

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: P597109

Luminaire Tested: **MSA-SA4A-835-U-T4FT-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P597109  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4A-835-U-T4FT-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 9571 lumens  
Efficiency: N/A  
Efficacy: 74.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

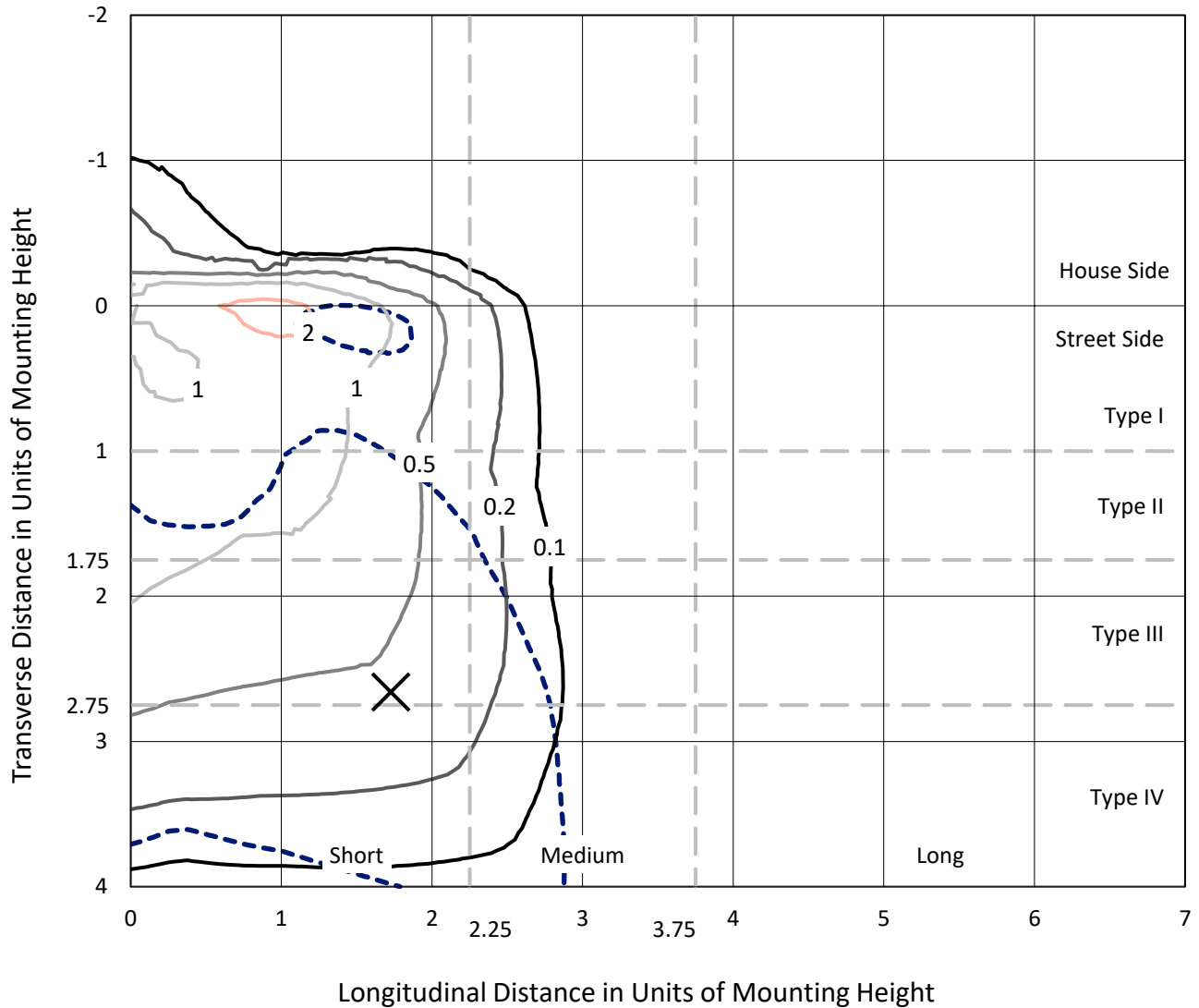
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

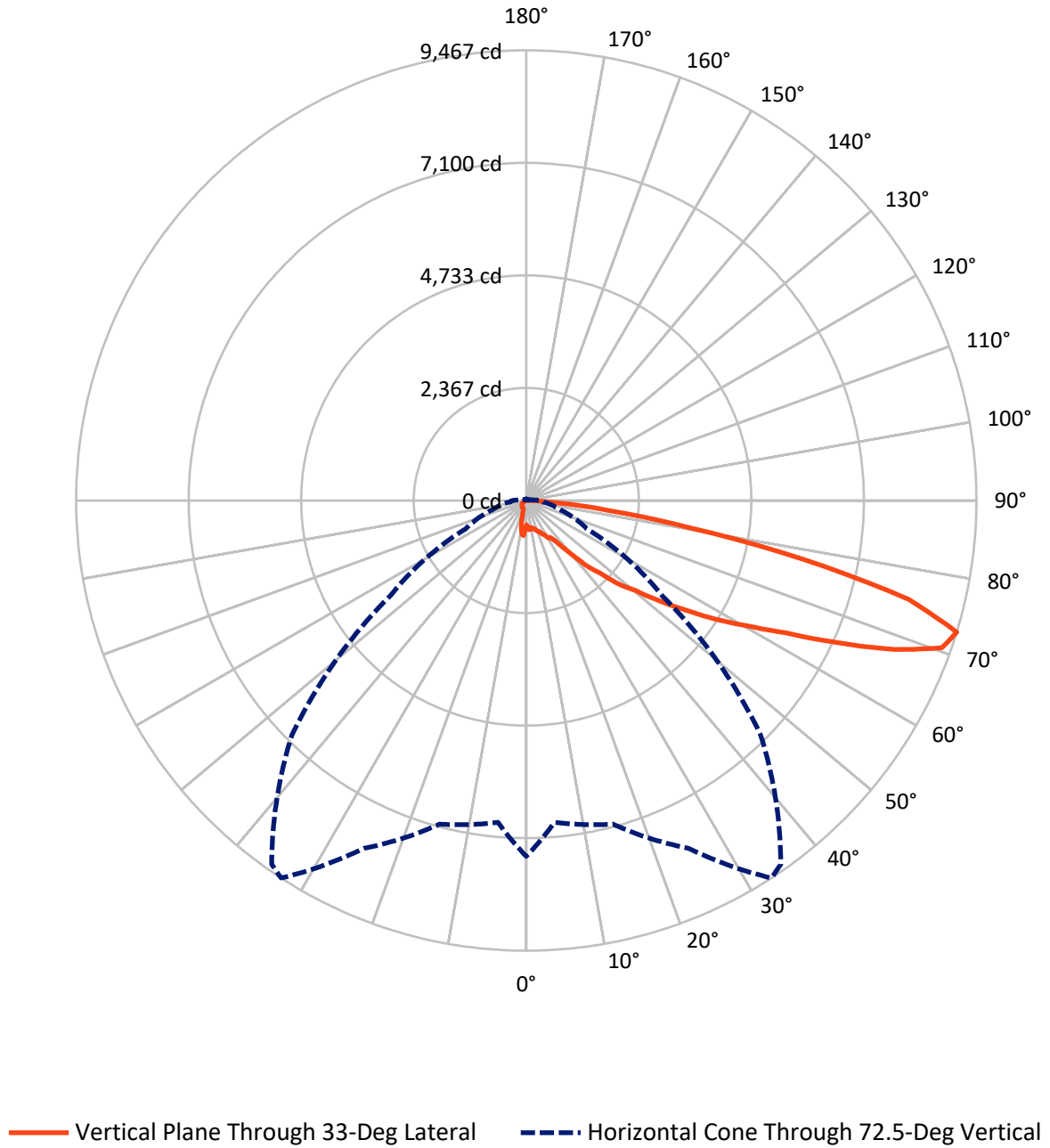
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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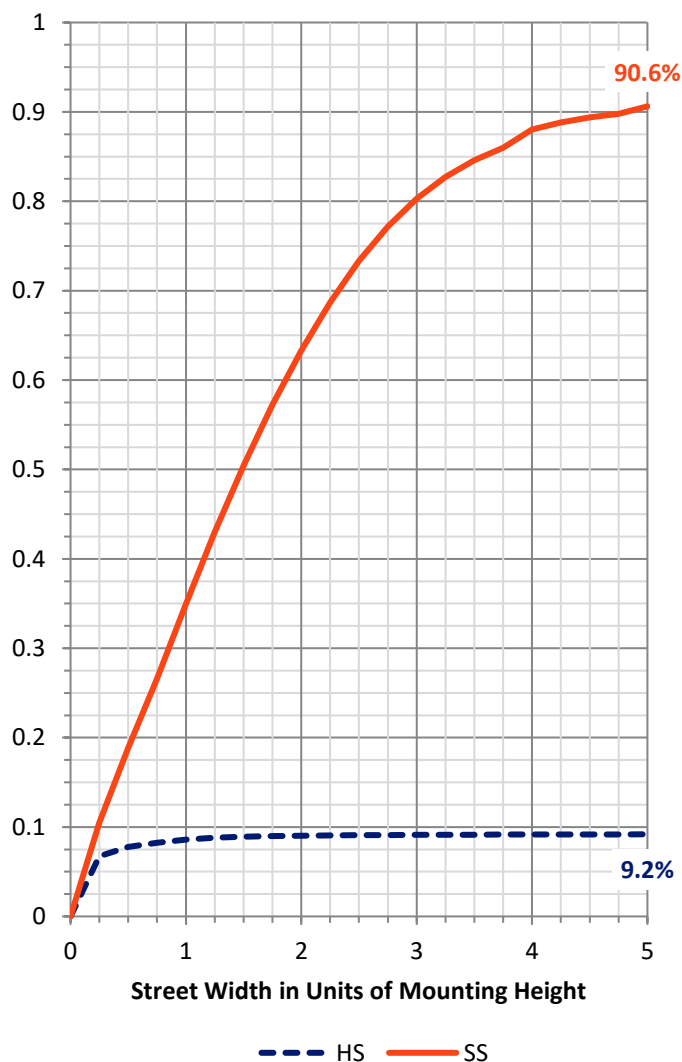
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	885.0	0.0	885.0
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	8686.0	0.0	8686.0
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	9571.0	0.0	9571.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	65.9	0.7
10°-20°	196.3	2.1
20°-30°	333.0	3.5
30°-40°	609.4	6.4
40°-50°	1286.1	13.4
50°-60°	2151.8	22.5
60°-70°	2880.3	30.1
70°-80°	1881.4	19.7
80°-90°	166.8	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°	9571.0	100.0
