

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: P597122

Luminaire Tested: **MSA-SA4B-835-U-SL4**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597122  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4B-835-U-SL4  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15602 lumens  
Efficiency: N/A  
Efficacy: 91.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G3

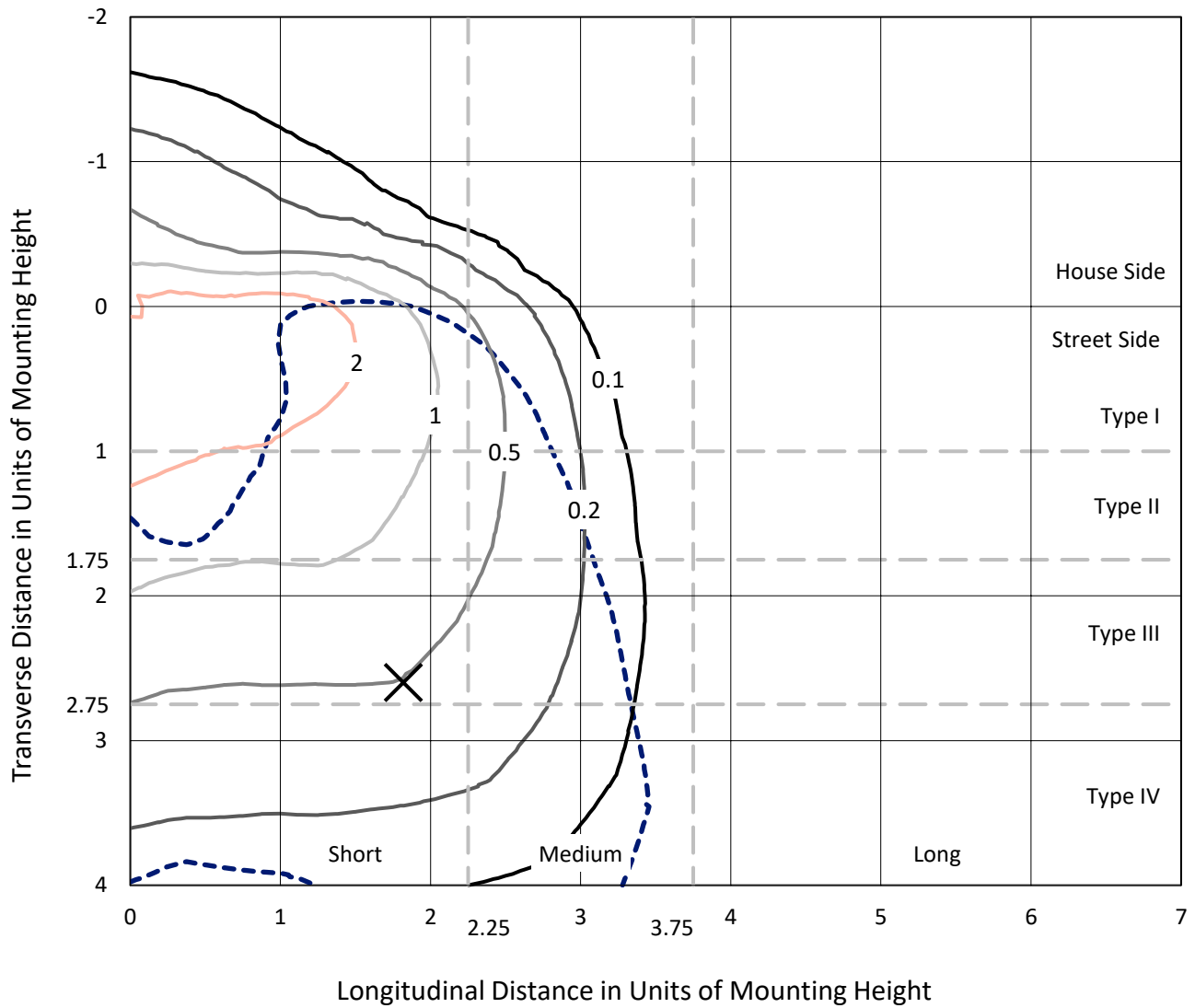
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

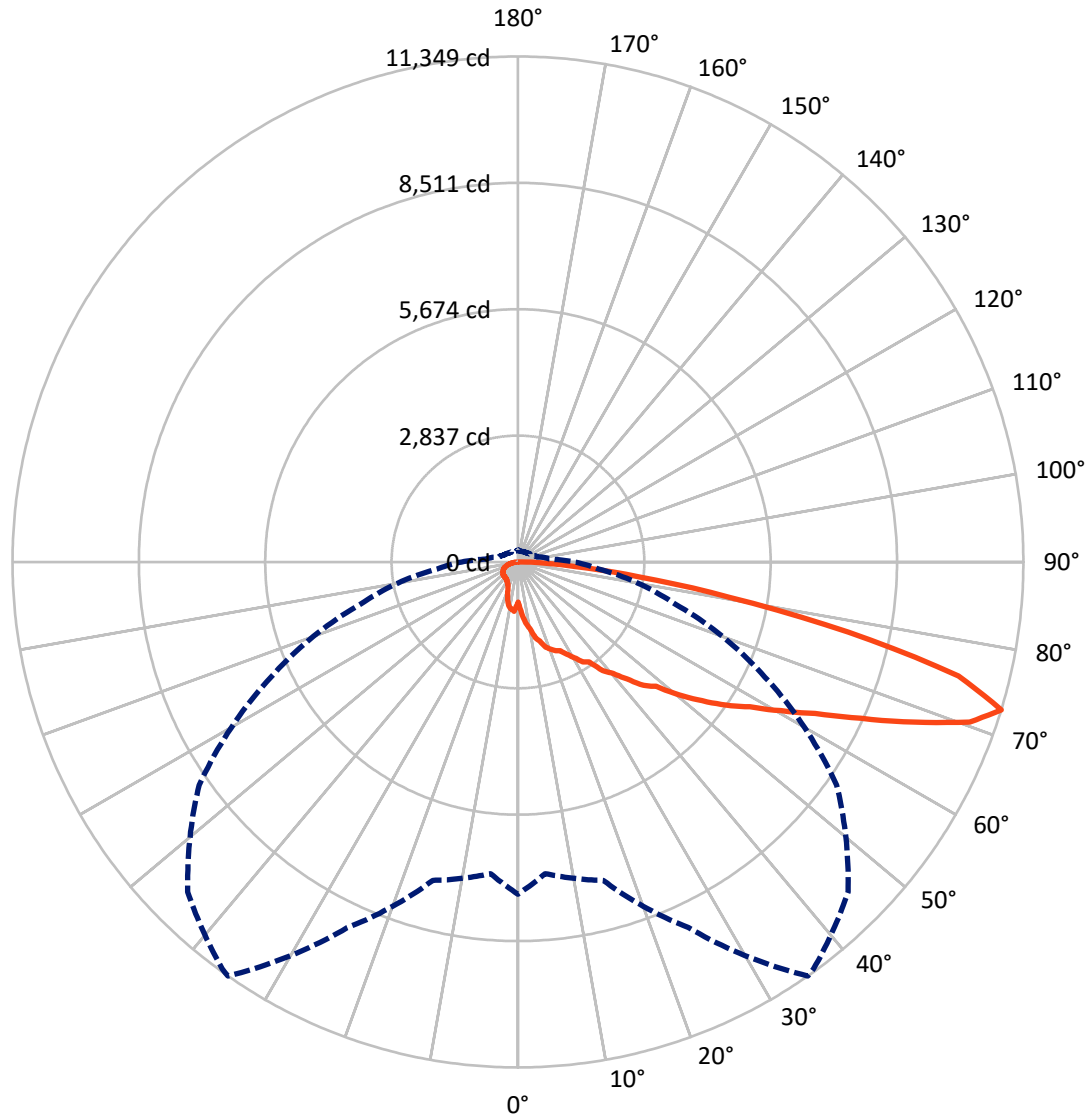
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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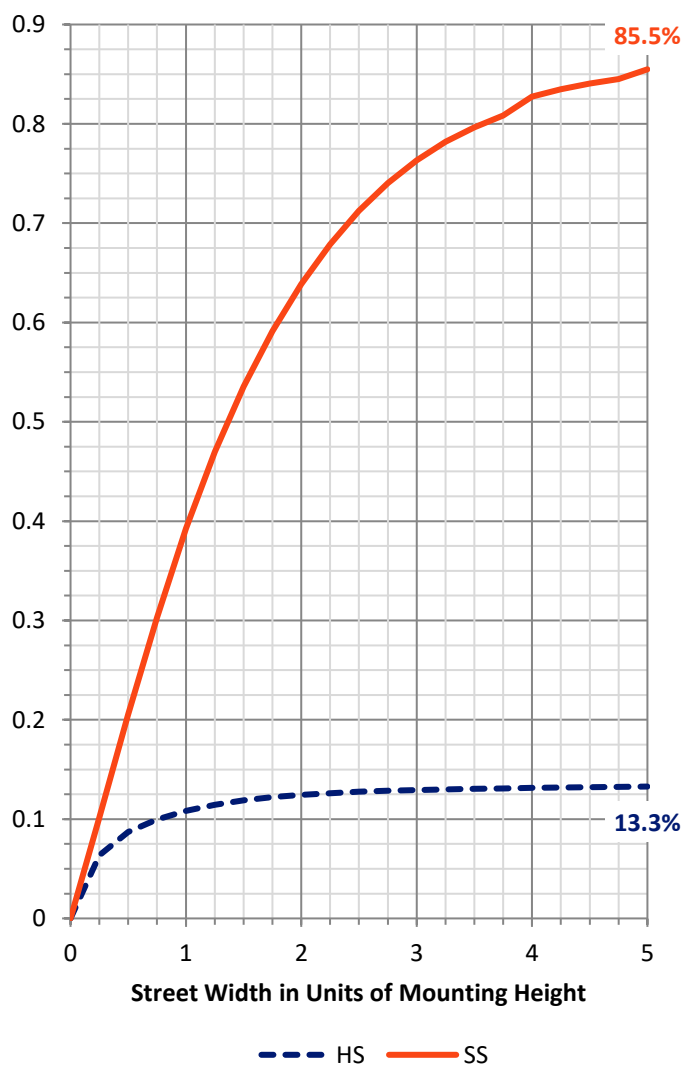
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2093.7	0.0	2093.7
	% Fixture	13.4	0.0	13.4
<b>Street Side</b>	Lumens	13508.3	0.0	13508.3
	% Fixture	86.6	0.0	86.6
<b>Total</b>	Lumens	15602.0	0.0	15602.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	119.8	0.8
10°-20°	422.1	2.7
20°-30°	733.4	4.7
30°-40°	1225.8	7.9
40°-50°	2127.6	13.6
50°-60°	3216.4	20.6
60°-70°	4166.8	26.7
70°-80°	3074.7	19.7
80°-90°	515.3	3.3
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°	15602.0	100.0
0°-180°	15602.0	100.0

