

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: P596733

Luminaire Tested: **MSA-SA3D-827-U-T3-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596733  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-11)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3D-827-U-T3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10806 lumens  
Efficiency: N/A  
Efficacy: 56.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

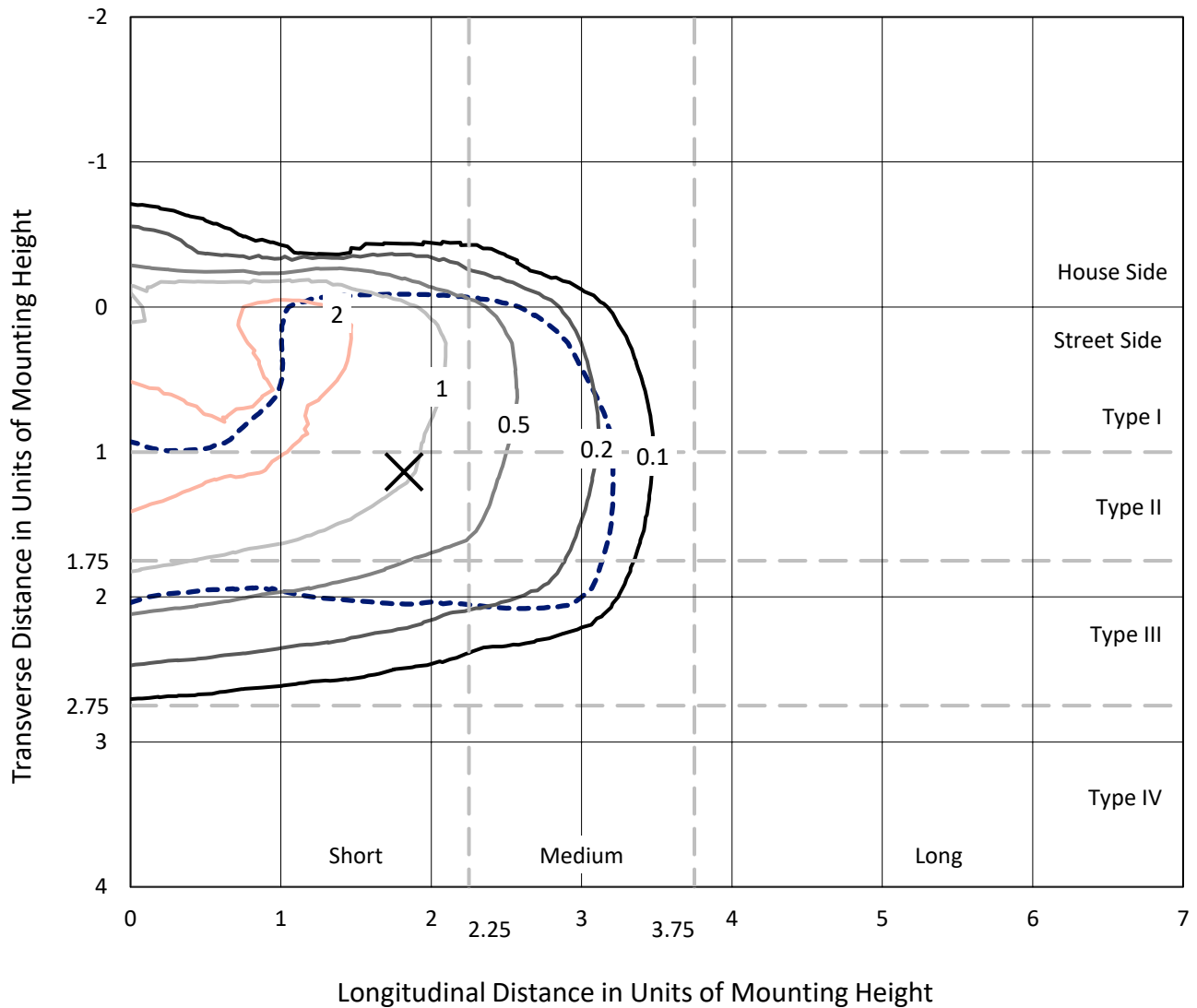
Input Watts (W): 192  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

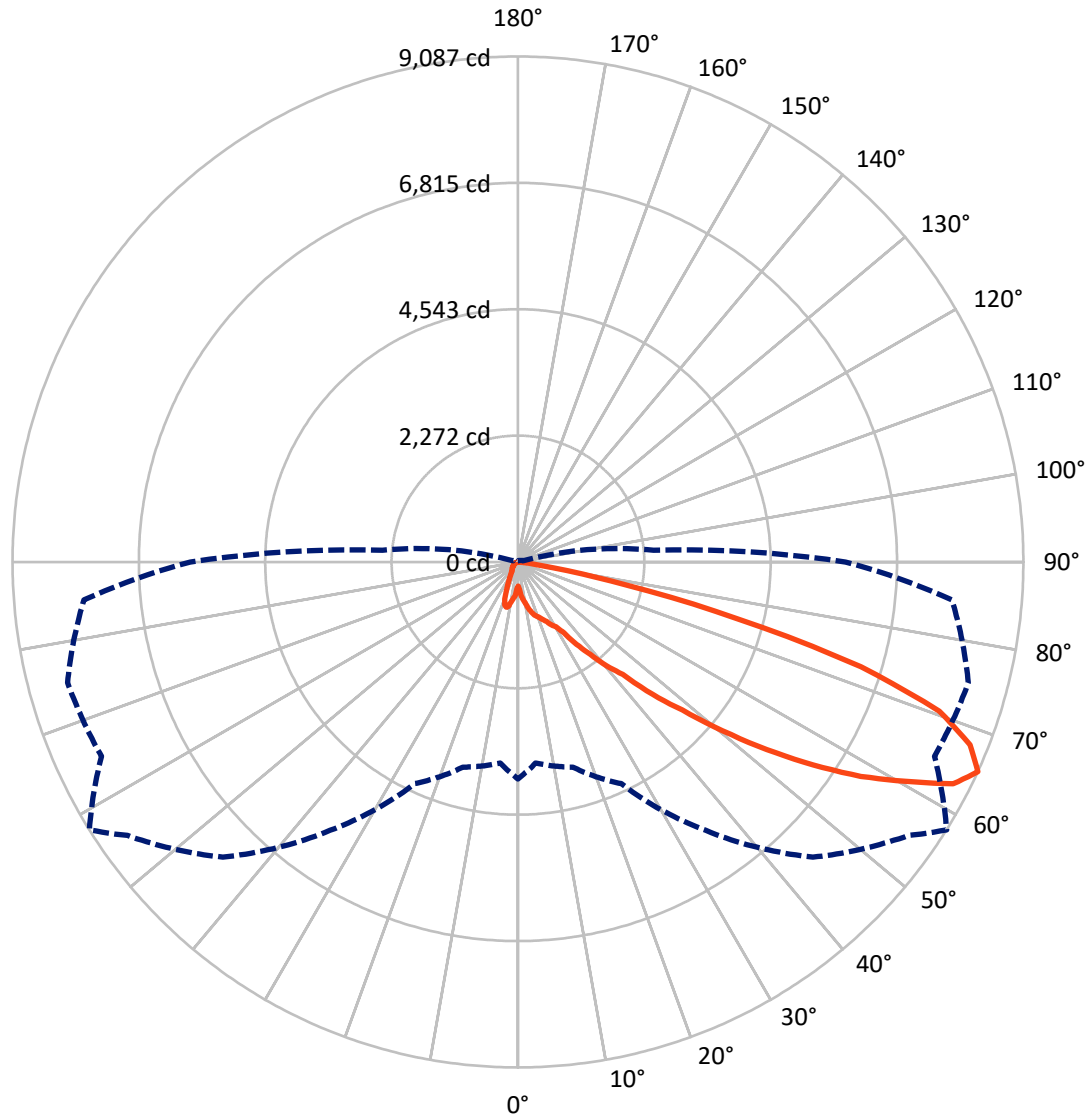
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 65-Deg Vertical

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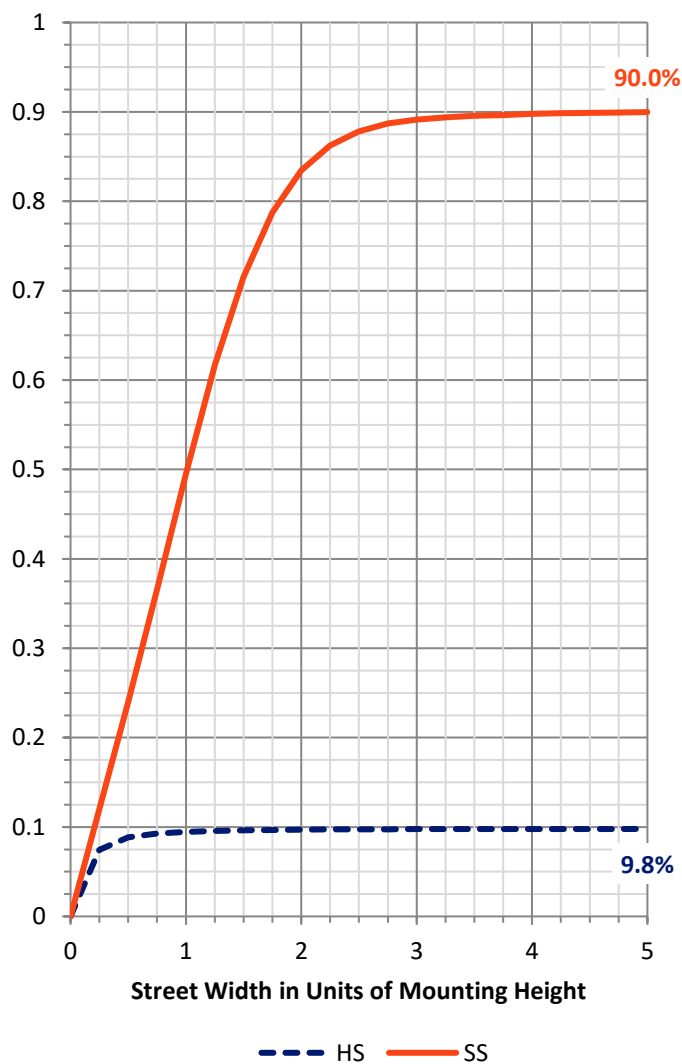
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1066.3	0.0	1066.3
	% Fixture	9.9	0.0	9.9
<b>Street Side</b>	Lumens	9739.7	0.0	9739.7
	% Fixture	90.1	0.0	90.1
<b>Total</b>	Lumens	10806.0	0.0	10806.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	60.8	0.6
10°-20°	221.8	2.1
20°-30°	429.4	4.0
30°-40°	856.6	7.9
40°-50°	1751.3	16.2
50°-60°	3106.2	28.7
60°-70°	3274.8	30.3
