

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: P596845

Luminaire Tested: **MSA-SA1A-835-U-T4FT-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596845  
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-SA1A-835-U-T4FT-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

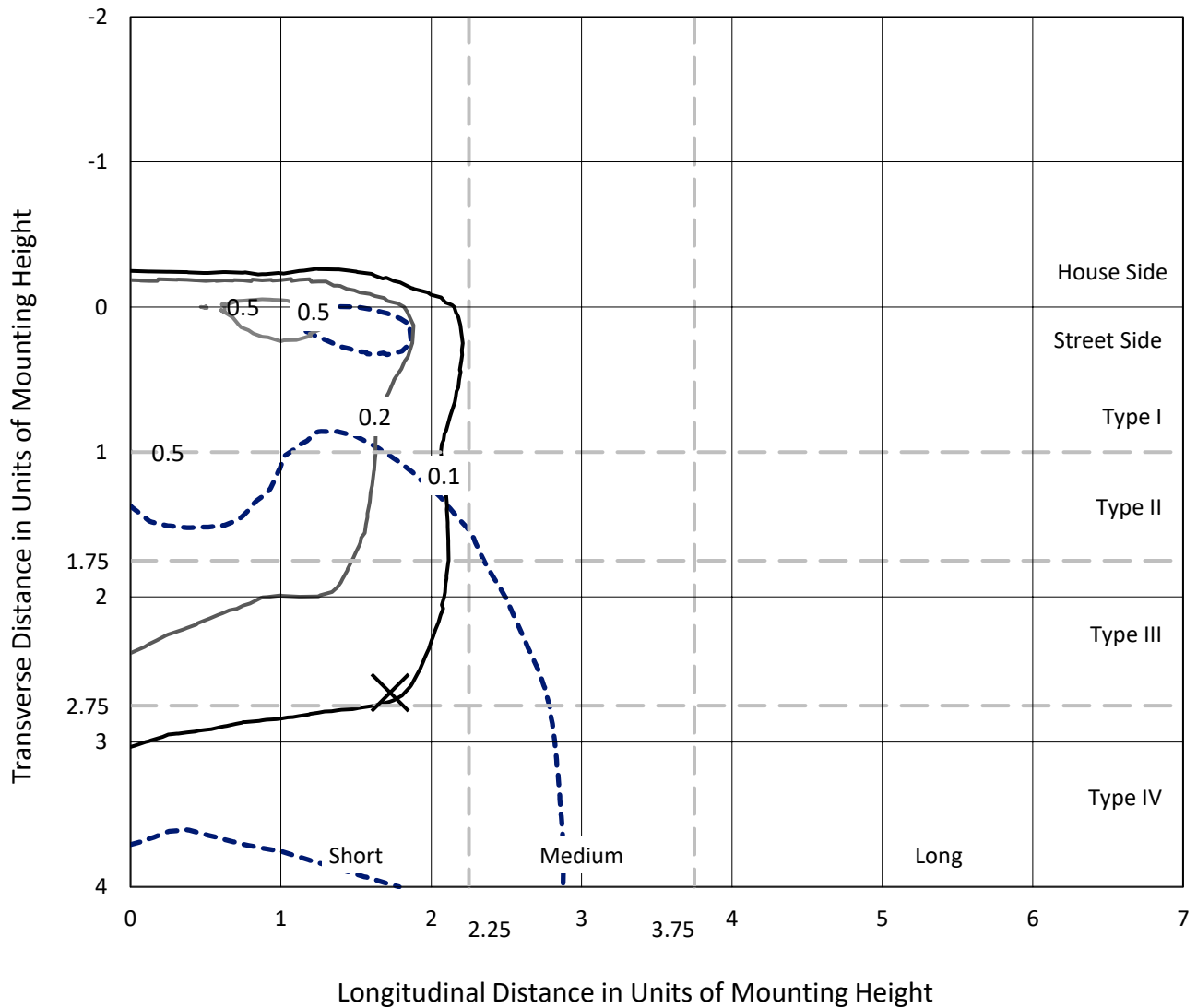
Lumens per Lamp: N/A  
Luminaire Lumens: 2495 lumens  
Efficiency: N/A  
Efficacy: 73.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

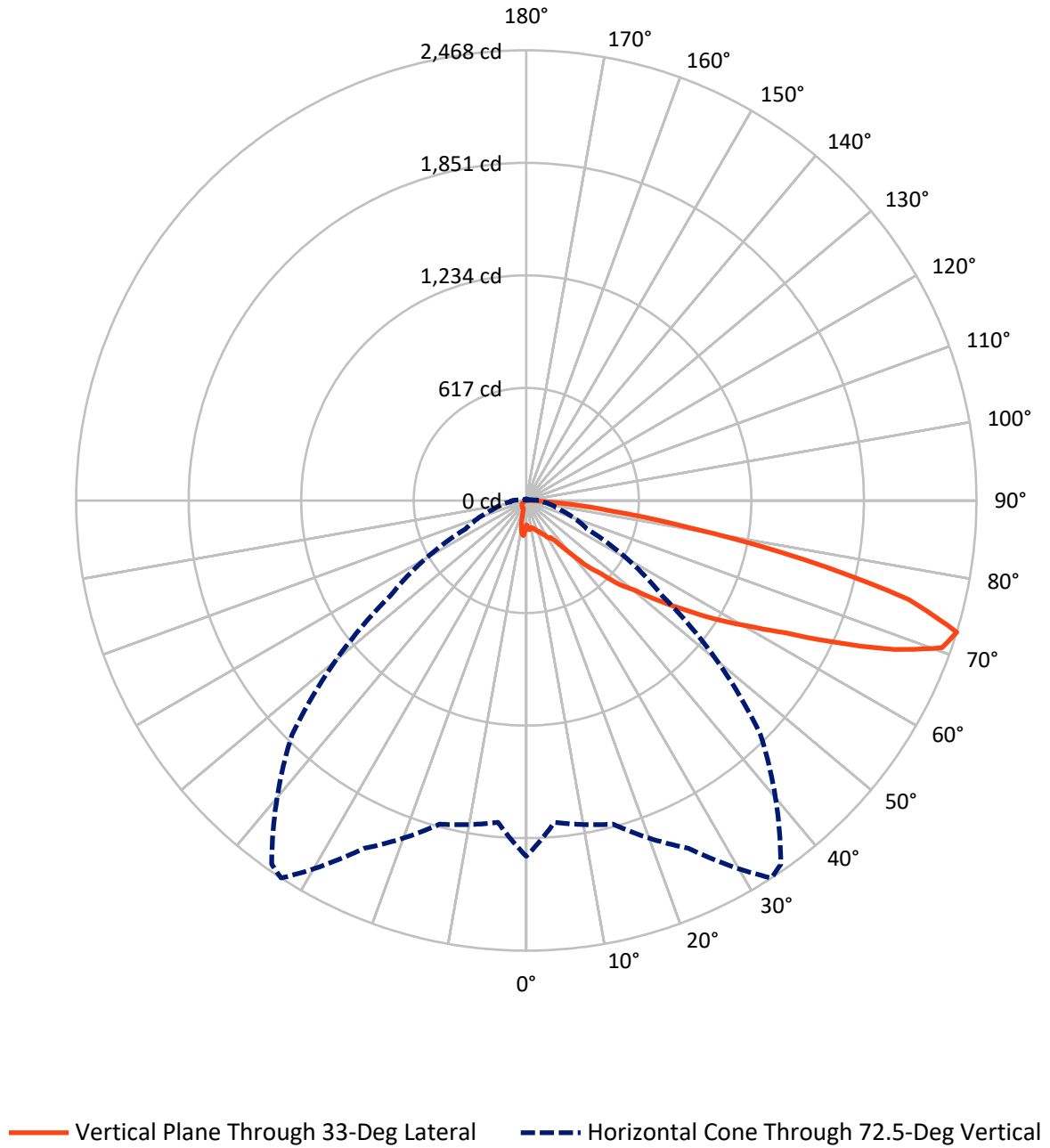
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.6 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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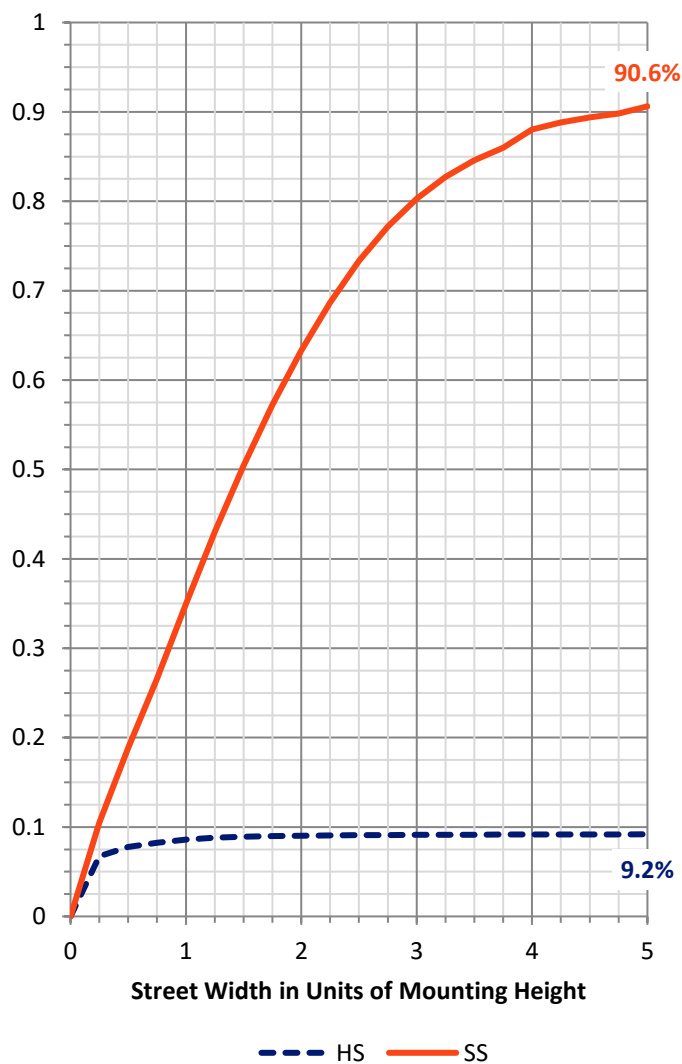
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	230.7	0.0	230.7
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	2264.3	0.0	2264.3
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	2495.0	0.0	2495.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	17.2	0.7
10°-20°	51.2	2.1
20°-30°	86.8	3.5
30°-40°	158.9	6.4
40°-50°	335.3	13.4
50°-60°	560.9	22.5
