

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: P596801

Luminaire Tested: **MSA-SA4C-827-U-T4FT-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596801  
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-SA4C-827-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: 13246 lumens  
Efficiency: N/A  
Efficacy: 58.9 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

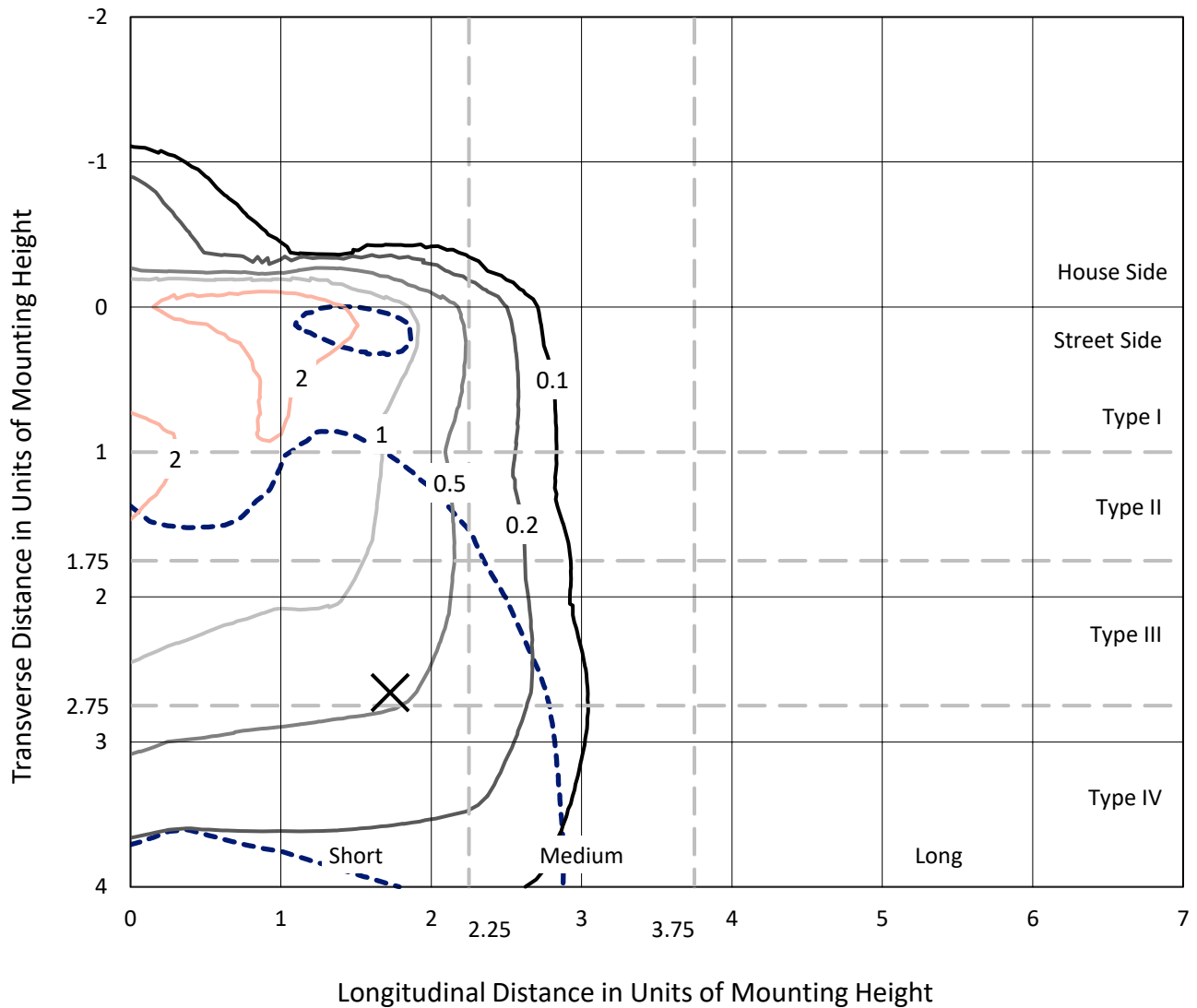
Input Watts (W): 225  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

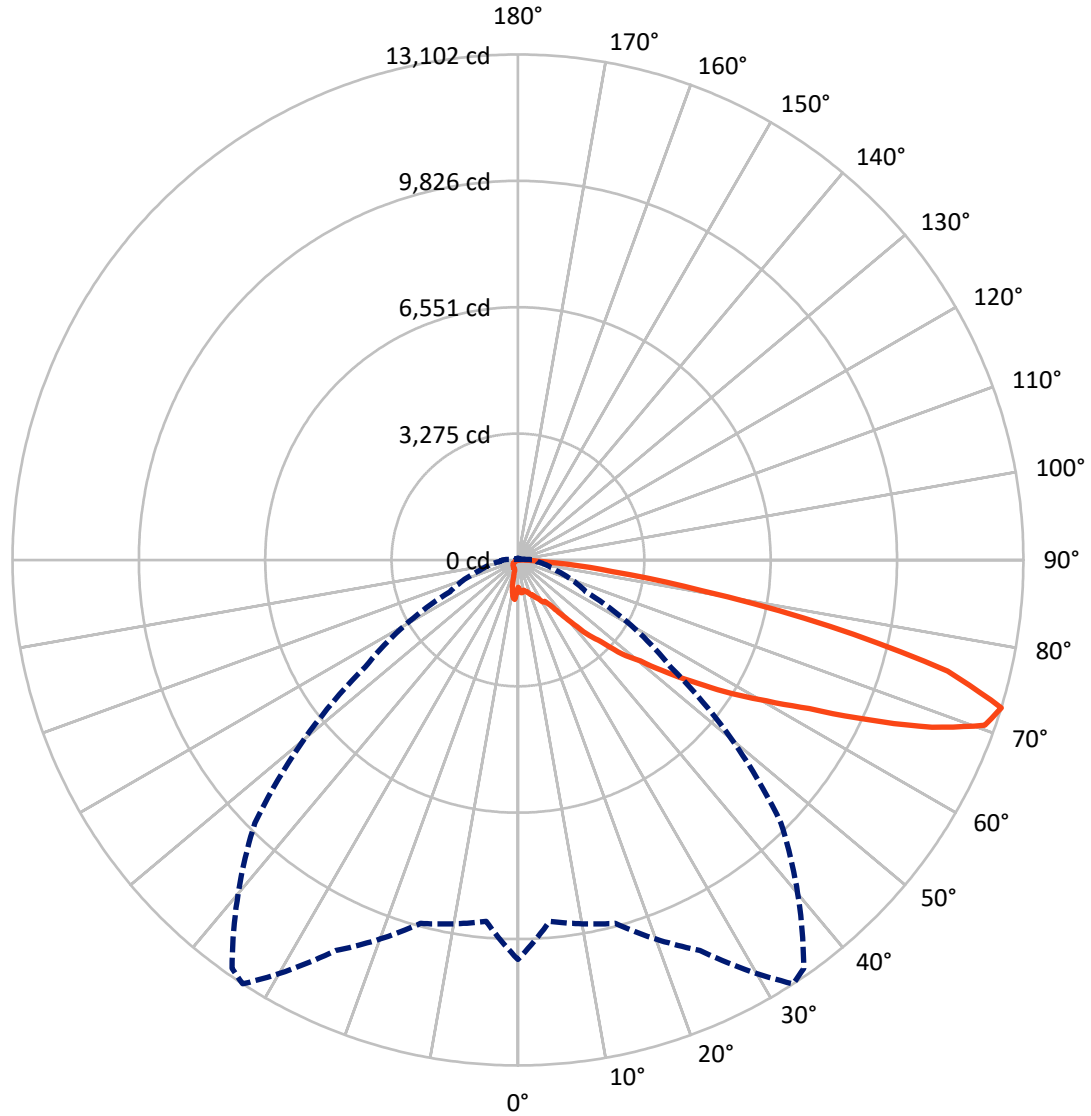
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.3 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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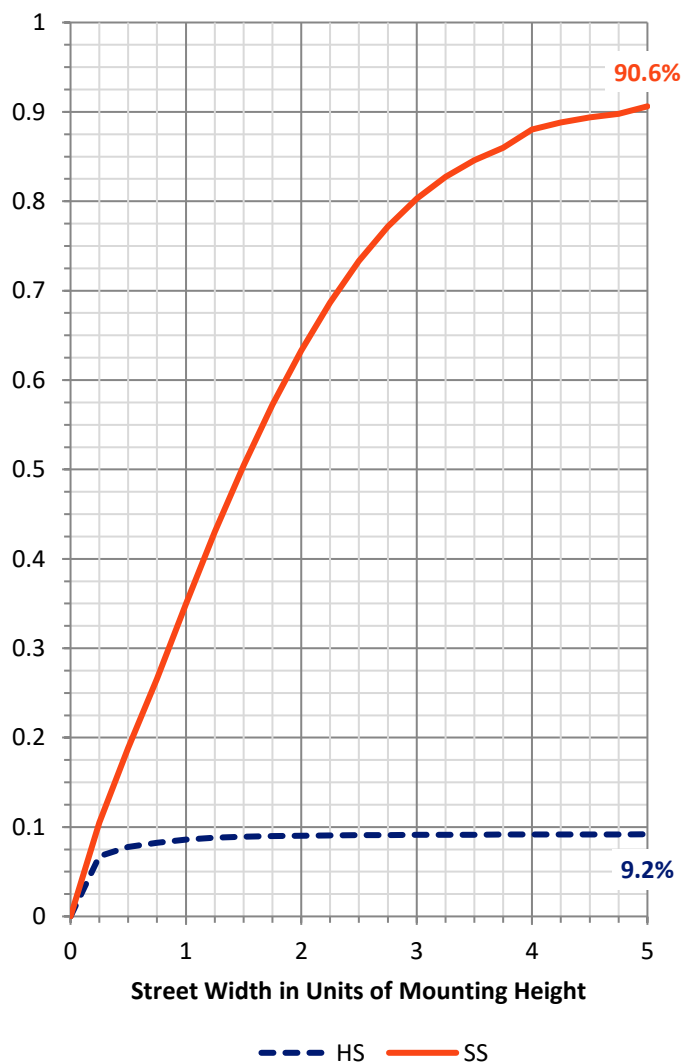
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1224.8	0.0	1224.8
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	12021.2	0.0	12021.2
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	13246.0	0.0	13246.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	91.2	0.7
10°-20°	271.7	2.1
20°-30°	460.8	3.5
30°-40°	843.4	6.4
40°-50°	1780.0	13.4
50°-60°	2978.0	22.5
60°-70°	3986.2	30.1
70°-80°	2603.8	19.7
