

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: P596569

Luminaire Tested: **MSA-SA2A-827-U-SL3-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596569  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2A-827-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4798 lumens  
Efficiency: N/A  
Efficacy: 72.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

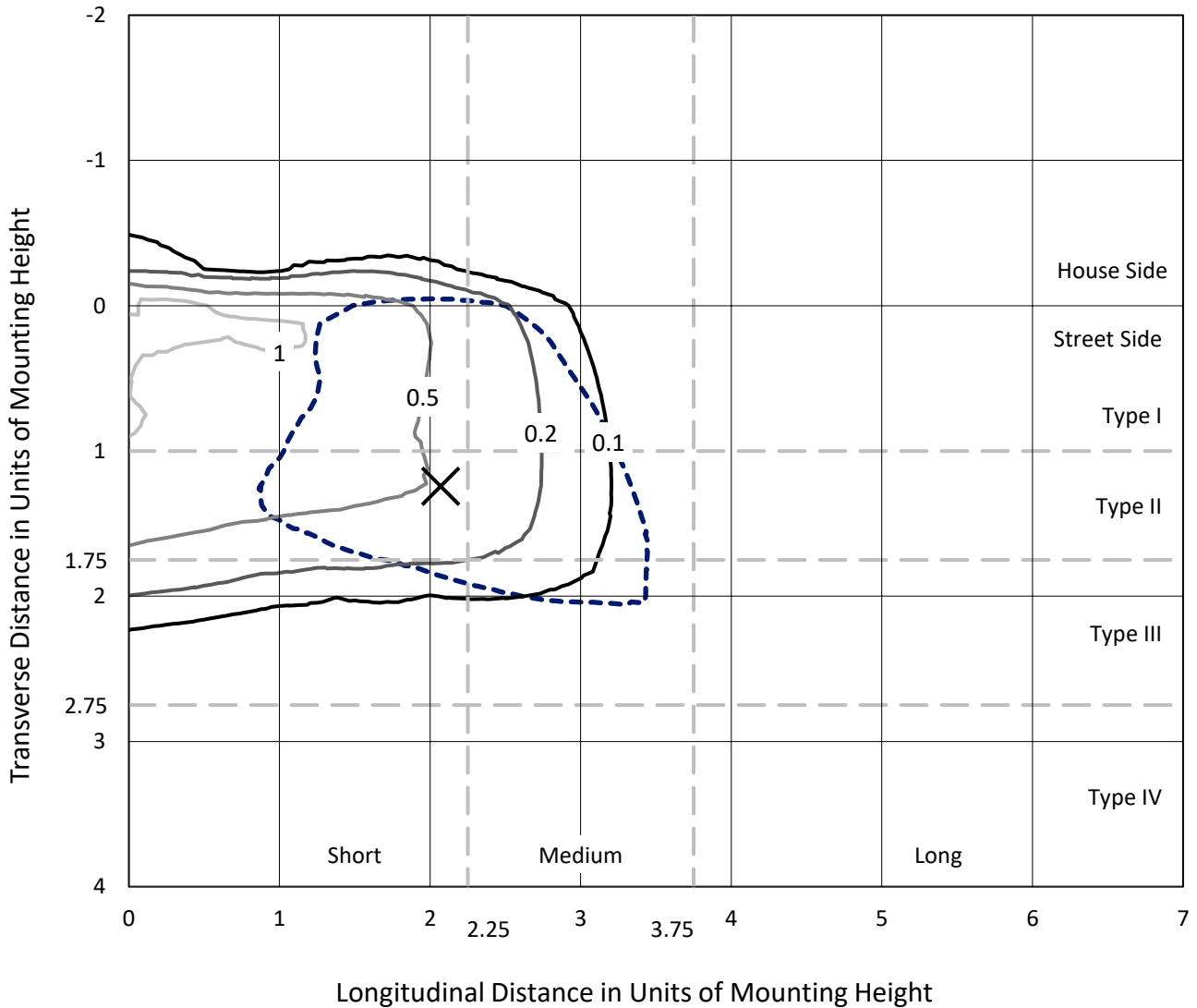
Input Watts (W): 66  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

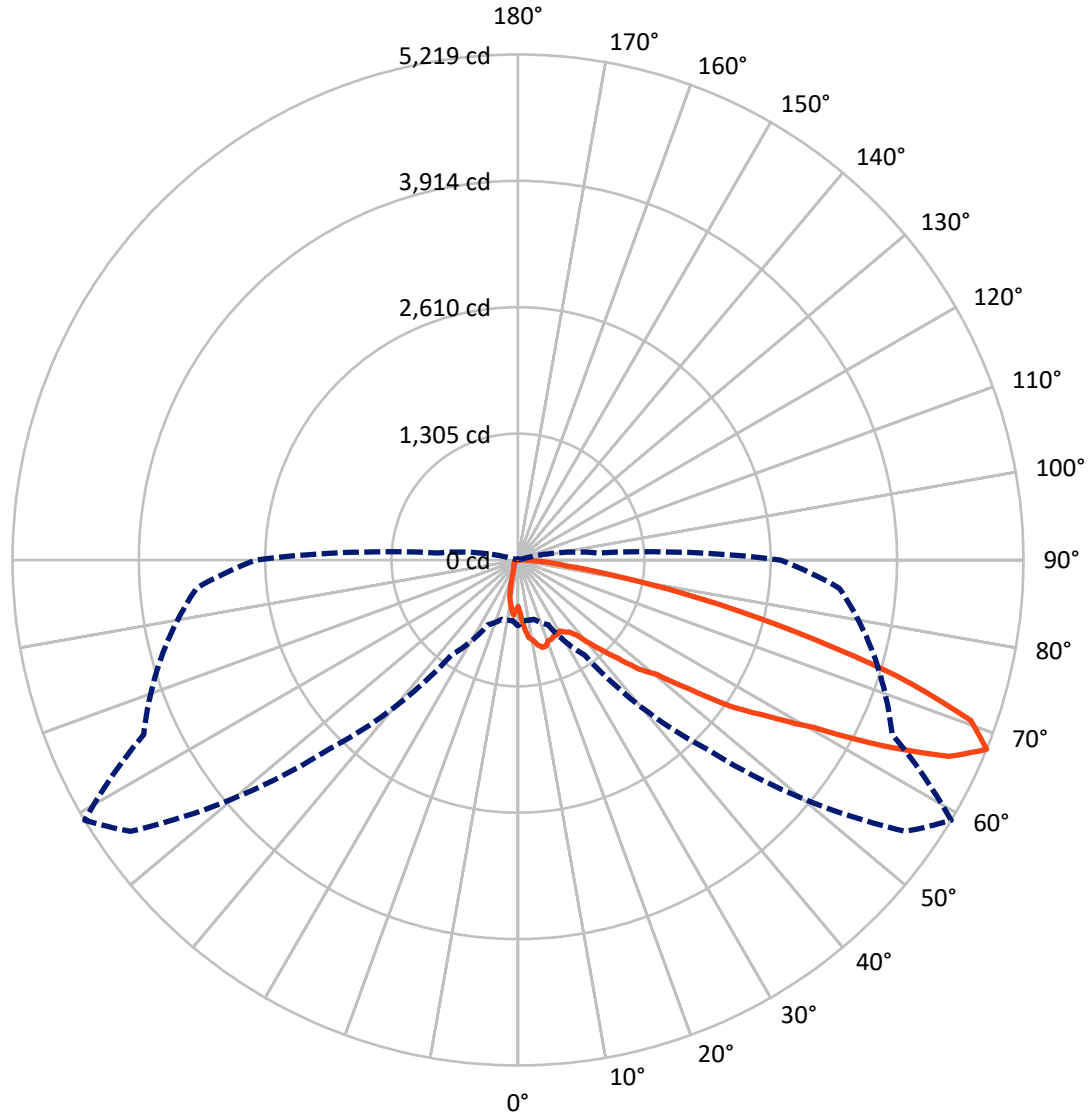
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.4 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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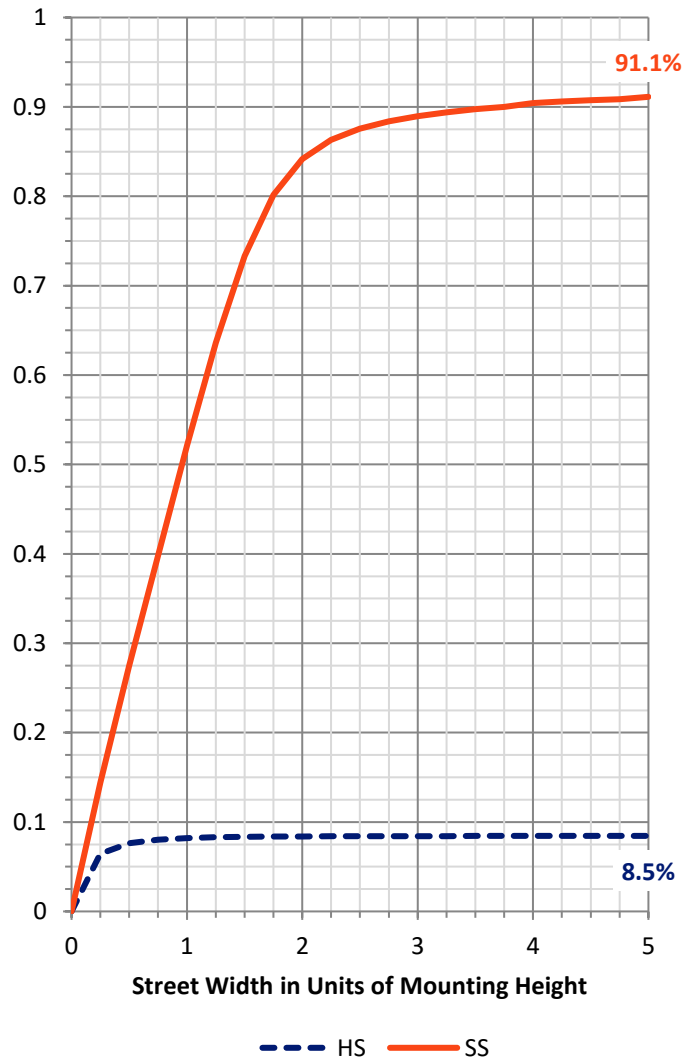
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	408.0	0.0	408.0
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	4390.0	0.0	4390.0
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	4798.0	0.0	4798.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.4	1.2
10°-20°	164.4	3.4
20°-30°	244.5	5.1
30°-40°	377.2	7.9
40°-50°	673.1	14.0
50°-60°	1197.8	25.0
60°-70°	1395.0	29.1