70°-80°	1061.7	9.8
80°-90°	43.4	0.4
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°	10806.0	100.0
0°-180°	10806.0	100.0

**Coefficient of Utilization**



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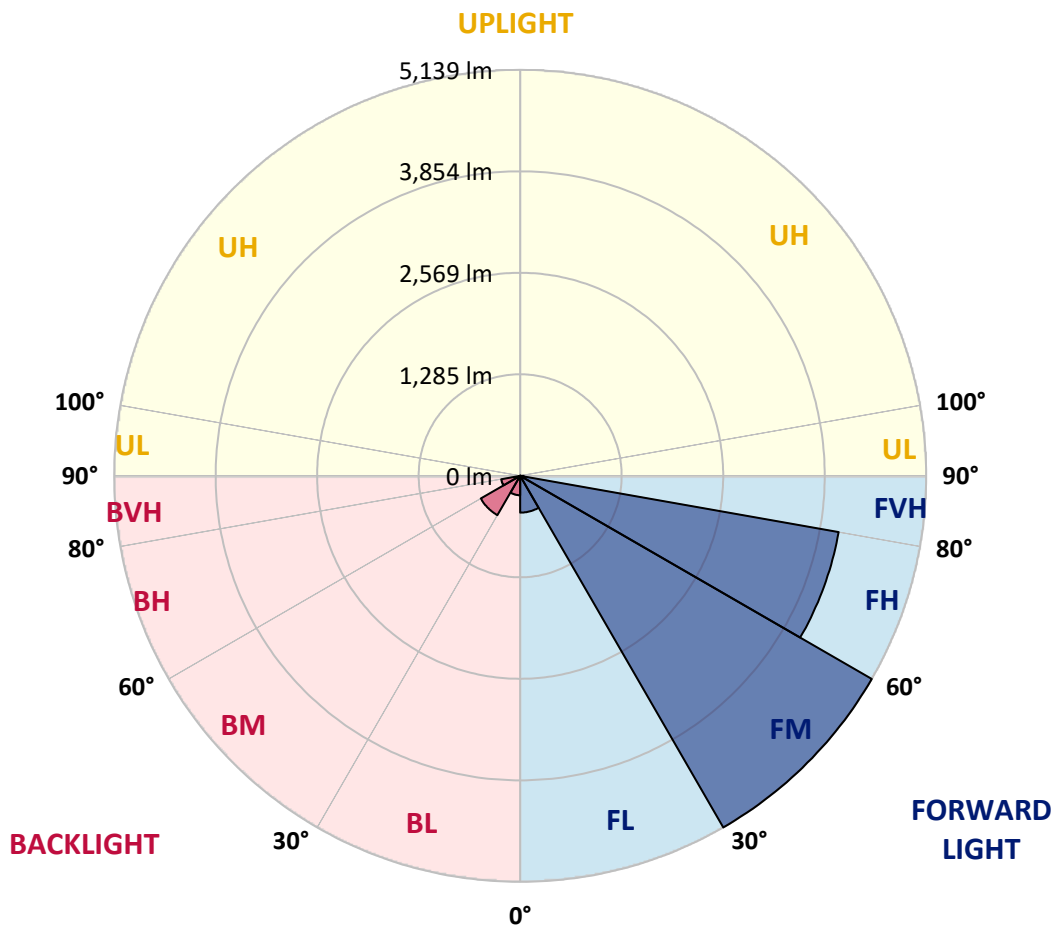
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	466.2	4.3			
FM (30°-60°)	5138.8	47.6			
FH (60°-80°)	4093.2	37.9			G2/5000
FVH (80°-90°)	41.6	0.4			G1/100
BL (0°-30°)	245.8	2.3	B1/500		
BM (30°-60°)	575.3	5.3	B1/1000		
BH (60°-80°)	243.4	2.3	B1/500		G1/500
BVH (80°-90°)	1.8	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6
2.5°	528.1	512.3	487.3	491.6	496.5	506.2	498.3	491.0	483.1	472.7	512.3
5°	637.6	611.5	609.0	603.5	599.3	598.7	608.4	605.4	609.6	629.1	649.2
7.5°	677.8	666.8	646.1	654.7	641.3	630.9	674.1	688.1	714.9	724.0	776.3
10°	673.5	657.7	666.2	670.5	679.6	717.3	744.7	759.9	783.0	832.9	822.6
12.5°	693.0	707.0	716.1	716.7	763.6	832.9	852.4	865.2	906.5	926.0	977.1
15°	758.1	781.2	766.6	772.7	787.9	872.5	918.1	946.1	1004.5	1067.8	1080.5
17.5°	851.2	865.8	835.3	813.4	855.4	901.7	984.4	1013.6	1050.7	1198.6	1226.0
20°	968.6	993.5	927.8	840.8	896.2	950.9	1041.0	1055.0	1094.5	1287.4	1330.6