60°-70°	750.8	30.1
70°-80°	490.5	19.7
80°-90°	43.5	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°	2495.0	100.0
0°-180°	2495.0	100.0

**Coefficient of Utilization**



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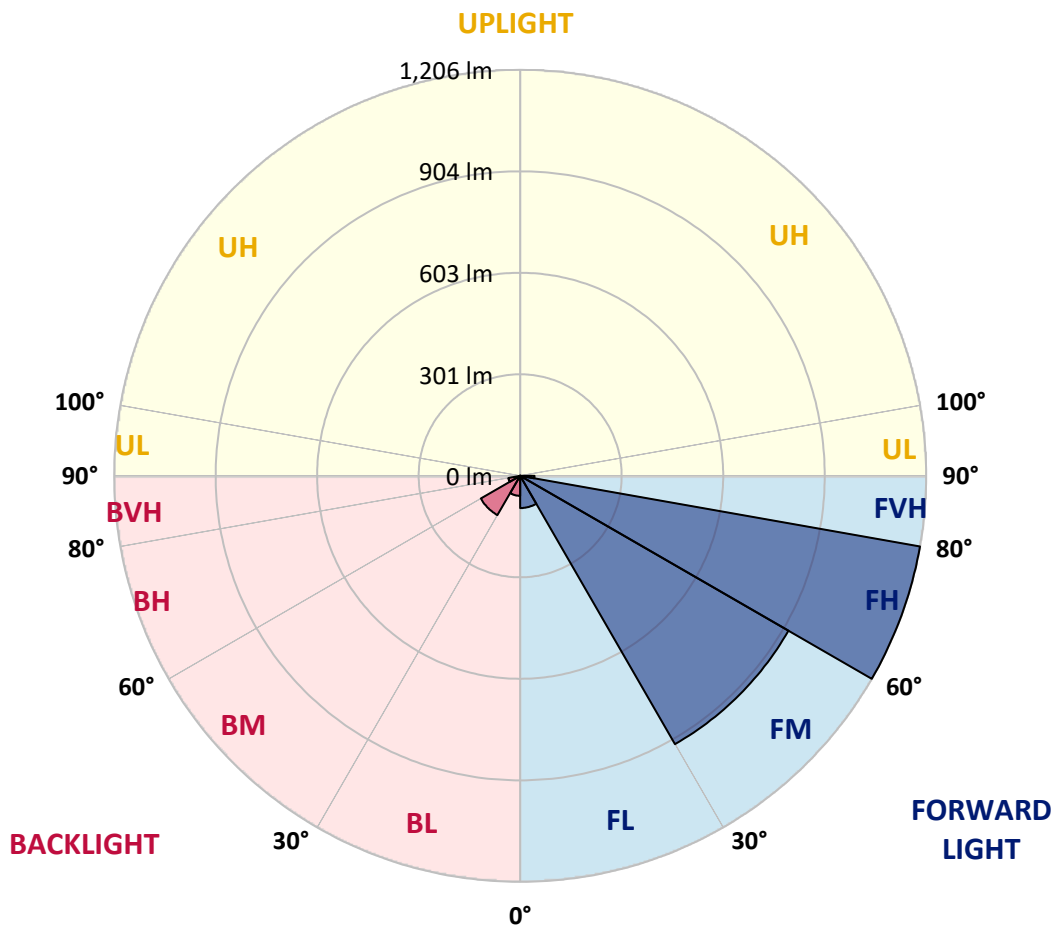
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	95.8	3.8			
FM (30°-60°)	920.2	36.9			
FH (60°-80°)	1205.7	48.3			G1/1800
FVH (80°-90°)	42.6	1.7			G1/100
BL (0°-30°)	59.4	2.4	B0/110		
BM (30°-60°)	134.9	5.4	B0/220		
BH (60°-80°)	35.6	1.4	B0/110		G0/110
BVH (80°-90°)	0.8	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7
2.5°	158.2	152.1	143.2	143.8	145.3	146.6	149.9	148.5	145.9	145.7	158.2
5°	167.6	160.8	160.3	161.1	160.7	162.9	160.1	169.1	176.8	185.9	200.6
7.5°	163.0	159.9	155.8	160.0	159.9	158.7	160.5	178.8	197.3	208.9	233.1
10°	149.9	146.3	149.3	150.7	149.7	154.6	166.6	181.6	203.6	228.0	239.8
12.5°	146.1	148.4	149.5	149.5	158.7	161.2	179.7	193.8	220.0	239.2	273.4
15°	160.7	165.0	157.4	155.7	158.6	160.0	180.5	197.5	231.1	266.2	294.9
17.5°	183.8	183.5	171.8	165.3	169.8	173.2	184.5	204.5	224.1	287.4	329.0