70°-80°	620.4	12.9
80°-90°	67.4	1.4
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°	4798.0	100.0
0°-180°	4798.0	100.0

**Coefficient of Utilization**



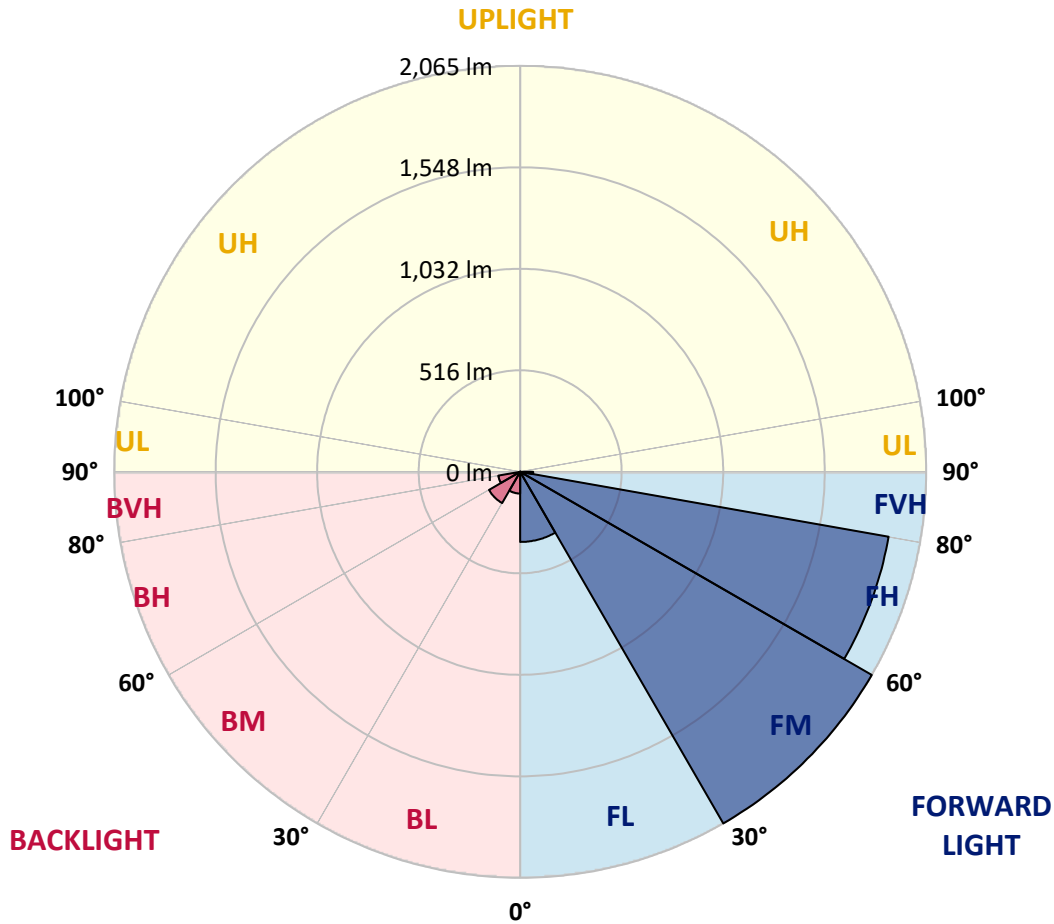
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	356.8	7.4			
FM (30°-60°)	2064.6	43.0			
FH (60°-80°)	1902.4	39.6			G2/5000
FVH (80°-90°)	66.2	1.4			G1/100
BL (0°-30°)	110.3	2.3	B1/500		
BM (30°-60°)	183.5	3.8	B0/220		
BH (60°-80°)	113.0	2.4	B1/500		G1/500
BVH (80°-90°)	1.2	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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	480.1	480.1	480.1	480.1	480.1	480.1	480.1	480.1	480.1	480.1	480.1
2.5°	625.8	602.3	568.7	578.7	587.7	596.2	582.1	574.1	570.2	535.7	578.9
5°	768.4	739.0	723.7	719.8	710.1	688.5	724.5	708.4	713.8	720.6	734.7
7.5°	811.9	798.6	776.4	784.7	747.8	744.6	794.4	808.3	826.5	814.1	831.1
10°	789.6	766.5	776.9	774.0	772.6	805.1	840.1	840.8	868.0	881.2	823.6
12.5°	745.3	748.0	785.4	782.5	831.1	896.2	904.2	895.7	940.2	917.4	908.6
15°	774.7	796.6	776.0	783.0	800.3	881.6	910.1	936.3	978.3	991.9	932.9
17.5°	810.2	812.4	774.7	766.0	809.5	847.4	914.4	936.1	940.2	1059.5	987.6
