

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: P368025

Luminaire Tested: **MSA-SA3C-760-U-T4FT-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368025  
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-SA3C-760-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: 13633 lumens  
Efficiency: N/A  
Efficacy: 82.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

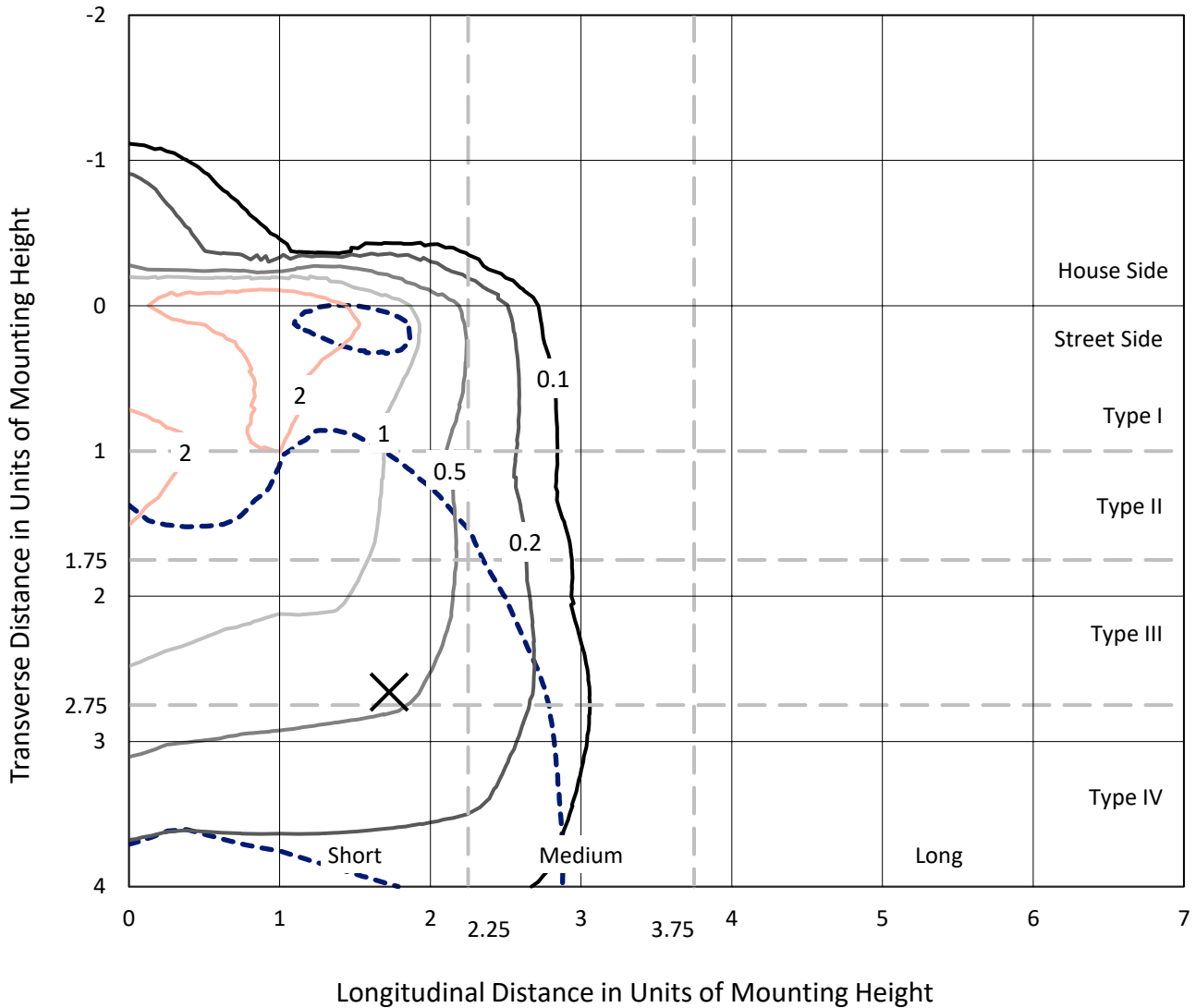
Input Watts (W): 166  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

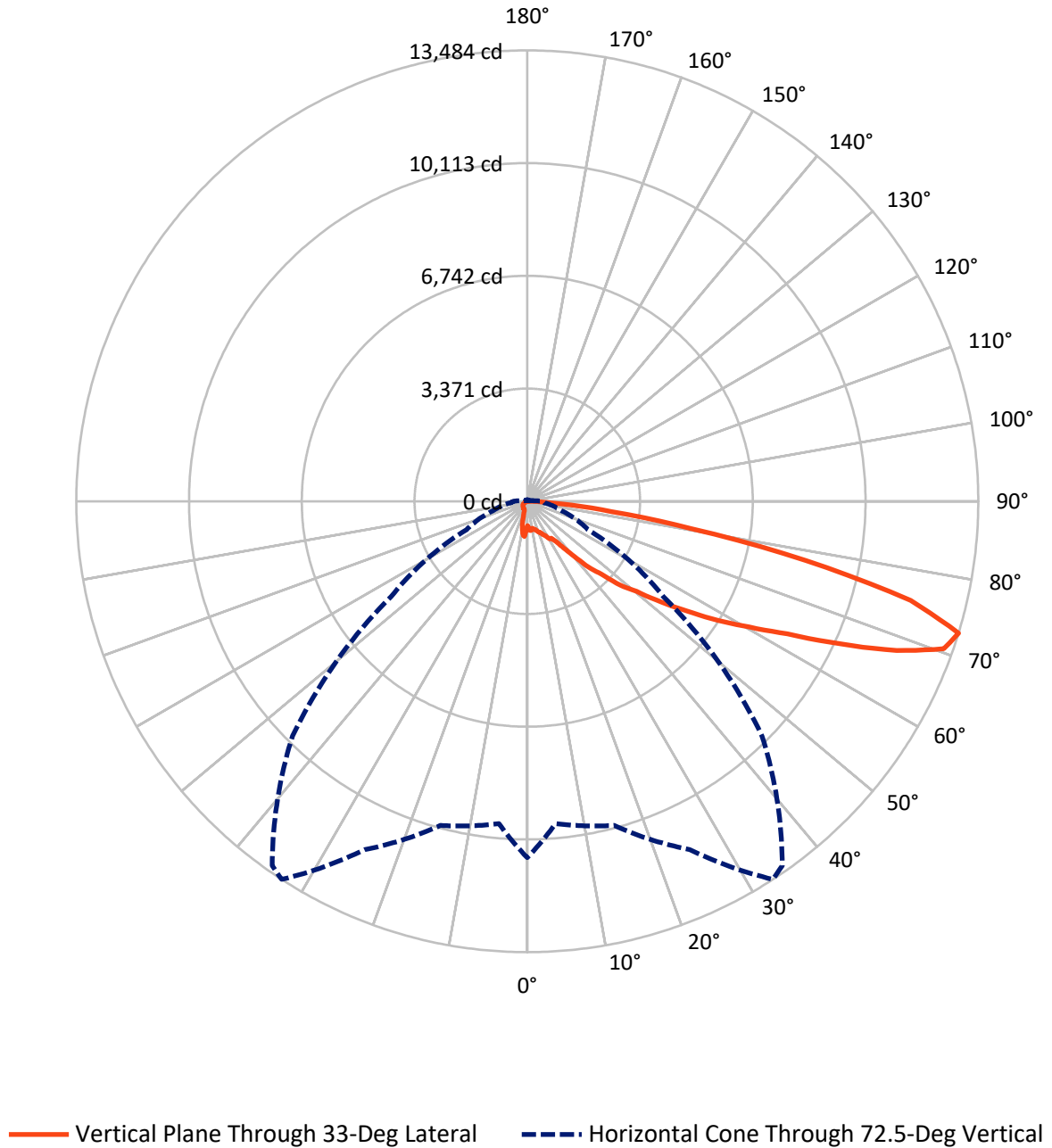
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.4 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot





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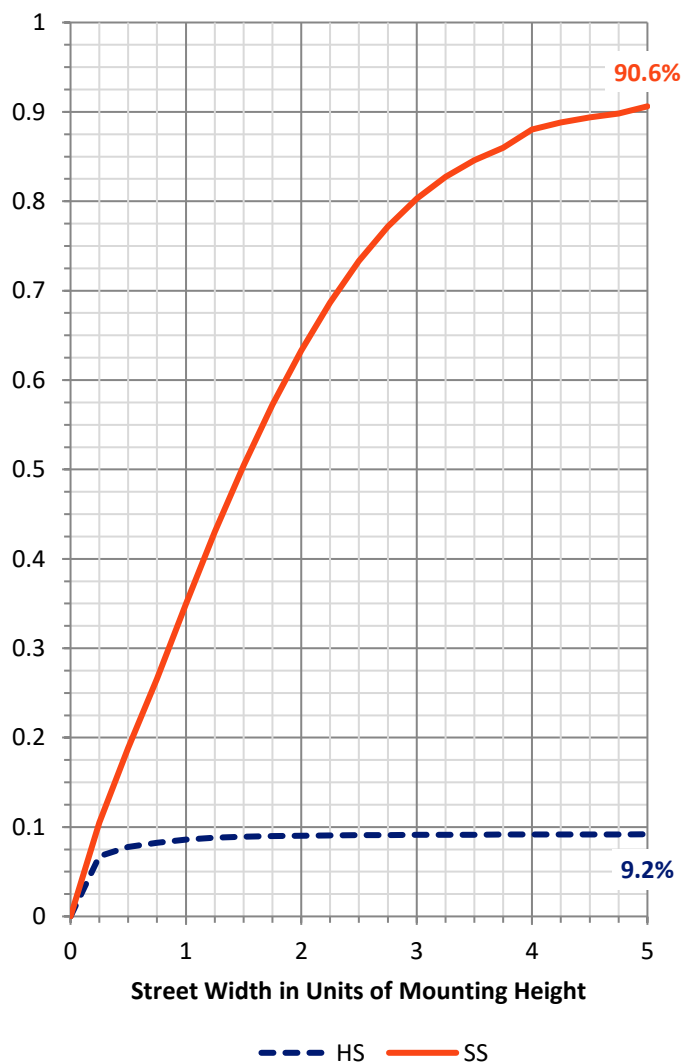
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1260.6	0.0	1260.6
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	12372.4	0.0	12372.4
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	13633.0	0.0	13633.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	93.9	0.7
10°-20°	279.7	2.1
20°-30°	474.3	3.5
30°-40°	868.0	6.4
40°-50°	1832.0	13.4
50°-60°	3065.0	22.5
60°-70°	4102.7	30.1
70°-80°	2679.9	19.7