0°-180°	9571.0	100.0

**Coefficient of Utilization**

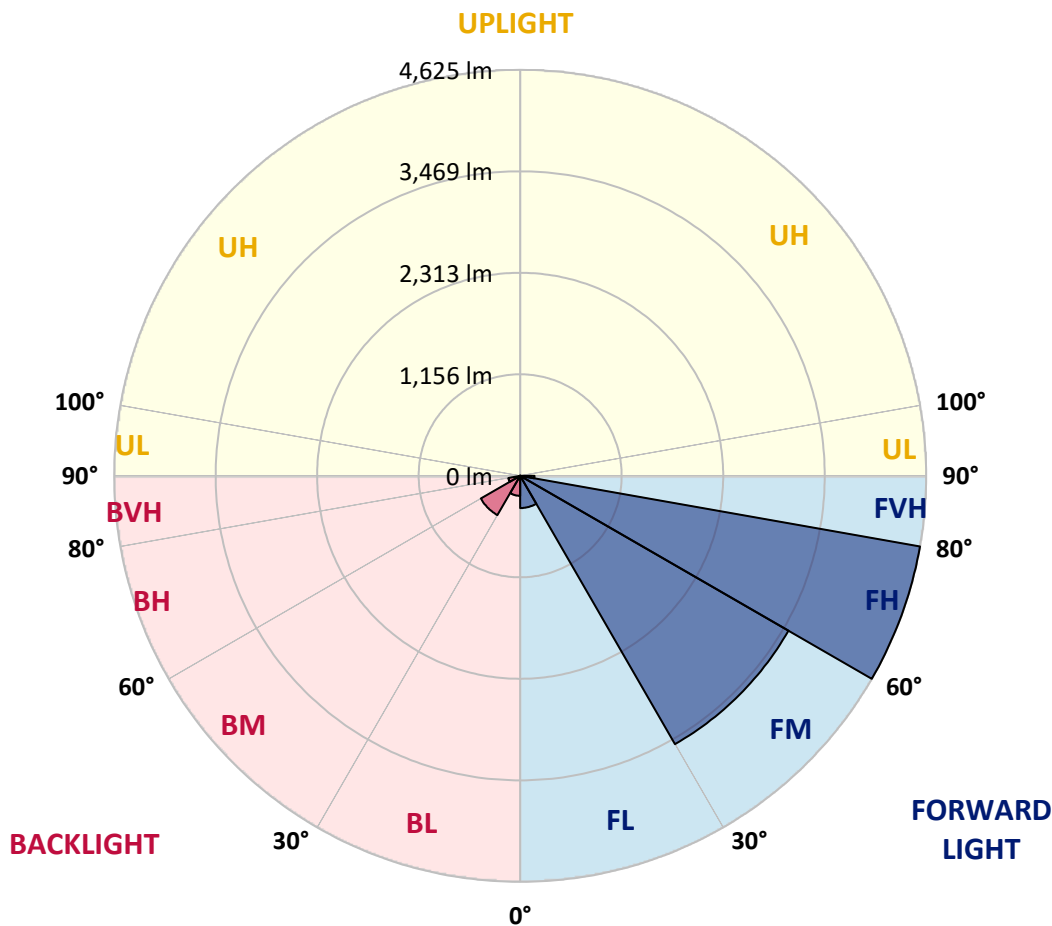


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	367.4	3.8			
FM (30°-60°)	3529.9	36.9			
FH (60°-80°)	4625.1	48.3			G2/5000
FVH (80°-90°)	163.6	1.7			G2/225
BL (0°-30°)	227.8	2.4	B1/500		
BM (30°-60°)	517.4	5.4	B1/1000		
BH (60°-80°)	136.6	1.4	B1/500		G1/500
BVH (80°-90°)	3.2	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-G2**  
 Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	509.1	509.1	509.1	509.1	509.1	509.1	509.1	509.1	509.1	509.1	509.1
2.5°	606.8	583.5	549.5	551.6	557.4	562.2	575.0	569.6	559.5	559.0	606.8
5°	643.0	616.9	614.8	618.0	616.4	624.9	614.3	648.8	678.0	713.1	769.4
7.5°	625.4	613.2	597.8	613.7	613.2	609.0	615.9	686.0	756.7	801.3	894.3
10°	575.0	561.1	572.8	578.1	574.4	593.0	639.3	696.6	781.1	874.7	919.8
12.5°	560.6	569.1	573.4	573.4	609.0	618.5	689.2	743.4	843.8	917.7	1049.0
15°	616.4	632.9	603.7	597.3	608.4	613.7	692.4	757.8	886.3	1021.3	1131.3
17.5°	705.1	704.1	658.9	633.9	651.5	664.2	707.8	784.3	859.8	1102.6	1262.0
20°	766.3	767.3	686.0	633.9	691.9	699.3	747.7	808.8	868.3	1143.5	1347.6