20°	791.0	809.7	764.8	709.6	777.2	828.7	896.7	889.9	917.6	1079.4	1000.0
22.5°	842.0	815.3	757.7	716.2	739.0	785.9	843.5	888.0	929.5	1031.8	1016.0
25°	846.9	837.2	785.9	749.0	745.1	757.0	837.2	865.8	931.0	1074.5	1002.4
27.5°	901.6	890.4	785.4	789.1	752.6	716.0	806.6	873.9	957.4	1048.5	1031.3
30°	972.0	973.0	837.7	849.1	797.1	738.1	831.6	850.1	975.4	1090.1	1052.7
32.5°	1043.4	1072.8	940.9	880.4	864.1	821.9	800.5	885.8	955.7	1161.0	1106.1
35°	1152.0	1172.0	1025.9	971.8	907.9	859.8	885.0	915.7	1026.4	1255.0	1176.3
37.5°	1335.9	1300.0	1178.5	1084.3	1068.9	998.0	1010.6	983.2	1098.6	1365.8	1315.3
40°	1439.4	1406.9	1280.6	1234.6	1137.0	1147.9	1108.1	1124.1	1203.3	1481.2	1441.9
42.5°	1547.3	1516.2	1405.4	1372.9	1279.8	1234.6	1216.7	1274.2	1363.9	1673.4	1623.3
45°	1655.7	1576.7	1529.8	1546.1	1504.3	1414.9	1394.0	1445.3	1539.3	1909.5	1814.8
47.5°	1747.0	1680.4	1645.2	1637.7	1621.4	1745.5	1660.5	1683.1	1724.7	2118.5	2053.4
50°	1911.7	1846.1	1791.0	1775.7	1854.9	2031.0	1899.8	1856.1	1939.2	2370.9	2329.8
52.5°	2149.6	2066.0	1978.3	1978.5	2127.9	2224.6	2286.8	2210.1	2225.6	2648.6	2630.3