20°	199.8	200.0	178.8	165.3	180.4	182.3	194.9	210.8	226.3	298.1	351.3
22.5°	220.3	212.9	189.5	176.3	186.6	188.4	202.2	214.8	237.7	296.9	379.8
25°	237.0	232.3	202.8	193.7	202.8	200.3	212.9	231.9	249.9	316.7	396.6
27.5°	263.1	255.0	212.2	213.9	213.3	215.1	218.0	247.1	271.4	317.6	435.4
30°	287.3	282.6	233.3	233.3	238.7	235.2	237.3	272.5	292.1	340.1	479.0
32.5°	312.4	312.6	258.1	244.9	240.6	254.9	268.9	284.8	317.2	378.6	545.8
35°	378.7	373.2	305.6	272.8	269.3	268.5	290.9	334.0	361.7	428.7	635.7
37.5°	512.4	493.1	407.8	335.9	322.9	318.5	344.0	388.1	415.7	502.4	784.3
40°	649.5	614.2	519.5	438.4	396.2	377.1	406.7	444.2	493.3	583.9	921.9
42.5°	769.9	726.3	603.5	549.0	494.0	485.7	457.8	518.9	604.1	702.5	1056.7
45°	887.2	801.4	678.3	635.1	568.4	573.1	563.7	616.6	719.2	832.4	1176.2
47.5°	968.0	890.8	770.0	713.9	687.2	659.6	734.4	789.4	821.7	914.9	1279.5
50°	1055.0	976.9	848.9	809.7	774.5	802.3	899.4	906.8	904.1	992.0	1349.9
52.5°	1167.3	1075.2	939.3	895.0	914.9	942.6	1054.7	1056.1	977.4	1056.8	1400.6
55°	1271.2	1169.1	1059.8	1018.0	1059.7	1083.1	1207.4	1161.8	1020.1	1100.8	1425.5