80°-90°	237.6	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°	13633.0	100.0
0°-180°	13633.0	100.0

**Coefficient of Utilization**

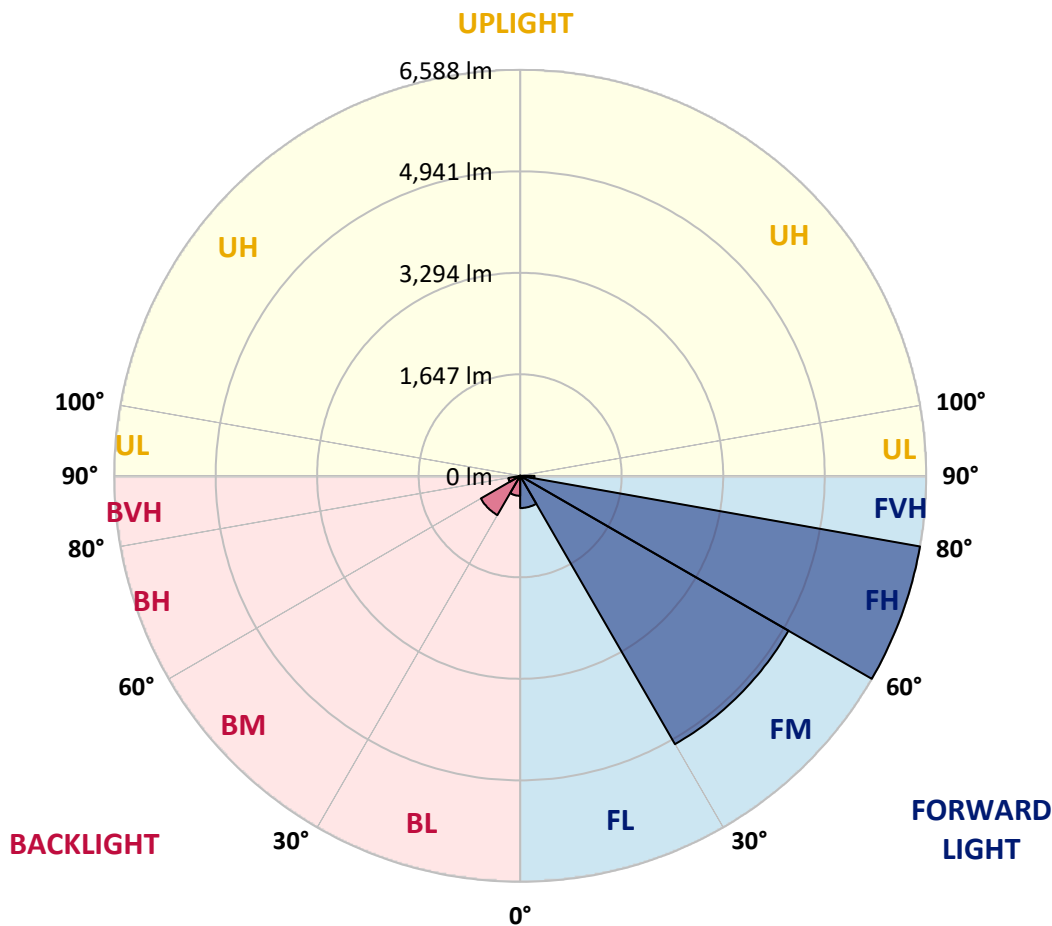


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	523.3	3.8			
FM (30°-60°)	5028.1	36.9			
FH (60°-80°)	6588.0	48.3			G3/7500
FVH (80°-90°)	233.0	1.7			G3/500
BL (0°-30°)	324.5	2.4	B1/500		
BM (30°-60°)	736.9	5.4	B1/1000		
BH (60°-80°)	194.6	1.4	B1/500		G1/500
BVH (80°-90°)	4.6	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-G3**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	725.1	725.1	725.1	725.1	725.1	725.1	725.1	725.1	725.1	725.1	725.1
2.5°	864.4	831.1	782.6	785.7	794.0	800.8	819.0	811.4	797.0	796.3	864.4
5°	915.9	878.8	875.7	880.3	878.0	890.1	875.0	924.2	965.8	1015.8	1096.0
7.5°	890.9	873.5	851.5	874.2	873.5	867.4	877.3	977.2	1077.8	1141.4	1273.9
10°	819.0	799.3	815.9	823.5	818.2	844.7	910.6	992.3	1112.7	1245.9	1310.2
12.5°	798.5	810.6	816.7	816.7	867.4	881.0	981.7	1058.9	1202.0	1307.2	1494.1
15°	878.0	901.5	859.8	850.8	866.7	874.2	986.3	1079.3	1262.5	1454.8	1611.5
17.5°	1004.4	1002.9	938.6	903.0	928.0	946.1	1008.2	1117.2	1224.7	1570.6	1797.7
20°	1091.5	1093.0	977.2	903.0	985.5	996.1	1065.0	1152.0	1236.8	1628.9	1919.5