55°	2340.8	2234.6	2161.9	2219.3	2442.1	2496.2	2733.6	2666.3	2646.1	2906.1	2883.7
57.5°	2367.0	2239.7	2205.2	2305.8	2610.7	2956.6	3211.9	3043.8	3013.0	3121.6	3166.0
60°	2122.1	1987.0	2013.0	2174.8	2665.6	3237.2	3651.2	3513.9	3317.9	3374.0	3404.6
62.5°	1582.8	1474.9	1547.8	1762.1	2454.0	3425.3	4159.7	4223.3	3671.6	3563.5	3556.9
65°	1026.9	959.4	1007.2	1182.9	1857.1	3403.9	4614.0	4890.0	3950.3	3718.0	3604.8
67.5°	679.3	628.0	634.8	738.8	1200.9	2768.3	4885.6	5219.1	4263.6	3805.7	3330.5
70°	506.3	466.0	468.4	524.8	712.8	1825.7	4506.8	4959.4	4378.1	3501.8	2688.2
72.5°	365.1	338.2	360.8	423.4	568.0	965.5	3359.2	4084.4	3817.6	2762.0	1811.1
75°	252.9	235.2	272.1	354.2	518.4	599.3	2219.8	2940.1	2675.8	1732.9	818.7
77.5°	140.2	134.8	188.0	288.6	470.6	491.2	1359.8	1931.9	1484.1	621.2	194.8
80°	61.2	59.3	91.1	216.7	395.5	443.9	765.5	1071.1	583.8	110.8	62.9
82.5°	26.2	25.3	38.9	130.5	287.4	371.2	472.0	515.5	200.9	34.3	35.7
85°	4.6	5.1	15.5	68.8	174.9	188.5	341.8	305.1	101.1	16.3	25.5
87.5°	0.0	0.0	2.4	13.4	32.8	53.9	148.2	106.9	19.2	5.3	4.4
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°	480.1	480.1	480.1	480.1	480.1	480.1	480.1	480.1	480.1	480.1	480.1