**Coefficient of Utilization**



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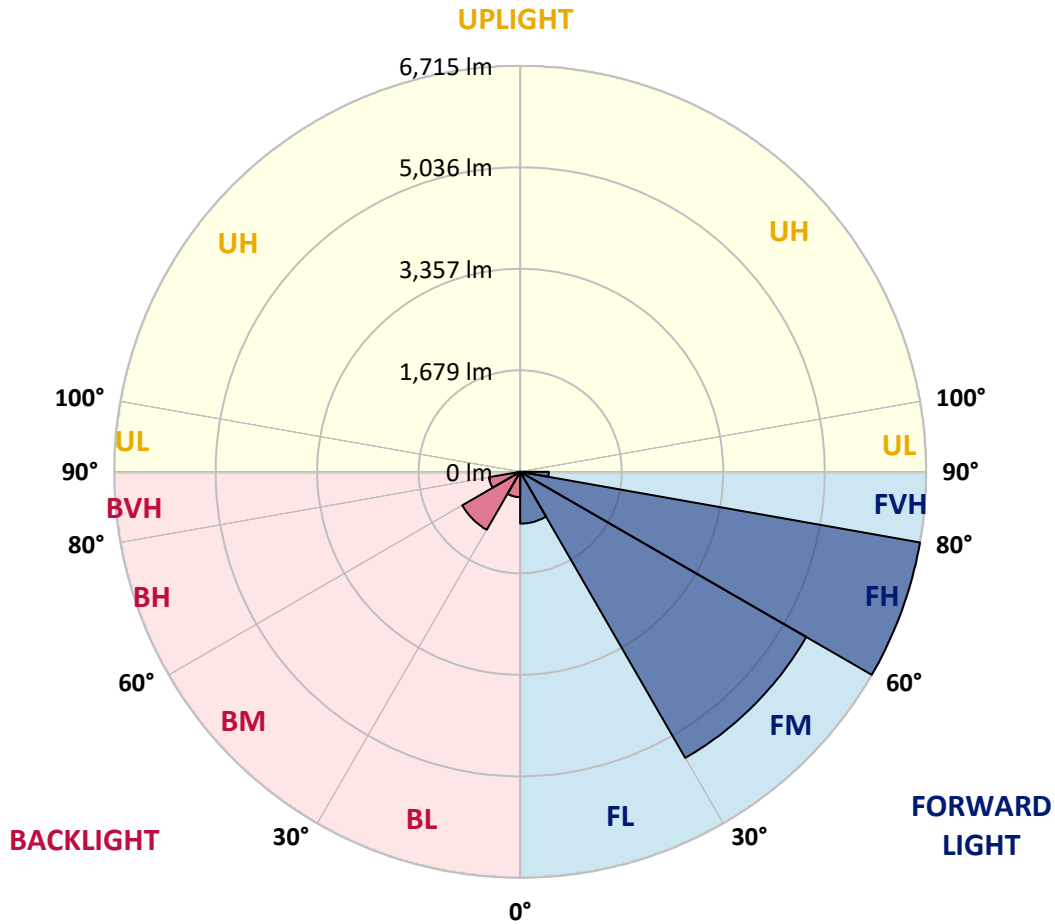
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	856.9	5.5			
FM (30°-60°)	5463.3	35.0			
FH (60°-80°)	6715.0	43.0			G3/7500
FVH (80°-90°)	473.1	3.0			G3/500
BL (0°-30°)	418.5	2.7	B1/500		
BM (30°-60°)	1106.6	7.1	B2/2500		
BH (60°-80°)	526.5	3.4	B2/1000		G2/1000
BVH (80°-90°)	42.2	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	901.6	901.6	901.6	901.6	901.6	901.6	901.6	901.6	901.6	901.6	901.6
2.5°	1124.7	1070.8	1024.2	1022.2	1065.5	1082.1	1075.4	1060.8	1043.5	1006.9	1086.8
5°	1409.1	1331.8	1317.2	1299.9	1260.6	1271.2	1207.3	1255.9	1271.2	1306.5	1359.8
7.5°	1576.9	1531.6	1496.3	1481.7	1413.7	1405.7	1358.5	1427.7	1457.0	1452.4	1531.6
10°	1642.8	1601.5	1604.2	1556.2	1534.3	1543.6	1548.9	1550.2	1568.2	1582.9	1542.9
12.5°	1676.8	1692.8	1751.4	1718.7	1746.7	1758.0	1813.9	1756.7	1758.7	1683.4	1724.7
15°	1847.9	1887.9	1853.9	1852.6	1843.9	1862.6	1910.5	1871.9	1901.8	1877.9	1824.6
17.5°	2054.3	2066.3	2001.1	1974.4	2009.1	2003.1	1991.1	1997.1	1922.5	2061.0	1995.7
20°	2117.6	2164.9	2079.0	1974.4	2089.0	2104.3	2101.6	2075.7	1947.8	2147.6	2084.3
22.5°	2301.4	2237.5	2169.5	2103.0	2161.6	2170.2	2155.6	2093.6	2051.0	2126.9	2176.9