22.5°	844.9	816.7	726.9	676.5	715.8	722.7	775.8	824.2	911.9	1138.8	1457.1
25°	909.2	891.1	777.9	742.9	777.9	768.4	816.7	889.5	958.6	1214.7	1521.4
27.5°	1009.1	978.3	814.1	820.5	818.3	825.2	836.4	948.0	1041.0	1218.5	1670.1
30°	1102.1	1084.0	894.9	894.9	915.6	902.3	910.3	1045.2	1120.7	1304.5	1837.5
32.5°	1198.3	1199.3	990.0	939.5	923.0	977.7	1031.4	1092.5	1216.9	1452.3	2093.7
35°	1452.8	1431.5	1172.2	1046.3	1033.0	1029.8	1115.9	1281.2	1387.4	1644.6	2438.5
37.5°	1965.6	1891.7	1564.4	1288.6	1238.7	1221.7	1319.4	1488.9	1594.7	1927.3	3008.7
40°	2491.7	2356.2	1992.7	1681.8	1519.8	1446.4	1560.1	1704.1	1892.3	2239.8	3536.4
42.5°	2953.4	2786.0	2315.2	2105.9	1894.9	1863.0	1756.2	1990.6	2317.4	2694.6	4053.4
45°	3403.5	3074.1	2602.2	2436.4	2180.3	2198.3	2162.2	2365.2	2758.9	3193.1	4512.0
47.5°	3713.3	3417.3	2954.0	2738.8	2636.2	2530.5	2817.4	3028.4	3152.2	3509.8	4908.4
50°	4047.0	3747.3	3256.3	3105.9	2971.0	3077.8	3450.3	3478.4	3468.3	3805.2	5178.3
52.5°	4478.0	4124.6	3603.3	3433.3	3509.8	3616.1	4046.0	4051.3	3749.4	4053.9	5372.8
55°	4876.5	4484.9	4065.6	3905.1	4065.1	4154.9	4631.5	4456.7	3913.1	4222.9	5468.5
57.5°	5438.2	4984.9	4680.4	4397.7	4721.9	4635.8	5146.5	4886.6	4097.0	4335.0	5433.4