2.5°	585.0	571.4	519.7	513.1	506.1	495.6	491.7	469.4	466.5	495.1	495.1
5°	728.1	679.5	630.2	591.3	556.6	508.5	494.9	480.8	469.4	466.5	475.4
7.5°	803.7	744.4	666.9	568.0	487.8	418.1	389.0	368.5	345.7	352.5	356.2
10°	799.5	736.6	637.7	510.7	421.7	344.7	270.6	227.4	203.3	191.4	190.0
12.5°	840.1	780.8	618.0	465.0	351.5	245.1	170.3	139.4	121.7	122.0	120.5
15°	863.7	799.0	595.2	407.2	247.6	157.7	118.1	111.3	108.8	111.5	110.1
17.5°	905.2	818.2	543.5	320.9	170.3	119.0	108.6	105.9	109.1	114.7	113.2
20°	902.0	784.9	469.9	226.2	125.8	107.1	102.8	98.6	105.2	111.0	110.1
22.5°	899.1	752.4	400.6	166.9	105.2	97.7	94.0	92.3	95.7	102.5	104.0
25°	873.4	736.4	330.4	125.4	95.2	88.7	87.0	85.5	86.7	92.3	92.1
27.5°	905.0	695.8	255.1	105.2	88.2	80.4	79.0	76.5	74.1	79.0	79.7
30°	898.4	701.4	199.9	92.6	81.1	70.7	71.2	66.1	61.7	66.1	66.1
32.5°	922.2	660.6	160.1	84.1	74.1	66.6	60.5	55.1	52.0	54.7	55.1
35°	957.0	662.3	125.4	78.7	68.0	59.3	52.0	46.6	43.7	44.9	45.7
37.5°	1073.3	650.6	104.7	74.6	65.8	54.9	47.4	40.3	38.4	39.8	40.6
40°	1149.1	681.7	92.3	72.4	60.2	50.5	40.6	35.5	33.8	34.5	35.7