80°-90°	230.9	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°	13246.0	100.0
0°-180°	13246.0	100.0

**Coefficient of Utilization**



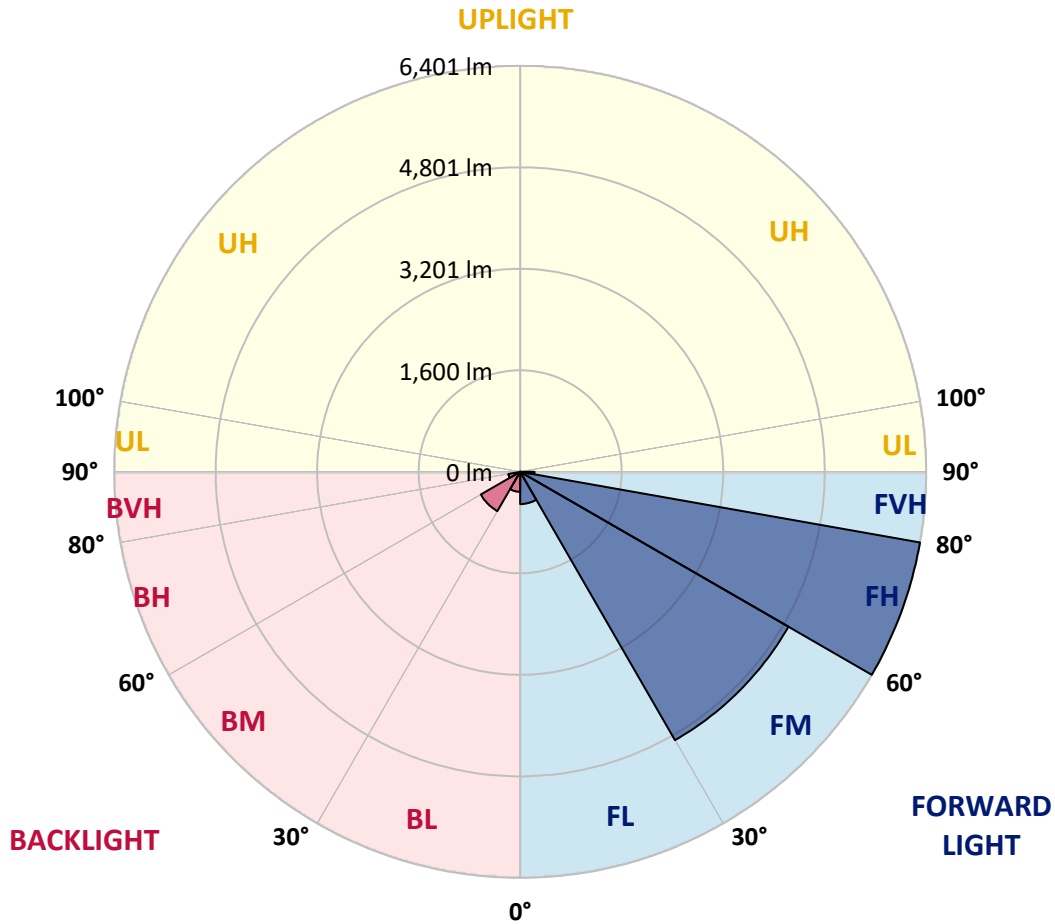
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	508.5	3.8			
FM (30°-60°)	4885.3	36.9			
FH (60°-80°)	6401.0	48.3			G3/7500
FVH (80°-90°)	226.4	1.7			G3/500
BL (0°-30°)	315.2	2.4	B1/500		
BM (30°-60°)	716.0	5.4	B1/1000		
BH (60°-80°)	189.0	1.4	B1/500		G1/500
BVH (80°-90°)	4.5	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°	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5
2.5°	839.9	807.5	760.4	763.4	771.5	778.1	795.7	788.4	774.4	773.7	839.9
5°	889.9	853.8	850.9	855.3	853.1	864.9	850.1	897.9	938.4	986.9	1064.9
7.5°	865.6	848.7	827.3	849.4	848.7	842.8	852.4	949.4	1047.2	1109.0	1237.7
10°	795.7	776.6	792.8	800.1	795.0	820.7	884.7	964.1	1081.1	1210.5	1273.0
12.5°	775.9	787.6	793.5	793.5	842.8	856.0	953.8	1028.9	1167.8	1270.1	1451.7
15°	853.1	875.9	835.4	826.6	842.1	849.4	958.3	1048.7	1226.7	1413.5	1565.7
17.5°	975.9	974.4	911.9	877.4	901.6	919.3	979.6	1085.5	1189.9	1526.0	1746.6
20°	1060.5	1061.9	949.4	877.4	957.5	967.8	1034.7	1119.3	1201.7	1582.6	1865.0