60°	6148.1	5614.6	5309.6	5010.4	5357.9	5416.4	5649.1	5101.3	4168.2	4371.7	5222.4
62.5°	6870.3	6333.6	5932.4	5729.4	6123.7	6316.0	6114.6	5208.1	4082.6	4300.0	4744.7
65°	7766.2	7079.1	6610.4	6491.4	7222.0	7504.7	6665.2	5234.1	3917.4	3905.1	3814.8
67.5°	8379.9	7710.9	7281.0	7480.3	8362.9	8385.8	7159.3	5242.1	3361.0	3057.6	2503.9
70°	8525.5	7809.2	7616.9	8203.5	9273.2	8985.7	7318.8	4838.3	2492.7	1814.7	1144.6
72.5°	7484.0	6794.3	7044.6	8066.9	9466.6	9334.8	6966.4	3490.7	1403.4	725.9	351.2
75°	4590.6	4173.5	5284.6	6839.4	8309.8	8224.8	5435.0	1803.5	565.4	290.1	131.3
77.5°	1996.4	1854.0	2757.9	4538.0	5971.2	5895.2	3184.6	664.2	292.3	204.1	66.4
80°	660.5	640.8	1044.7	2148.9	3497.6	3430.6	1341.7	276.3	208.3	163.7	37.2
82.5°	156.8	155.7	364.5	988.9	1781.7	1725.9	411.8	152.5	150.9	129.1	19.7
85°	39.3	40.4	101.0	404.4	723.7	638.2	107.3	76.0	106.3	87.7	10.1
87.5°	0.0	0.0	26.0	57.9	109.5	68.5	11.7	20.2	29.8	31.4	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	509.1	509.1	509.1	509.1	509.1	509.1	509.1	509.1	509.1	509.1	509.1
2.5°	617.5	611.6	563.8	575.5	593.6	592.0	603.7	594.6	586.6	626.0	622.3