22.5°	1203.5	1163.4	1035.4	963.5	1019.6	1029.4	1105.1	1174.0	1298.9	1622.1	2075.4
25°	1295.1	1269.3	1108.1	1058.2	1108.1	1094.5	1163.4	1267.1	1365.5	1730.3	2167.0
27.5°	1437.4	1393.5	1159.6	1168.7	1165.6	1175.5	1191.4	1350.3	1482.8	1735.6	2379.0
30°	1569.8	1544.1	1274.6	1274.6	1304.2	1285.2	1296.6	1488.8	1596.3	1858.2	2617.4
32.5°	1706.8	1708.3	1410.1	1338.2	1314.7	1392.7	1469.2	1556.2	1733.3	2068.6	2982.2
35°	2069.4	2039.1	1669.7	1490.4	1471.4	1466.9	1589.5	1824.9	1976.3	2342.6	3473.4
37.5°	2799.8	2694.6	2228.3	1835.5	1764.4	1740.1	1879.4	2120.9	2271.5	2745.3	4285.6
40°	3549.1	3356.1	2838.4	2395.6	2164.8	2060.3	2222.3	2427.4	2695.3	3190.4	5037.2
42.5°	4206.9	3968.5	3297.8	2999.6	2699.1	2653.7	2501.6	2835.4	3300.9	3838.3	5773.7
45°	4848.0	4378.7	3706.6	3470.4	3105.6	3131.3	3079.9	3369.0	3929.9	4548.3	6426.9
47.5°	5289.3	4867.7	4207.6	3901.1	3755.0	3604.4	4013.1	4313.6	4490.0	4999.4	6991.6
50°	5764.6	5337.7	4638.3	4424.1	4231.9	4384.0	4914.6	4954.7	4940.3	5420.2	7376.1
52.5°	6378.5	5875.1	5132.6	4890.4	4999.4	5150.8	5763.1	5770.7	5340.7	5774.4	7653.1
55°	6946.1	6388.3	5791.1	5562.5	5790.3	5918.3	6597.2	6348.2	5573.9	6015.1	7789.3