22.5°	1243.0	1205.9	1105.5	969.8	953.4	977.7	1063.5	1118.3	1185.2	1337.3	1437.7
25°	1513.7	1501.0	1353.1	1201.6	1092.1	1037.3	1151.1	1181.5	1291.1	1455.9	1511.3
27.5°	1814.9	1840.4	1593.4	1501.6	1286.8	1107.9	1205.9	1281.9	1411.5	1499.1	1632.4
30°	2212.2	2171.4	1881.8	1789.9	1544.8	1302.0	1347.6	1352.5	1542.9	1641.5	1768.0
32.5°	2523.7	2549.9	2186.0	2044.9	1849.0	1600.7	1454.1	1517.4	1653.7	1873.3	1993.2
35°	2860.8	2858.3	2503.6	2313.8	2057.6	1844.7	1769.9	1816.1	1987.1	2235.9	2267.6
37.5°	3364.5	3321.3	2902.7	2624.7	2406.9	2225.0	2167.8	2106.3	2282.8	2520.0	2638.7
40°	3839.7	3690.6	3303.7	2973.9	2695.3	2621.0	2414.2	2451.9	2504.2	2817.6	3145.5
42.5°	4319.7	4227.2	3710.1	3433.9	3091.3	2914.9	2779.8	2762.2	3011.0	3382.2	3721.0
45°	4953.1	4670.2	4256.5	4013.7	3617.0	3440.0	3331.1	3396.2	3620.1	4162.1	4387.9
47.5°	5484.8	5224.4	4869.1	4500.4	4084.3	4283.2	4078.8	3976.0	4283.2	4843.6	5143.5
50°	5941.8	5651.5	5292.0	5018.8	4951.3	5142.3	4728.6	4766.3	4965.9	5624.2	5793.3
52.5°	6273.9	5968.5	5654.6	5522.6	5799.4	5895.5	5688.0	5604.7	5786.0	6289.8	6371.9
55°	6524.0	6211.3	5966.1	6148.0	6683.4	6651.8	6724.8	6440.0	6613.4	6984.0	6945.0
