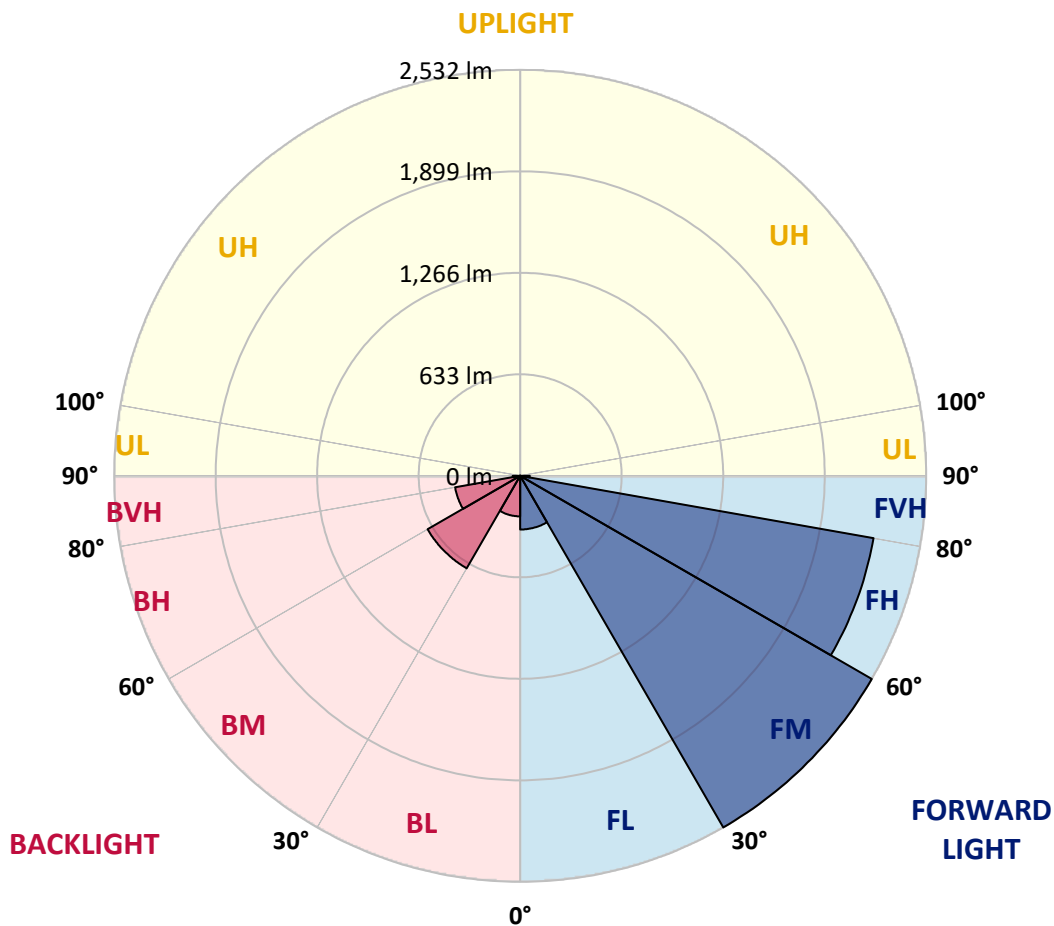
CATALOG NUMBER: MSA-SA2A-835-U-T3

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	334.8	5.1			
FM (30°-60°)	2532.0	38.7			
FH (60°-80°)	2237.8	34.2			G2/5000
FVH (80°-90°)	60.2	0.9			G1/100
BL (0°-30°)	253.0	3.9	B1/500		
BM (30°-60°)	666.5	10.2	B1/1000		
BH (60°-80°)	412.0	6.3	B1/500		G1/500
BVH (80°-90°)	46.7	0.7			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 Short





REPORT NUMBER: P596932  
 CATALOG NUMBER: MSA-SA2A-835-U-T3

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9
2.5°	335.4	325.3	308.4	312.5	322.3	327.8	324.5	320.2	314.4	313.4	338.4
5°	434.3	415.0	407.1	403.8	391.8	384.7	397.0	395.4	401.9	413.9	438.4
7.5°	506.5	492.9	479.8	478.5	455.3	447.1	463.5	472.2	483.9	484.2	517.4
10°	545.2	533.5	533.2	521.0	519.1	534.6	534.9	541.4	542.8	556.7	550.1
12.5°	587.2	586.4	601.4	601.1	618.5	644.1	631.3	631.3	635.2	618.3	639.0
15°	687.2	695.9	667.8	672.5	672.5	697.5	696.7	701.6	713.4	709.0	699.7
17.5°	791.3	796.7	765.7	736.8	739.0	733.5	753.1	755.0	743.9	794.6	783.4
20°	858.3	879.6	814.2	777.9	785.0	791.3	792.1	780.4	774.7	852.6	837.3
22.5°	941.1	923.2	863.2	823.2	833.8	825.3	823.7	832.7	840.6	870.0	894.8
25°	996.5	995.1	923.2	879.3	867.6	865.1	881.7	878.2	897.0	950.4	934.9
27.5°	1076.8	1101.9	974.4	985.3	933.8	879.6	933.0	949.0	982.8	974.1	1008.7
30°	1232.7	1213.9	1080.7	1077.7	1019.3	973.8	1010.9	997.3	1058.0	1056.1	1081.7
32.5°	1359.9	1373.0	1205.5	1174.1	1130.8	1076.0	1051.5	1089.4	1122.1	1175.7	1190.2
35°	1494.6	1491.6	1333.2	1270.0	1198.4	1175.7	1206.0	1221.8	1291.3	1340.6	1306.3
37.5°	1703.8	1680.1	1498.9	1379.3	1325.6	1317.4	1369.2	1346.3	1421.5	1433.2	1452.6
40°	1898.4	1827.0	1650.4	1513.4	1428.1	1458.6	1460.2	1463.2	1503.5	1535.4	1631.1
42.5°	2083.4	2033.2	1804.4	1701.4	1575.8	1546.0	1564.6	1570.8	1672.8	1737.9	1870.3
45°	2336.2	2201.9	2025.6	1919.9	1779.3	1741.4	1728.3	1782.3	1880.7	2028.9	2142.5
47.5°	2550.1	2428.9	2260.8	2121.5	1964.3	2072.5	1998.4	1968.1	2100.3	2283.9	2464.9