25°	2384.6	2369.3	2282.8	2274.8	2210.2	2179.5	2204.8	2186.9	2144.9	2280.1	2224.8
27.5°	2575.1	2557.1	2358.0	2439.9	2346.0	2338.0	2204.2	2264.1	2306.1	2296.1	2378.6
30°	2790.8	2811.5	2520.5	2602.4	2493.8	2479.2	2344.7	2420.6	2449.2	2458.6	2561.8
32.5°	3030.6	3087.2	2798.2	2730.9	2673.0	2683.0	2569.1	2430.6	2541.8	2759.5	2804.2
35°	3290.3	3313.6	3010.6	2909.4	2758.2	2747.6	2749.6	2766.9	2879.4	3127.8	3162.4
37.5°	3770.4	3662.5	3396.8	3140.4	3089.8	2990.6	3057.9	3111.1	3223.7	3604.6	3749.8
40°	4066.1	3986.2	3581.3	3432.8	3292.9	3302.3	3428.1	3427.5	3693.2	4086.0	4307.8
42.5°	4339.8	4252.5	3871.0	3721.8	3589.3	3621.9	3657.9	3721.1	4230.5	4863.8	4965.0
45°	4560.2	4369.1	4094.7	4061.4	3952.2	3908.9	4061.4	4162.6	4873.2	5493.1	5551.7
47.5°	4710.0	4552.8	4284.5	4255.2	4174.6	4280.5	4696.7	4761.9	5371.3	6125.1	6120.4
50°	4937.7	4722.7	4480.3	4464.9	4692.0	4748.6	5256.1	5249.4	5856.0	6649.8	6539.9
52.5°	5200.1	4929.1	4666.1	4830.5	5176.8	5204.8	5644.9	5824.1	6385.4	7155.9	6868.9
55°	5501.8	5198.8	4944.4	5164.2	5679.6	5597.0	6042.5	6480.0	7048.0	7689.3	7106.6
57.5°	5875.4	5507.8	5302.0	5636.3	6138.4	6211.6	6611.9	7162.6	7581.4	8020.9	7279.8
60°	6269.6	5838.1	5649.6	5967.9	6781.0	6864.9	7256.5	7729.9	8179.4	8333.2	7247.1
