

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: P366839

Luminaire Tested: **MSA-SA1B-760-U-T4W-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P366839  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1B-760-U-T4W-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

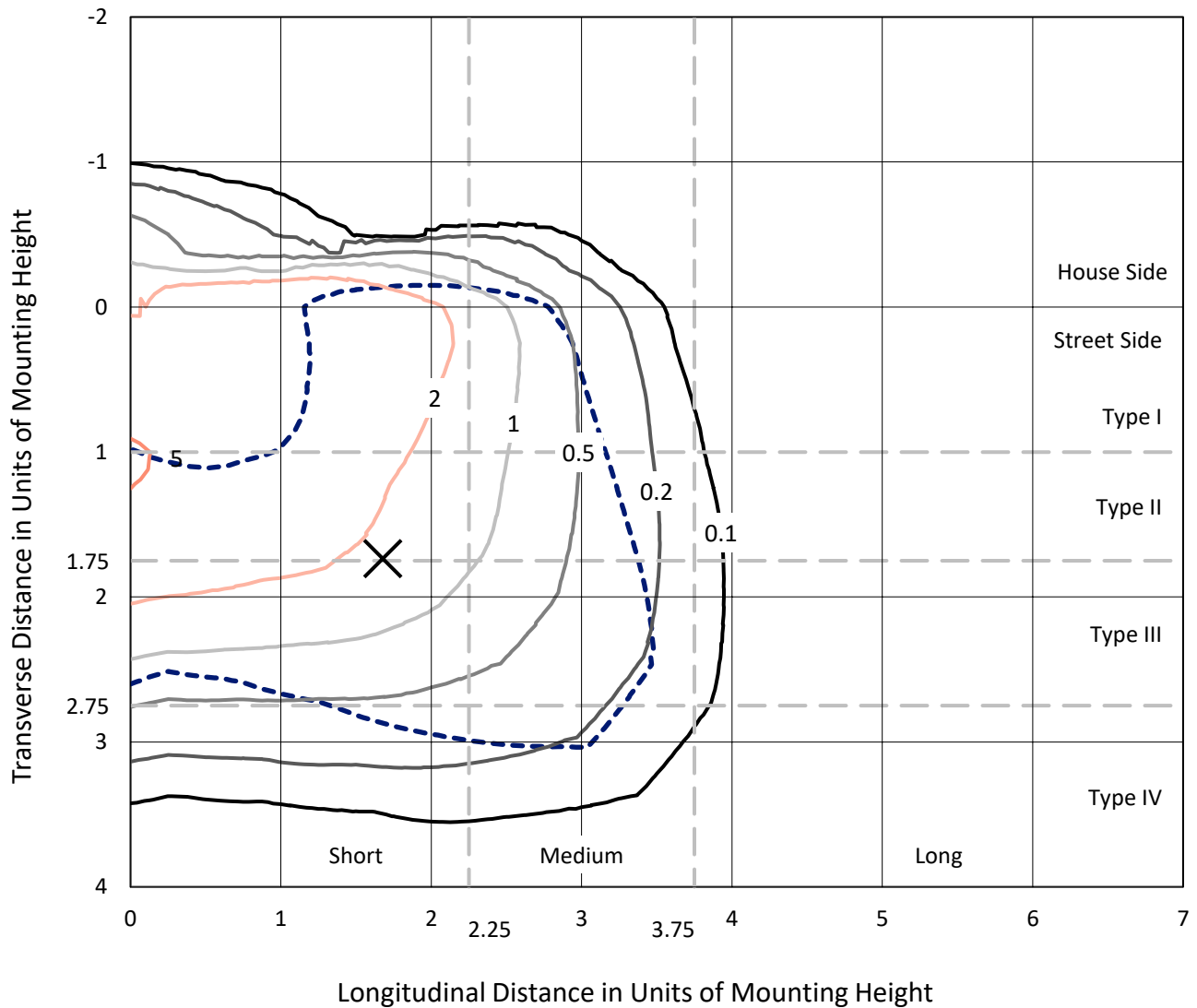
Lumens per Lamp: N/A  
Luminaire Lumens: 3818 lumens  
Efficiency: N/A  
Efficacy: 86.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
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: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

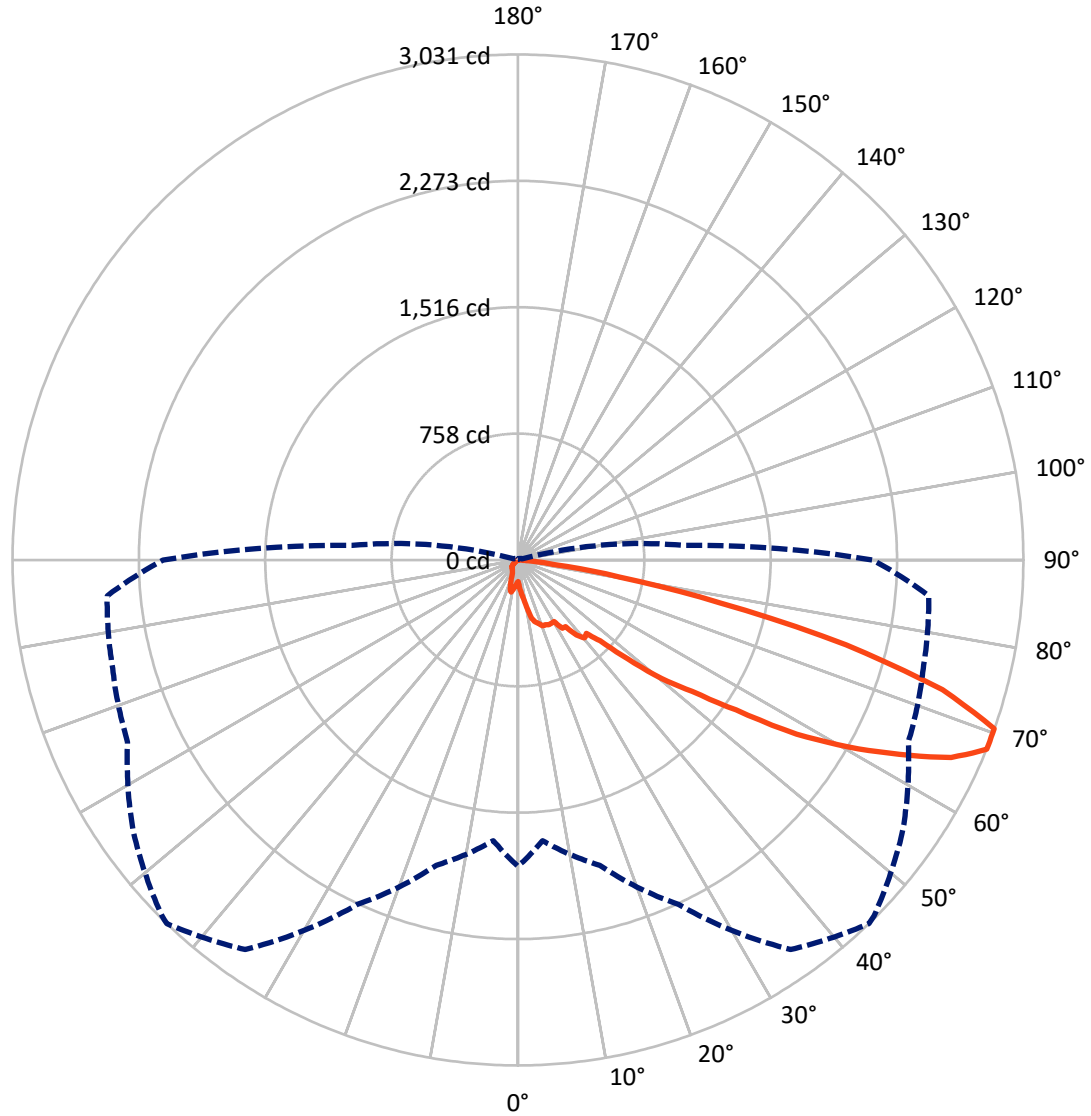
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.5 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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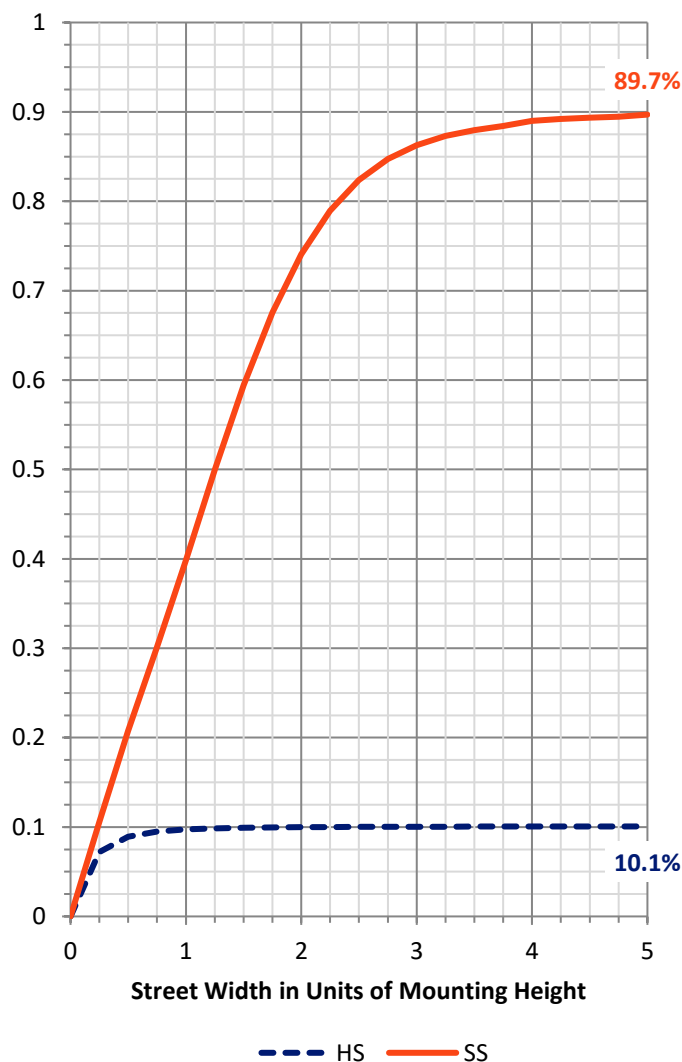
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	387.8	0.0	387.8
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	3430.2	0.0	3430.2
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	3818.0	0.0	3818.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	19.1	0.5
10°-20°	79.8	2.1