5°	785.4	753.5	738.6	759.3	748.2	722.2	743.9	740.2	733.8	747.1	757.2
7.5°	911.3	882.1	868.8	825.2	762.0	712.1	720.0	701.4	683.9	704.6	725.9
10°	952.8	936.8	935.2	850.2	790.7	718.4	632.9	559.0	539.4	513.3	525.0
12.5°	1065.4	1075.0	1014.9	915.6	800.8	662.1	510.1	405.4	362.9	335.3	336.9
15°	1157.9	1191.4	1104.2	925.7	704.6	504.8	339.6	245.5	218.9	212.0	209.9
17.5°	1295.5	1327.9	1131.8	853.9	568.0	342.2	218.4	191.3	192.9	197.7	196.6
20°	1397.5	1392.8	1107.9	726.9	418.7	224.2	182.8	179.1	187.6	201.4	198.2
22.5°	1495.8	1462.9	1093.1	609.5	271.0	180.1	176.4	175.9	183.9	197.1	200.9
25°	1566.0	1571.3	1068.1	477.2	197.1	167.4	170.6	175.4	183.3	197.7	195.5
27.5°	1766.9	1618.1	963.9	346.5	166.3	160.5	168.4	178.0	180.7	198.7	199.3
30°	1897.0	1794.5	895.9	233.3	153.6	148.3	164.2	177.0	180.1	203.5	205.1
32.5°	2123.9	1870.5	817.3	173.2	142.9	144.5	154.6	171.6	186.5	211.5	212.6
35°	2406.1	2114.4	674.9	155.7	139.2	136.6	141.3	161.0	185.5	212.6	217.9
37.5°	2943.3	2260.5	535.1	150.9	139.2	134.4	139.2	150.9	182.3	223.2	234.3
40°	3303.1	2558.1	385.8	149.9	136.6	132.3	133.9	145.6	173.2	216.8	233.3
42.5°	3746.3	2683.5	284.3	147.2	133.9	127.5	128.6	143.5	164.2	203.5	215.7