57.5°	7746.2	7100.5	6666.8	6264.2	6725.9	6603.3	7330.6	6960.5	5835.8	6174.9	7739.4
60°	8757.4	7997.5	7563.0	7136.9	7631.9	7715.2	8046.7	7266.3	5937.2	6227.1	7438.9
62.5°	9786.1	9021.6	8450.1	8161.0	8722.6	8996.6	8709.7	7418.4	5815.3	6124.9	6758.4
65°	11062.2	10083.5	9415.9	9246.4	10287.1	10689.8	9493.9	7455.5	5579.9	5562.5	5433.8
67.5°	11936.4	10983.5	10371.1	10655.0	11912.2	11944.8	10197.8	7466.9	4787.4	4355.2	3566.5
70°	12143.8	11123.5	10849.5	11685.1	13208.8	12799.3	10424.9	6891.6	3550.7	2584.8	1630.4
72.5°	10660.3	9677.8	10034.3	11490.6	13484.3	13296.6	9923.1	4972.1	1999.0	1033.9	500.3
75°	6538.9	5944.8	7527.4	9742.2	11836.5	11715.4	7741.6	2568.9	805.3	413.3	187.0
77.5°	2843.7	2640.8	3928.3	6464.0	8505.4	8397.1	4536.1	946.1	416.3	290.7	94.6
80°	940.8	912.8	1488.1	3060.9	4982.0	4886.6	1911.2	393.6	296.7	233.1	53.0
82.5°	223.3	221.8	519.2	1408.6	2537.9	2458.4	586.6	217.2	215.0	183.9	28.0
85°	56.0	57.5	143.8	576.0	1030.9	909.0	152.9	108.2	151.4	124.9	14.4
87.5°	0.0	0.0	37.1	82.5	155.9	97.6	16.7	28.8	42.4	44.7	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	725.1	725.1	725.1	725.1	725.1	725.1	725.1	725.1	725.1	725.1	725.1
2.5°	879.5	871.2	803.1	819.7	845.5	843.2	859.8	847.0	835.6	891.6	886.3