20°-30°	141.4	3.7
30°-40°	229.8	6.0
40°-50°	459.9	12.0
50°-60°	943.6	24.7
60°-70°	1296.2	33.9
70°-80°	609.2	16.0
80°-90°	39.0	1.0
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°	3818.0	100.0
0°-180°	3818.0	100.0

**Coefficient of Utilization**

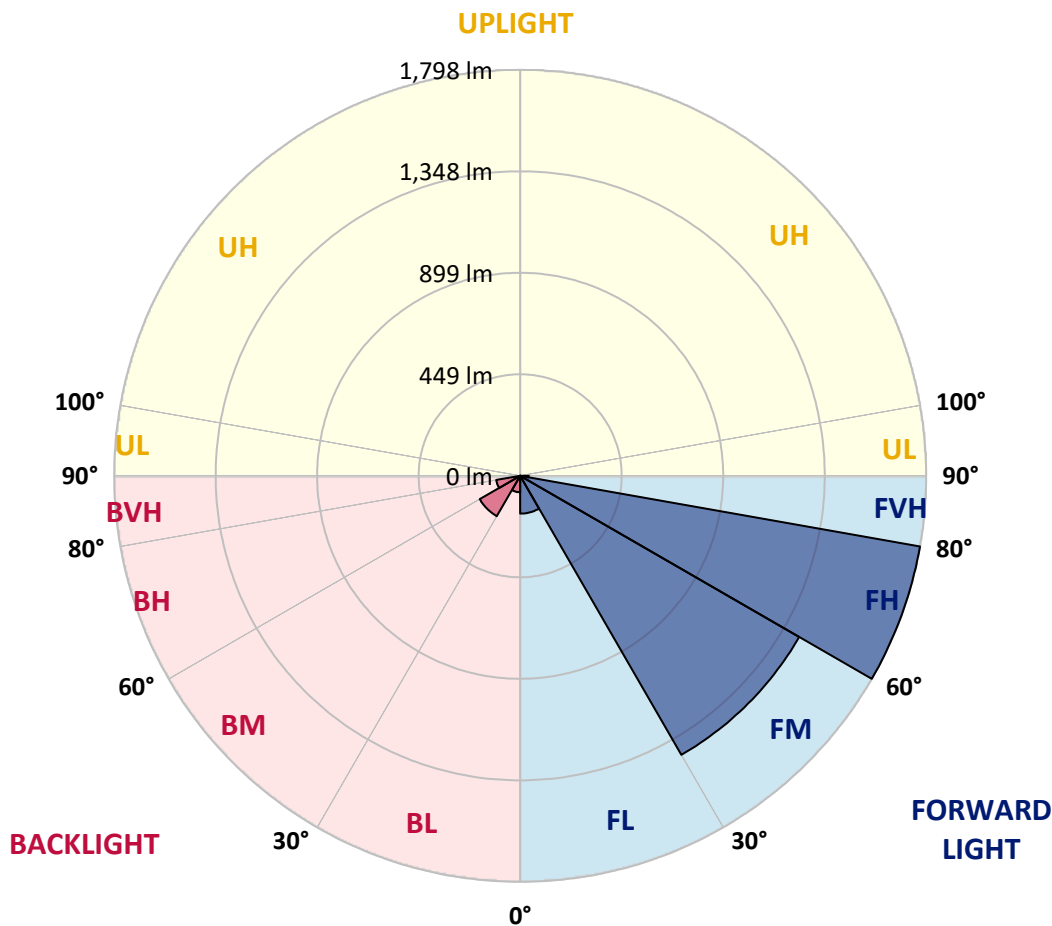


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	167.5	4.4			
FM (30°-60°)	1426.7	37.4			
FH (60°-80°)	1797.8	47.1			G1/1800
FVH (80°-90°)	38.2	1.0			G1/100
BL (0°-30°)	72.8	1.9	B0/110		
BM (30°-60°)	206.6	5.4	B0/220		
BH (60°-80°)	107.6	2.8	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°	35°	44°	45°	55°	65°	75°	85°
0°	128.6	128.6	128.6	128.6	128.6	128.6	128.6	128.6	128.6	128.6	128.6
2.5°	163.6	158.3	150.7	152.4	153.3	155.6	155.8	152.8	144.4	142.1	152.4
5°	229.3	216.4	214.1	209.3	199.6	194.3	193.1	198.3	191.6	189.5	192.2
7.5°	292.9	281.9	269.9	263.4	243.2	230.7	230.1	232.2	233.5	226.1	229.9
10°	335.2	323.2	320.6	305.3	287.8	284.9	283.6	275.6	269.1	263.6	245.3
12.5°	373.5	373.3	377.9	355.8	353.1	356.0	355.0	326.3	319.8	296.9	291.6
15°	424.4	437.1	417.1	398.5	375.0	385.1	382.3	364.0	359.6	344.0	321.5