57.5°	1417.6	1299.5	1220.1	1146.4	1230.9	1208.5	1341.6	1273.9	1068.0	1130.1	1416.4
60°	1602.7	1463.6	1384.1	1306.1	1396.7	1412.0	1472.6	1329.8	1086.6	1139.6	1361.4
62.5°	1791.0	1651.1	1546.5	1493.6	1596.3	1646.5	1594.0	1357.7	1064.3	1120.9	1236.9
65°	2024.5	1845.4	1723.2	1692.2	1882.7	1956.4	1737.5	1364.5	1021.2	1018.0	994.5
67.5°	2184.5	2010.1	1898.0	1950.0	2180.1	2186.0	1866.3	1366.5	876.2	797.1	652.7
70°	2222.5	2035.7	1985.6	2138.5	2417.4	2342.4	1907.9	1261.3	649.8	473.1	298.4
72.5°	1951.0	1771.2	1836.4	2102.9	2467.8	2433.4	1816.0	910.0	365.8	189.2	91.6
75°	1196.7	1088.0	1377.6	1782.9	2166.2	2144.1	1416.8	470.1	147.4	75.6	34.2
77.5°	520.4	483.3	718.9	1183.0	1556.6	1536.8	830.2	173.2	76.2	53.2	17.3
80°	172.2	167.1	272.3	560.2	911.8	894.3	349.8	72.0	54.3	42.7	9.7
82.5°	40.9	40.6	95.0	257.8	464.5	449.9	107.4	39.8	39.3	33.7	5.1
85°	10.3	10.5	26.3	105.4	188.7	166.4	28.0	19.8	27.7	22.9	2.6
87.5°	0.0	0.0	6.8	15.1	28.5	17.9	3.0	5.3	7.8	8.2	1.4
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°	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7	132.7