57.5°	6539.2	6168.7	6025.1	6317.8	7052.7	7542.5	7756.0	7271.7	7370.3	7526.7	7439.1
60°	6061.0	5692.3	5680.7	6096.3	7159.8	7773.1	8240.3	8004.3	7872.2	7988.4	7822.4
62.5°	5108.2	4850.3	4970.7	5430.1	6761.3	7645.9	8498.3	8782.4	8268.3	8294.5	8058.4
65°	3900.5	3629.8	3818.4	4397.0	5890.0	7503.5	8571.3	9086.6	8261.0	8381.5	7832.1
67.5°	2583.3	2426.3	2639.9	3277.5	4682.9	6623.8	8533.6	8767.2	7998.8	8041.4	6991.9
70°	1333.6	1295.3	1468.1	1971.3	3148.5	5088.8	8163.1	8035.3	7466.4	6927.4	5393.0
72.5°	427.1	428.9	595.0	900.4	1697.5	3098.0	6274.6	6449.8	5974.6	5067.5	3292.7
75°	189.2	186.2	248.8	377.8	707.6	1389.0	3898.1	4087.3	3719.8	2787.7	1384.1
77.5°	136.3	132.0	159.4	220.9	350.4	470.9	1827.7	1972.5	1686.5	966.2	317.0
80°	96.1	95.5	115.6	155.1	219.0	209.3	577.4	647.4	518.4	234.2	93.1
82.5°	54.1	56.0	80.3	109.5	133.2	104.6	162.4	178.9	174.6	124.7	40.8
85°	26.2	29.2	52.3	79.1	70.0	40.8	57.8	62.7	73.0	72.4	20.7
87.5°	0.0	0.0	21.3	35.9	18.9	6.1	17.6	20.1	19.5	23.1	4.9
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°	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6	432.6
2.5°	520.2	516.5	470.3	474.0	484.3	480.0	483.7	475.2	465.4	505.0	504.4