5°	1118.7	1073.3	1052.1	1081.6	1065.7	1028.6	1059.7	1054.4	1045.3	1064.2	1078.6
7.5°	1298.1	1256.5	1237.5	1175.5	1085.4	1014.3	1025.6	999.1	974.1	1003.7	1033.9
10°	1357.1	1334.4	1332.2	1211.1	1126.3	1023.3	901.5	796.3	768.3	731.2	747.8
12.5°	1517.6	1531.2	1445.7	1304.2	1140.7	943.1	726.6	577.5	517.0	477.6	479.9
15°	1649.3	1697.0	1572.9	1318.5	1003.7	719.1	483.7	349.7	311.8	302.0	299.0
17.5°	1845.3	1891.5	1612.2	1216.4	809.1	487.4	311.1	272.5	274.8	281.6	280.1
20°	1990.7	1983.9	1578.2	1035.4	596.4	319.4	260.4	255.1	267.2	286.9	282.3
22.5°	2130.7	2083.8	1557.0	868.2	386.0	256.6	251.3	250.5	261.9	280.8	286.1
25°	2230.6	2238.2	1521.4	679.7	280.8	238.4	243.0	249.8	261.1	281.6	278.5
27.5°	2516.7	2304.8	1373.0	493.5	236.9	228.6	239.9	253.6	257.3	283.1	283.8
30°	2702.2	2556.1	1276.1	332.3	218.7	211.2	233.9	252.1	256.6	289.9	292.2
32.5°	3025.4	2664.3	1164.1	246.8	203.6	205.9	220.3	244.5	265.7	301.2	302.8
35°	3427.3	3011.7	961.3	221.8	198.3	194.5	201.3	229.3	264.2	302.8	310.3
37.5°	4192.5	3219.9	762.2	215.0	198.3	191.5	198.3	215.0	259.6	317.9	333.8
40°	4704.9	3643.8	549.5	213.4	194.5	188.5	190.7	207.4	246.8	308.8	332.3
42.5°	5336.2	3822.4	404.9	209.7	190.7	181.7	183.2	204.4	233.9	289.9	307.3