50°	2727.5	2594.0	2429.2	2348.8	2323.7	2420.2	2227.8	2231.3	2352.3	2611.4	2818.8
52.5°	2864.9	2722.3	2576.3	2535.4	2675.5	2731.1	2592.1	2571.1	2659.4	2965.7	3214.7
55°	2993.2	2842.0	2729.2	2812.5	3048.5	3054.8	3045.0	2928.6	3034.9	3345.2	3624.5
57.5°	3026.2	2863.2	2788.3	2907.9	3227.0	3475.2	3572.8	3344.4	3452.6	3690.5	3975.5
60°	2856.4	2716.9	2686.9	2849.3	3323.4	3686.4	3941.1	3804.6	3764.0	3967.6	4221.3
62.5°	2508.7	2346.9	2371.1	2596.7	3221.8	3770.0	4232.2	4338.7	4092.9	4188.0	4328.6
65°	1996.7	1842.2	1891.3	2162.7	2902.7	3797.8	4380.9	4599.5	4211.7	4250.4	4176.6
67.5°	1408.2	1267.8	1329.7	1680.7	2414.7	3442.0	4406.5	4477.9	4085.3	4072.5	3761.3
70°	797.8	709.8	776.8	1069.5	1704.4	2742.0	4205.7	4111.7	3858.6	3677.1	3147.1
72.5°	365.9	335.7	367.8	544.4	981.2	1824.5	3433.5	3518.8	3324.8	3097.8	2394.3
75°	194.6	183.9	197.5	271.9	459.1	992.6	2439.5	2631.3	2528.1	2349.6	1561.9
77.5°	144.7	136.5	143.1	176.3	245.2	388.3	1386.1	1628.1	1667.3	1503.0	867.3
80°	110.9	104.4	110.9	133.2	169.8	184.5	592.6	758.9	864.3	698.4	344.7
82.5°	82.3	77.9	88.0	100.0	119.3	115.3	210.4	261.9	337.6	230.8	134.3
85°	65.4	59.9	63.8	67.8	76.3	63.2	96.2	107.6	113.9	95.4	49.6
87.5°	25.6	23.7	46.3	36.5	31.1	19.1	28.9	32.7	33.5	32.2	14.4
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: P596932  
 CATALOG NUMBER: MSA-SA2A-835-U-T3

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9	280.9
2.5°	341.1	338.4	322.3	327.5	336.0	337.6	341.1	331.3	326.4	344.4	345.2
5°	440.6	425.9	418.3	419.1	413.6	405.2	418.0	426.4	429.7	443.1	448.0
7.5°	517.7	500.0	487.2	472.5	451.8	438.4	460.8	477.1	485.8	513.6	524.5
10°	552.0	537.9	535.2	516.6	516.1	515.8	514.7	509.0	527.8	525.1	532.7
12.5°	622.9	619.9	594.0	586.6	587.5	586.6	563.8	562.7	562.9	588.0	579.0
15°	688.8	689.4	665.7	639.0	615.0	607.6	598.6	594.6	600.5	614.7	606.0
17.5°	770.3	773.0	705.2	662.9	631.3	630.5	609.0	583.7	620.2	628.9	619.3
20°	822.9	811.4	728.1	657.2	648.2	623.7	597.0	562.1	593.7	615.0	621.0