5°	657.7	630.3	615.7	602.3	604.8	577.4	593.2	600.5	599.3	621.8	627.9
7.5°	778.2	741.7	712.5	684.5	641.9	603.5	627.3	642.5	652.8	691.8	707.0
10°	834.7	804.9	793.4	738.6	708.2	684.5	655.9	635.2	643.7	633.4	643.7
12.5°	958.9	938.8	894.4	839.0	802.5	753.8	647.4	558.5	503.8	504.4	500.7
15°	1072.0	1070.8	1004.5	912.6	806.8	668.0	501.9	390.0	338.3	323.7	318.8
17.5°	1219.9	1201.6	1080.5	944.9	754.4	517.2	341.9	267.1	262.2	270.7	267.1
20°	1314.2	1287.4	1118.3	898.0	621.8	349.8	258.0	236.7	251.3	263.4	260.4
22.5°	1408.5	1368.3	1146.9	840.8	442.3	256.1	233.0	229.4	238.5	253.7	256.1
25°	1460.2	1452.3	1202.8	733.7	303.0	224.5	224.5	223.3	226.3	237.3	235.5
27.5°	1610.5	1503.4	1160.9	572.5	234.2	206.3	209.3	208.1	197.1	208.1	208.7
30°	1704.2	1654.9	1163.9	407.6	206.3	182.5	190.4	180.7	164.3	173.4	171.6
32.5°	1892.8	1769.9	1154.8	275.0	188.0	174.0	161.8	147.8	135.7	139.3	136.3
35°	2112.4	2018.7	1031.3	220.9	175.2	153.9	134.5	120.5	107.7	110.7	110.1
37.5°	2549.2	2251.7	929.0	199.0	166.7	141.2	118.6	99.2	92.5	94.3	96.1
40°	2953.8	2640.5	738.6	189.2	152.1	125.9	98.0	84.0	79.7	80.9	82.7
42.5°	3558.6	2949.6	557.9	179.5	137.5	106.5	81.5	72.4	68.1	70.6	71.8