2.5°	161.0	159.4	147.0	150.0	154.7	154.3	157.4	155.0	152.9	163.2	162.2
5°	204.7	196.4	192.5	197.9	195.0	188.3	193.9	193.0	191.3	194.8	197.4
7.5°	237.6	229.9	226.5	215.1	198.6	185.6	187.7	182.9	178.3	183.7	189.2
10°	248.4	244.2	243.8	221.6	206.1	187.3	165.0	145.7	140.6	133.8	136.9
12.5°	277.7	280.2	264.6	238.7	208.8	172.6	133.0	105.7	94.6	87.4	87.8
15°	301.8	310.6	287.9	241.3	183.7	131.6	88.5	64.0	57.1	55.3	54.7
17.5°	337.7	346.2	295.1	222.6	148.1	89.2	56.9	49.9	50.3	51.5	51.3
20°	364.3	363.1	288.8	189.5	109.2	58.5	47.7	46.7	48.9	52.5	51.7
22.5°	389.9	381.4	284.9	158.9	70.6	47.0	46.0	45.9	47.9	51.4	52.4
25°	408.2	409.6	278.4	124.4	51.4	43.6	44.5	45.7	47.8	51.5	51.0
27.5°	460.6	421.8	251.3	90.3	43.4	41.8	43.9	46.4	47.1	51.8	51.9
30°	494.5	467.8	233.5	60.8	40.0	38.6	42.8	46.1	47.0	53.1	53.5
32.5°	553.7	487.6	213.0	45.2	37.3	37.7	40.3	44.7	48.6	55.1	55.4
35°	627.2	551.2	175.9	40.6	36.3	35.6	36.8	42.0	48.3	55.4	56.8
37.5°	767.3	589.3	139.5	39.3	36.3	35.0	36.3	39.3	47.5	58.2	61.1
40°	861.1	666.8	100.6	39.1	35.6	34.5	34.9	38.0	45.2	56.5	60.8
42.5°	976.6	699.5	74.1	38.4	34.9	33.2	33.5	37.4	42.8	53.1	56.2