22.5°	1169.3	1130.3	1006.1	936.2	990.6	1000.2	1073.7	1140.6	1262.0	1576.0	2016.5
25°	1258.3	1233.3	1076.7	1028.1	1076.7	1063.4	1130.3	1231.1	1326.7	1681.2	2105.5
27.5°	1396.6	1353.9	1126.7	1135.5	1132.5	1142.1	1157.6	1312.0	1440.7	1686.3	2311.4
30°	1525.3	1500.3	1238.4	1238.4	1267.1	1248.7	1259.8	1446.6	1551.0	1805.5	2543.1
32.5°	1658.4	1659.8	1370.1	1300.2	1277.4	1353.2	1427.5	1512.0	1684.1	2009.9	2897.6
35°	2010.6	1981.2	1622.3	1448.0	1429.7	1425.2	1544.4	1773.1	1920.2	2276.1	3374.8
37.5°	2720.3	2618.1	2165.1	1783.4	1714.3	1690.7	1826.1	2060.6	2207.0	2667.4	4164.0
40°	3448.4	3260.9	2757.8	2327.6	2103.3	2001.8	2159.2	2358.5	2618.8	3099.8	4894.2
42.5°	4087.5	3855.8	3204.2	2914.5	2622.5	2578.4	2430.6	2754.9	3207.2	3729.3	5609.8
45°	4710.4	4254.4	3601.4	3371.9	3017.4	3042.4	2992.4	3273.4	3818.3	4419.1	6244.5
47.5°	5139.1	4729.5	4088.2	3790.4	3648.4	3502.1	3899.2	4191.2	4362.5	4857.5	6793.1
50°	5601.0	5186.2	4506.7	4298.5	4111.7	4259.6	4775.1	4814.1	4800.1	5266.4	7166.7
52.5°	6197.4	5708.3	4986.9	4751.6	4857.5	5004.5	5599.5	5606.8	5189.1	5610.5	7435.8
55°	6749.0	6207.0	5626.7	5404.6	5626.0	5750.3	6409.9	6168.0	5415.6	5844.4	7568.2
57.5°	7526.3	6899.0	6477.6	6086.3	6535.0	6415.8	7122.6	6762.9	5670.1	5999.6	7519.7