42.5°	1292.0	698.9	86.2	70.0	55.1	43.2	34.7	31.8	29.4	30.4	31.3
45°	1444.8	728.3	81.6	67.3	51.3	37.9	30.6	28.2	25.0	25.3	26.2
47.5°	1632.6	798.3	76.3	62.7	45.9	34.5	27.2	23.6	20.7	20.4	21.6
50°	1884.8	891.8	71.4	56.8	42.5	31.6	23.8	19.2	16.8	16.0	17.0
52.5°	2153.9	1012.8	66.3	52.7	38.4	27.7	20.4	15.5	13.4	12.9	13.6
55°	2420.7	1129.0	61.5	50.0	34.0	23.8	17.2	12.9	10.9	10.4	10.9
57.5°	2724.6	1254.6	55.1	44.7	29.9	20.7	14.3	10.7	9.0	8.5	8.7
60°	2953.5	1298.8	49.8	38.9	26.0	18.2	12.1	8.5	7.3	6.8	7.0
62.5°	3062.1	1226.6	44.7	33.8	22.8	15.8	10.2	7.0	6.1	5.6	5.6
65°	3033.9	1066.8	39.6	28.9	19.7	13.1	8.0	6.1	5.3	4.6	4.4
67.5°	2708.3	834.8	33.8	24.3	16.5	10.7	6.8	5.8	4.9	4.4	3.6
70°	2147.9	604.4	27.5	20.2	13.8	8.7	5.3	5.3	4.6	4.4	3.4
72.5°	1407.9	380.4	22.4	16.3	11.4	6.8	4.1	4.9	4.4	4.4	3.2
75°	610.0	136.0	18.0	13.1	9.5	4.6	3.6	4.4	4.6	4.4	3.6
77.5°	142.9	42.3	14.1	10.4	7.8	3.2	3.6	4.4	4.6	4.1	3.2
80°	53.7	18.0	9.2	6.8	6.1	1.9	3.2	2.7	2.4	1.7	0.5
82.5°	32.6	7.5	4.9	3.4	2.9	0.5	1.5	1.0	0.5	0.5	0.0
85°	23.1	3.6	2.7	2.4	1.5	0.0	0.2	0.0	0.0	0.2	0.0
87.5°	3.2	1.0	1.2	1.2	1.0	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)