45°	4143.9	3212.4	416.8	171.0	125.3	91.9	68.8	62.7	57.8	59.6	62.1
47.5°	4728.6	3504.5	310.9	157.6	111.9	79.1	59.0	54.8	51.7	52.3	55.4
50°	5251.8	3640.7	244.6	141.2	101.0	68.8	53.5	49.3	48.1	48.7	51.1
52.5°	5636.3	3642.0	206.3	126.5	90.7	60.8	50.5	45.6	45.0	46.2	48.7
55°	5983.7	3544.6	178.9	113.8	81.5	55.4	48.1	43.8	43.8	45.0	47.5
57.5°	6214.3	3365.7	155.1	100.4	73.6	52.3	46.2	42.0	41.4	40.8	42.6
60°	6326.9	3121.8	131.4	88.2	66.3	50.5	45.0	37.1	36.5	35.3	36.5
62.5°	6255.7	2816.3	110.1	76.1	59.0	48.1	39.5	32.2	31.0	28.6	30.4
65°	5891.9	2445.2	93.1	65.1	51.1	40.8	33.5	27.4	24.3	21.3	20.7
67.5°	5147.8	1986.5	77.9	56.0	43.8	33.5	27.4	24.3	18.9	16.4	15.8
70°	3857.9	1356.2	64.5	48.1	36.5	28.6	23.1	21.9	17.6	15.8	14.6
72.5°	2263.3	731.9	54.1	42.0	31.0	23.7	18.9	20.1	17.6	14.6	13.4
75°	904.1	243.4	43.2	33.5	24.9	17.0	15.8	16.4	15.8	13.4	11.0
77.5°	206.3	76.7	33.5	26.2	19.5	11.0	12.8	14.0	14.0	11.0	7.9
80°	64.5	30.4	19.5	16.4	14.0	6.1	9.1	9.7	6.7	3.0	0.0
82.5°	20.7	8.5	6.7	6.7	6.1	1.2	1.8	1.2	0.0	0.0	0.0
85°	7.9	5.5	4.3	4.3	2.4	0.0	0.0	0.0	0.0	0.0	0.0
87.5°	3.0	2.4	1.8	2.4	1.2	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)