17.5°	477.3	480.6	447.2	418.8	412.6	399.4	402.1	395.6	373.3	385.7	363.4
20°	478.5	485.9	450.1	403.2	421.9	421.3	421.5	415.2	385.7	414.8	394.3
22.5°	496.2	478.1	444.9	415.0	418.3	421.5	424.9	417.1	410.8	417.9	421.7
25°	489.1	481.9	449.9	430.1	427.0	429.5	430.3	440.2	436.2	453.5	444.0
27.5°	507.6	497.3	440.0	443.6	432.4	429.5	424.4	457.5	469.3	455.6	480.9
30°	539.4	537.9	457.1	462.3	453.7	427.8	441.3	484.4	499.2	490.8	521.5
32.5°	589.1	594.1	507.0	472.9	477.3	488.9	483.8	484.4	521.7	540.4	564.9
35°	659.6	656.9	555.6	512.9	489.7	491.6	498.8	533.1	581.3	580.0	605.9
37.5°	798.1	768.2	641.7	553.7	560.7	570.1	564.9	611.0	615.6	617.3	679.2
40°	1002.3	962.6	777.5	639.8	572.9	614.8	612.2	623.6	654.5	666.1	756.4
42.5°	1271.4	1217.9	1016.5	798.1	631.8	603.0	618.5	640.0	744.0	777.1	876.0
45°	1568.7	1460.5	1254.8	1023.8	779.6	690.1	701.9	741.9	886.1	940.9	1050.1
47.5°	1761.3	1666.2	1490.8	1223.8	933.7	886.8	887.8	896.5	1053.1	1154.6	1301.1
50°	1928.7	1827.4	1664.7	1432.9	1206.4	1117.5	1097.3	1057.5	1265.7	1404.5	1567.0
52.5°	2164.9	2046.6	1838.6	1678.2	1517.3	1308.0	1300.9	1314.4	1516.5	1662.4	1839.6