62.5°	6645.8	6179.0	6008.5	6401.4	7493.5	7701.3	7990.3	8291.9	8676.8	8409.2	6852.2
65°	7064.7	6597.2	6490.0	7079.3	8459.8	8666.2	9043.8	8953.2	8847.3	8140.1	6199.0
67.5°	7508.2	7033.4	7053.4	7865.8	9599.1	9634.4	10214.4	9612.5	8646.9	7427.6	5102.2
70°	7746.6	7260.5	7466.2	8704.2	10758.5	10707.9	10826.4	9789.6	7829.8	5871.4	3516.7
72.5°	7457.6	7024.1	7401.0	9057.1	11348.5	11293.9	10482.8	8738.1	6121.7	3651.2	1823.3
75°	6314.2	5896.0	6472.7	8073.5	10216.4	10267.0	8921.2	6498.0	3504.7	1468.3	757.1
77.5°	4290.5	4074.7	4568.8	6017.9	7588.7	7763.9	6619.2	3799.7	1471.7	608.0	458.1
80°	2267.4	2164.9	2529.8	3466.7	4805.2	4935.7	3892.3	1892.5	753.8	393.6	327.0
82.5°	1231.9	1188.7	1384.4	1782.6	2730.2	2844.1	2018.4	1257.2	508.1	246.4	199.8
85°	827.7	811.1	940.9	957.6	1291.2	1328.5	1057.5	968.2	305.0	120.5	131.9
87.5°	414.2	397.6	495.4	437.5	492.8	493.4	484.8	618.0	77.2	40.0	24.0
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°	901.6	901.6	901.6	901.6	901.6	901.6	901.6	901.6	901.6	901.6	901.6
2.5°	1088.1	1064.8	984.2	983.6	995.5	987.5	993.5	960.9	946.9	1010.9	1007.5
5°	1352.5	1282.5	1215.3	1192.0	1164.7	1105.4	1108.7	1109.4	1099.4	1137.4	1140.0