45°	4109.2	2774.9	223.7	146.1	127.5	125.4	127.5	141.9	155.7	174.8	186.0
47.5°	4385.0	2881.2	179.6	139.2	125.9	125.4	122.7	132.8	141.3	146.1	153.6
50°	4586.9	2857.3	148.8	128.6	120.6	123.8	119.0	120.6	122.7	120.1	128.6
52.5°	4710.7	2771.2	123.8	115.8	114.2	116.9	111.1	106.3	102.6	100.4	105.7
55°	4755.9	2598.5	105.2	99.4	103.1	104.2	99.4	90.9	84.5	81.3	85.6
57.5°	4670.3	2335.4	91.4	82.4	90.9	90.9	84.5	75.5	68.0	62.7	67.0
60°	4453.5	2044.8	81.3	68.5	77.6	78.1	70.7	61.1	55.3	50.0	52.6
62.5°	4049.7	1728.1	71.2	59.5	67.0	67.5	58.5	49.4	45.2	39.3	41.4
65°	3242.0	1321.6	60.6	52.6	57.9	56.3	48.4	42.0	36.7	31.4	32.4
67.5°	2104.3	815.7	52.6	47.8	48.9	47.3	40.9	36.7	30.8	26.6	27.1
70°	942.1	351.2	46.2	43.0	42.5	39.9	34.5	34.0	30.3	26.6	26.6
72.5°	290.7	132.3	39.9	38.8	36.7	33.5	30.3	32.4	29.8	25.5	25.0
75°	114.8	60.6	32.9	32.9	31.9	27.6	27.1	29.2	27.6	23.4	22.3
77.5°	60.0	38.3	27.1	28.2	27.6	21.3	24.4	26.6	25.5	19.7	16.5
80°	35.6	23.4	20.2	22.8	22.3	14.9	18.6	17.0	12.2	5.8	1.6
82.5°	19.7	10.6	9.0	13.3	13.3	5.3	9.6	8.5	4.8	0.0	0.0
85°	9.6	7.4	6.9	7.4	5.3	1.6	4.8	4.8	2.7	0.0	0.0
87.5°	4.8	4.3	3.2	2.7	2.1	0.0	1.6	2.1	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)