55°	2378.0	2234.2	2035.6	1934.6	1871.9	1588.1	1594.2	1616.7	1838.4	1915.6	2082.2
57.5°	2472.1	2316.3	2214.2	2168.7	2135.2	1970.6	1950.0	1936.5	2092.3	2121.8	2336.3
60°	2533.8	2385.6	2339.2	2349.8	2451.2	2276.5	2257.8	2179.4	2302.4	2326.6	2564.1
62.5°	2494.8	2359.7	2369.6	2457.3	2682.6	2567.7	2513.6	2382.6	2474.2	2493.8	2727.7
65°	2249.5	2108.7	2235.9	2448.3	2859.0	2856.3	2831.3	2570.2	2569.4	2594.4	2740.3
67.5°	1837.5	1689.7	1895.4	2278.6	2851.7	3031.3	3019.5	2819.0	2583.0	2516.1	2472.9
70°	1277.5	1149.3	1382.6	1881.7	2597.6	3030.0	3011.0	2986.2	2474.8	2165.8	1917.3
72.5°	663.8	593.3	810.6	1296.7	2070.6	2662.2	2724.7	2683.9	2113.1	1573.5	1129.1
75°	225.5	202.3	334.3	688.2	1376.5	2032.9	2106.2	2064.7	1435.2	844.2	446.5
77.5°	87.4	81.3	119.8	279.4	690.5	1238.8	1318.4	1276.0	769.7	309.3	105.1
80°	49.7	48.0	66.1	125.9	304.4	616.2	672.2	609.7	277.5	104.2	27.4
82.5°	21.1	21.7	36.8	68.0	153.1	217.5	242.5	221.3	116.2	71.4	10.1
85°	4.6	5.7	17.5	37.9	64.2	62.1	65.1	72.2	71.4	52.4	4.4
87.5°	0.0	0.0	5.5	10.3	15.4	10.1	8.0	14.1	21.9	21.1	1.9
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°	128.6	128.6	128.6	128.6	128.6	128.6	128.6	128.6	128.6	128.6	128.6