7.5°	1507.6	1423.7	1361.8	1237.9	1140.7	1064.8	1074.8	1086.1	1074.8	1125.4	1144.0
10°	1530.3	1463.7	1389.8	1251.9	1187.3	1118.7	1049.5	988.2	980.9	957.6	964.9
12.5°	1664.8	1609.5	1455.0	1303.9	1228.6	1123.4	996.9	927.0	868.4	878.3	859.7
15°	1775.3	1736.0	1550.9	1353.1	1173.3	1042.8	908.3	812.4	759.8	753.8	735.2
17.5°	1925.2	1869.2	1559.6	1319.2	1102.1	945.6	793.8	685.2	662.6	653.3	643.9
20°	1997.1	1896.5	1528.3	1212.6	1018.8	829.7	680.6	587.3	580.7	597.3	594.0
22.5°	2059.7	1919.2	1500.3	1148.0	889.0	712.5	603.3	542.1	534.7	556.0	560.0
25°	2096.3	1983.8	1469.7	1082.1	808.4	625.3	545.4	510.8	512.1	540.1	536.7
27.5°	2261.4	2006.4	1392.4	1004.2	715.9	560.7	517.4	499.4	492.1	530.7	534.1
30°	2365.3	2154.2	1375.1	921.6	647.3	513.4	492.1	484.8	483.5	530.1	533.4
32.5°	2558.4	2203.5	1383.1	831.7	585.3	498.8	473.5	472.8	486.1	530.7	536.1
35°	2826.1	2411.3	1344.5	780.5	551.4	476.1	458.8	464.1	486.8	535.4	542.7
37.5°	3348.2	2607.0	1356.5	732.5	540.1	468.8	454.8	458.1	494.8	547.4	567.4
40°	3761.7	2962.0	1337.8	708.5	524.7	467.5	446.2	459.5	494.1	554.0	572.0
42.5°	4361.1	3245.0	1339.8	684.6	524.1	462.1	444.8	460.8	492.8	548.0	572.7
45°	4875.1	3498.7	1368.5	670.6	517.4	470.8	442.8	462.8	484.1	526.7	554.0
47.5°	5296.7	3781.7	1397.8	657.3	514.8	478.8	440.8	448.8	469.5	502.8	527.4