60°	8508.8	7770.5	7348.3	6934.3	7415.3	7496.1	7818.3	7060.0	5768.6	6050.3	7227.7
62.5°	9508.3	8765.5	8210.2	7929.3	8475.0	8741.2	8462.5	7207.9	5650.2	5951.0	6566.6
65°	10748.2	9797.3	9148.6	8983.9	9995.1	10386.4	9224.4	7243.9	5421.5	5404.6	5279.6
67.5°	11597.6	10671.7	10076.7	10352.5	11574.1	11605.7	9908.3	7254.9	4651.5	4231.6	3465.3
70°	11799.1	10807.7	10541.5	11353.4	12833.8	12436.0	10129.0	6696.0	3449.9	2511.5	1584.1
72.5°	10357.7	9403.1	9749.5	11164.4	13101.5	12919.1	9641.4	4831.0	1942.2	1004.6	486.1
75°	6353.3	5776.0	7313.8	9465.6	11500.5	11382.8	7521.9	2496.0	782.5	401.5	181.6
77.5°	2763.0	2565.9	3816.8	6280.5	8263.9	8158.8	4407.4	919.3	404.5	282.4	91.9
80°	914.1	886.9	1445.8	2974.0	4840.5	4747.9	1856.9	382.4	288.3	226.5	51.5
82.5°	216.9	215.5	504.5	1368.6	2465.9	2388.6	570.0	211.1	208.9	178.7	27.2
85°	54.4	55.9	139.7	559.7	1001.6	883.2	148.6	105.2	147.1	121.3	14.0
87.5°	0.0	0.0	36.0	80.2	151.5	94.9	16.2	27.9	41.2	43.4	7.4
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°	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5	704.5
2.5°	854.6	846.5	780.3	796.5	821.5	819.3	835.4	822.9	811.9	866.3	861.2