2.5°	154.3	152.2	139.0	138.1	139.0	136.6	136.4	131.6	132.0	143.0	143.8
5°	192.2	181.7	170.3	166.7	163.4	155.8	160.0	160.0	160.0	167.0	169.1
7.5°	226.5	212.4	196.4	183.0	169.9	160.4	167.0	171.6	174.3	183.4	187.6
10°	242.1	228.2	213.9	194.7	184.6	181.1	173.5	169.5	174.3	172.4	174.7
12.5°	275.4	262.7	238.1	218.3	210.7	198.5	176.2	160.6	150.3	148.6	148.2
15°	307.8	300.0	267.0	240.4	214.1	185.9	147.8	127.2	116.2	114.3	114.5
17.5°	348.9	337.7	289.1	251.0	206.3	155.6	114.1	96.4	95.6	100.2	100.6
20°	376.2	357.9	300.2	242.3	180.6	117.7	89.3	85.1	91.8	100.2	99.4
22.5°	402.3	382.5	315.0	234.7	140.0	89.3	82.1	82.5	88.2	97.3	99.6
25°	419.6	412.4	333.1	217.1	106.7	77.3	78.5	81.7	86.5	95.2	95.2
27.5°	471.6	438.1	331.0	182.7	82.1	72.0	74.9	79.0	81.5	91.8	92.8
30°	503.2	492.2	341.9	147.8	72.0	65.3	70.9	74.5	76.2	88.0	88.4
32.5°	541.9	517.7	355.2	109.1	66.9	64.8	63.6	66.3	71.2	81.5	82.1
35°	589.1	581.9	336.2	85.7	65.3	60.6	58.1	59.6	62.7	69.7	71.2
37.5°	685.3	642.8	324.9	73.5	65.3	59.2	56.4	52.6	53.1	57.9	60.6
40°	766.3	753.3	293.1	71.4	62.3	57.1	50.3	45.7	42.5	44.0	45.1
42.5°	915.2	854.8	252.0	70.3	59.6	51.6	42.7	37.9	33.1	33.5	35.2