45°	1071.2	723.4	58.3	38.1	33.2	32.7	33.2	37.0	40.6	45.6	48.5
47.5°	1143.1	751.1	46.8	36.3	32.8	32.7	32.0	34.6	36.8	38.1	40.0
50°	1195.7	744.8	38.8	33.5	31.4	32.3	31.0	31.4	32.0	31.3	33.5
52.5°	1228.0	722.4	32.3	30.2	29.8	30.5	29.0	27.7	26.7	26.2	27.6
55°	1239.8	677.4	27.4	25.9	26.9	27.2	25.9	23.7	22.0	21.2	22.3
57.5°	1217.5	608.8	23.8	21.5	23.7	23.7	22.0	19.7	17.7	16.3	17.5
60°	1161.0	533.0	21.2	17.9	20.2	20.4	18.4	15.9	14.4	13.0	13.7
62.5°	1055.7	450.5	18.6	15.5	17.5	17.6	15.2	12.9	11.8	10.3	10.8
65°	845.1	344.5	15.8	13.7	15.1	14.7	12.6	10.9	9.6	8.2	8.4
67.5°	548.6	212.6	13.7	12.5	12.7	12.3	10.7	9.6	8.0	6.9	7.1
70°	245.6	91.6	12.1	11.2	11.1	10.4	9.0	8.9	7.9	6.9	6.9
72.5°	75.8	34.5	10.4	10.1	9.6	8.7	7.9	8.4	7.8	6.6	6.5
75°	29.9	15.8	8.6	8.6	8.3	7.2	7.1	7.6	7.2	6.1	5.8
77.5°	15.7	10.0	7.1	7.3	7.2	5.5	6.4	6.9	6.6	5.1	4.3
80°	9.3	6.1	5.3	6.0	5.8	3.9	4.8	4.4	3.2	1.5	0.4
82.5°	5.1	2.8	2.4	3.5	3.5	1.4	2.5	2.2	1.2	0.0	0.0
85°	2.5	1.9	1.8	1.9	1.4	0.4	1.2	1.2	0.7	0.0	0.0
87.5°	1.2	1.1	0.8	0.7	0.6	0.0	0.4	0.6	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)