45°	5853.2	3952.6	318.7	208.1	181.7	178.6	181.7	202.1	221.8	249.0	264.9
47.5°	6246.0	4104.0	255.8	198.3	179.4	178.6	174.8	189.2	201.3	208.1	218.7
50°	6533.6	4069.9	211.9	183.2	171.8	176.4	169.5	171.8	174.8	171.1	183.2
52.5°	6710.0	3947.3	176.4	165.0	162.7	166.5	158.2	151.4	146.1	143.1	150.6
55°	6774.3	3701.3	149.9	141.5	146.8	148.4	141.5	129.4	120.3	115.8	121.9
57.5°	6652.5	3326.6	130.2	117.3	129.4	129.4	120.3	107.5	96.9	89.3	95.4
60°	6343.6	2912.6	115.8	97.6	110.5	111.3	100.7	87.0	78.7	71.1	74.9
62.5°	5768.4	2461.5	101.4	84.8	95.4	96.1	83.3	70.4	64.3	56.0	59.0
65°	4617.9	1882.4	86.3	74.9	82.5	80.2	68.9	59.8	52.2	44.7	46.2
67.5°	2997.4	1161.9	74.9	68.1	69.6	67.4	58.3	52.2	43.9	37.8	38.6
70°	1342.0	500.3	65.9	61.3	60.6	56.8	49.2	48.4	43.1	37.8	37.8
72.5°	414.0	188.5	56.8	55.3	52.2	47.7	43.1	46.2	42.4	36.3	35.6
75°	163.5	86.3	46.9	46.9	45.4	39.4	38.6	41.6	39.4	33.3	31.8
77.5°	85.5	54.5	38.6	40.1	39.4	30.3	34.8	37.8	36.3	28.0	23.5
80°	50.7	33.3	28.8	32.5	31.8	21.2	26.5	24.2	17.4	8.3	2.3
82.5°	28.0	15.1	12.9	18.9	18.9	7.6	13.6	12.1	6.8	0.0	0.0
85°	13.6	10.6	9.8	10.6	7.6	2.3	6.8	6.8	3.8	0.0	0.0
87.5°	6.8	6.1	4.5	3.8	3.0	0.0	2.3	3.0	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)