45°	1095.8	965.5	215.4	69.3	57.7	46.1	36.0	30.3	25.3	25.5	27.2
47.5°	1337.1	1127.0	171.0	66.1	54.3	41.1	29.1	23.2	20.2	20.8	22.3
50°	1611.2	1268.7	135.2	61.3	50.3	36.2	23.6	18.7	17.7	18.3	20.0
52.5°	1856.1	1373.1	111.6	56.8	44.6	29.5	19.8	16.6	16.2	16.6	17.9
55°	2073.8	1433.7	93.3	51.8	38.3	23.8	17.9	15.4	15.2	14.9	15.8
57.5°	2278.0	1451.2	72.8	43.8	31.2	20.6	16.6	14.3	13.9	13.3	13.9
60°	2426.8	1421.3	53.5	35.2	25.5	18.7	15.6	12.8	12.2	11.2	11.6
62.5°	2498.6	1339.4	40.4	28.2	21.7	17.1	13.9	11.2	10.3	9.1	9.3
65°	2430.4	1204.5	31.8	23.8	18.5	14.3	11.8	9.5	8.4	7.2	7.2
67.5°	2128.3	999.2	26.9	20.6	15.6	12.2	9.7	8.6	6.9	5.9	5.7
70°	1562.2	718.8	23.2	18.1	13.5	10.5	8.2	7.8	6.7	5.7	5.3
72.5°	881.7	406.8	19.8	16.0	11.4	8.8	6.9	7.2	6.5	5.3	4.8
75°	336.4	137.1	16.4	13.3	9.3	6.7	5.9	5.9	5.9	4.4	3.8
77.5°	83.4	34.9	13.1	10.7	7.4	4.4	4.8	5.1	5.1	3.8	2.7
80°	22.9	11.8	7.8	7.8	5.3	2.5	3.4	3.4	2.7	1.3	0.0
82.5°	8.4	4.4	2.7	3.4	2.3	0.8	1.3	0.8	0.6	0.0	0.0
85°	3.6	2.3	1.7	1.9	1.1	0.0	0.2	0.4	0.0	0.0	0.0
87.5°	1.5	1.1	0.8	0.8	0.4	0.0	0.0	0.0	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)