5°	1087.0	1042.8	1022.2	1050.9	1035.5	999.4	1029.6	1024.4	1015.6	1034.0	1048.0
7.5°	1261.2	1220.8	1202.4	1142.1	1054.6	985.5	996.5	970.8	946.5	975.2	1004.6
10°	1318.6	1296.5	1294.3	1176.7	1094.3	994.3	875.9	773.7	746.5	710.4	726.6
12.5°	1474.5	1487.8	1404.7	1267.1	1108.3	916.3	706.0	561.1	502.3	464.1	466.3
15°	1602.5	1648.8	1528.2	1281.1	975.2	698.6	469.9	339.8	303.0	293.4	290.5
17.5°	1793.0	1837.8	1566.4	1181.8	786.2	473.6	302.3	264.8	267.0	273.6	272.1
20°	1934.2	1927.5	1533.4	1006.1	579.5	310.3	253.0	247.8	259.6	278.7	274.3
22.5°	2070.2	2024.6	1512.8	843.5	375.1	249.3	244.2	243.4	254.5	272.8	278.0
25°	2167.3	2174.6	1478.2	660.4	272.8	231.7	236.1	242.7	253.7	273.6	270.6
27.5°	2445.3	2239.4	1334.1	479.5	230.2	222.1	233.1	246.4	250.0	275.0	275.8
30°	2625.5	2483.5	1239.9	322.8	212.5	205.2	227.2	244.9	249.3	281.7	283.9
32.5°	2939.5	2588.7	1131.1	239.7	197.8	200.0	214.0	237.5	258.1	292.7	294.2
35°	3330.0	2926.2	934.0	215.5	192.7	189.0	195.6	222.8	256.7	294.2	301.5
37.5°	4073.5	3128.5	740.6	208.9	192.7	186.1	192.7	208.9	252.2	308.9	324.3
40°	4571.4	3540.3	533.9	207.4	189.0	183.1	185.3	201.5	239.7	300.1	322.8
42.5°	5184.7	3713.9	393.5	203.7	185.3	176.5	178.0	198.6	227.2	281.7	298.6