50°	5640.3	3980.8	1435.0	654.6	514.8	474.8	435.5	434.8	452.2	478.8	502.1
52.5°	5908.0	4121.3	1460.3	657.9	514.8	459.5	428.8	423.5	434.2	453.5	476.8
55°	6101.8	4164.6	1439.7	666.6	514.1	445.5	416.9	412.2	417.5	430.8	452.8
57.5°	6179.7	4050.7	1316.5	651.3	514.1	435.5	402.2	396.9	402.2	412.2	434.2
60°	5984.6	3684.5	1138.7	612.0	504.1	422.2	385.6	382.2	390.2	398.9	420.2
62.5°	5495.1	3197.7	948.9	565.4	483.5	410.9	369.6	370.2	382.9	394.9	416.2
65°	4734.6	2609.0	791.1	518.1	457.5	392.9	352.9	357.6	375.6	391.6	412.9
67.5°	3725.8	1933.1	665.9	472.1	420.9	363.6	334.3	335.6	348.3	363.6	384.2
70°	2490.5	1229.9	547.4	418.2	372.9	325.6	305.7	301.0	297.7	311.0	329.0
72.5°	1263.2	726.5	449.5	357.6	321.0	284.3	269.0	257.0	247.7	255.7	269.7
75°	661.9	508.1	362.9	297.0	265.0	241.7	230.4	214.4	207.8	212.4	222.4
77.5°	468.1	397.6	293.7	235.1	215.8	191.8	193.8	177.1	171.8	174.5	185.1
80°	359.6	315.0	225.7	177.8	166.5	143.2	149.8	139.8	133.2	131.9	139.8
82.5°	245.1	237.1	160.5	124.5	116.5	99.9	109.2	105.2	96.6	91.2	95.2
85°	165.1	157.2	97.9	71.9	68.6	51.9	66.6	63.9	56.6	48.6	49.3
87.5°	28.6	52.6	28.0	18.0	16.6	6.0	15.3	14.7	13.3	6.7	5.3
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)