22.5°	872.8	852.9	749.3	667.3	624.3	595.1	569.2	546.6	556.7	580.4	576.6
25°	906.5	901.1	778.7	691.6	623.4	558.6	523.7	509.3	514.4	551.2	547.7
27.5°	987.2	928.3	773.6	697.8	597.3	508.7	491.3	475.7	470.6	510.4	521.3
30°	1041.1	1016.9	808.2	688.0	564.3	467.8	442.2	439.0	440.6	485.8	488.8
32.5°	1132.7	1069.8	864.9	650.4	516.3	437.6	408.2	409.5	416.9	449.9	456.7
35°	1228.1	1190.5	872.5	623.4	477.4	405.4	393.5	383.9	388.0	416.9	418.3
37.5°	1405.2	1275.2	919.3	581.7	448.8	393.2	370.3	361.9	364.0	380.4	392.1
40°	1561.0	1445.5	897.5	541.4	413.4	376.8	348.2	342.0	335.4	351.5	358.9
42.5°	1810.9	1567.0	890.2	497.0	396.7	354.8	335.2	318.5	312.3	325.9	339.2
45°	2060.8	1695.9	850.1	452.0	373.3	353.1	316.1	300.3	301.9	314.2	327.8
47.5°	2339.2	1868.9	782.3	408.4	347.7	345.2	297.0	290.2	295.1	308.7	322.3
50°	2668.4	2052.6	726.2	369.2	329.4	321.5	294.6	286.4	291.0	307.1	320.4
52.5°	3028.3	2254.0	685.3	333.0	308.7	302.7	297.8	289.9	295.4	309.3	323.2
55°	3386.1	2437.9	657.5	308.2	291.0	294.8	304.6	298.9	301.6	312.0	325.9
57.5°	3651.5	2534.9	601.6	281.7	276.6	290.2	305.4	295.9	297.5	312.0	327.0
60°	3805.7	2553.4	509.8	260.2	265.1	280.9	297.0	284.7	283.7	307.4	326.2
62.5°	3788.8	2445.8	404.4	240.6	252.0	267.0	284.2	272.5	275.5	307.9	327.8
65°	3546.9	2225.9	321.5	224.0	236.2	251.8	273.6	268.9	283.4	329.7	351.2
67.5°	3121.8	1904.6	258.3	208.4	221.5	241.4	280.9	293.2	299.5	352.0	374.1
70°	2530.0	1479.8	215.3	194.8	209.8	246.3	302.2	299.7	294.6	341.4	358.9
72.5°	1827.8	1014.4	189.4	181.5	195.4	231.6	302.7	289.6	283.1	311.7	324.3
75°	1143.6	605.2	165.4	164.6	173.3	207.6	289.1	277.4	259.7	273.8	290.2
77.5°	653.1	309.8	139.2	146.6	151.8	180.1	258.9	248.2	232.4	238.4	254.5
80°	249.3	149.9	117.4	130.2	128.9	152.6	219.3	216.9	198.9	200.8	210.6
82.5°	117.4	83.9	97.5	112.0	104.6	121.5	178.2	177.4	161.6	146.3	154.2
85°	43.6	44.7	71.4	85.3	72.8	78.5	128.9	125.3	110.1	92.9	102.7
87.5°	9.8	16.1	35.1	44.4	25.3	24.3	52.0	45.2	43.6	25.9	27.2
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)