45°	5687.0	3840.4	309.6	202.2	176.5	173.6	176.5	196.4	215.5	242.0	257.4
47.5°	6068.7	3987.5	248.6	192.7	174.3	173.6	169.9	183.9	195.6	202.2	212.5
50°	6348.2	3954.4	205.9	178.0	166.9	171.4	164.7	166.9	169.9	166.2	178.0
52.5°	6519.5	3835.2	171.4	160.3	158.1	161.8	153.7	147.1	141.9	139.0	146.3
55°	6582.0	3596.2	145.6	137.5	142.7	144.1	137.5	125.8	116.9	112.5	118.4
57.5°	6463.6	3232.2	126.5	114.0	125.8	125.8	116.9	104.4	94.1	86.8	92.7
60°	6163.6	2829.9	112.5	94.9	107.4	108.1	97.8	84.6	76.5	69.1	72.8
62.5°	5604.6	2391.6	98.5	82.4	92.7	93.4	80.9	68.4	62.5	54.4	57.4
65°	4486.8	1829.0	83.8	72.8	80.2	78.0	66.9	58.1	50.7	43.4	44.9
67.5°	2912.3	1128.9	72.8	66.2	67.7	65.5	56.6	50.7	42.7	36.8	37.5
70°	1303.9	486.1	64.0	59.6	58.8	55.2	47.8	47.1	41.9	36.8	36.8
72.5°	402.3	183.1	55.2	53.7	50.7	46.3	41.9	44.9	41.2	35.3	34.6
75°	158.9	83.8	45.6	45.6	44.1	38.2	37.5	40.4	38.2	32.4	30.9
77.5°	83.1	53.0	37.5	39.0	38.2	29.4	33.8	36.8	35.3	27.2	22.8
80°	49.3	32.4	27.9	31.6	30.9	20.6	25.7	23.5	16.9	8.1	2.2
82.5°	27.2	14.7	12.5	18.4	18.4	7.4	13.2	11.8	6.6	0.0	0.0
85°	13.2	10.3	9.6	10.3	7.4	2.2	6.6	6.6	3.7	0.0	0.0
87.5°	6.6	5.9	4.4	3.7	2.9	0.0	2.2	2.9	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)