

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: P596666

Luminaire Tested: **MSA-SA3A-827-U-T2**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596666  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-8)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3A-827-U-T2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8601 lumens  
Efficiency: N/A  
Efficacy: 89.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B2 - U0 - G2

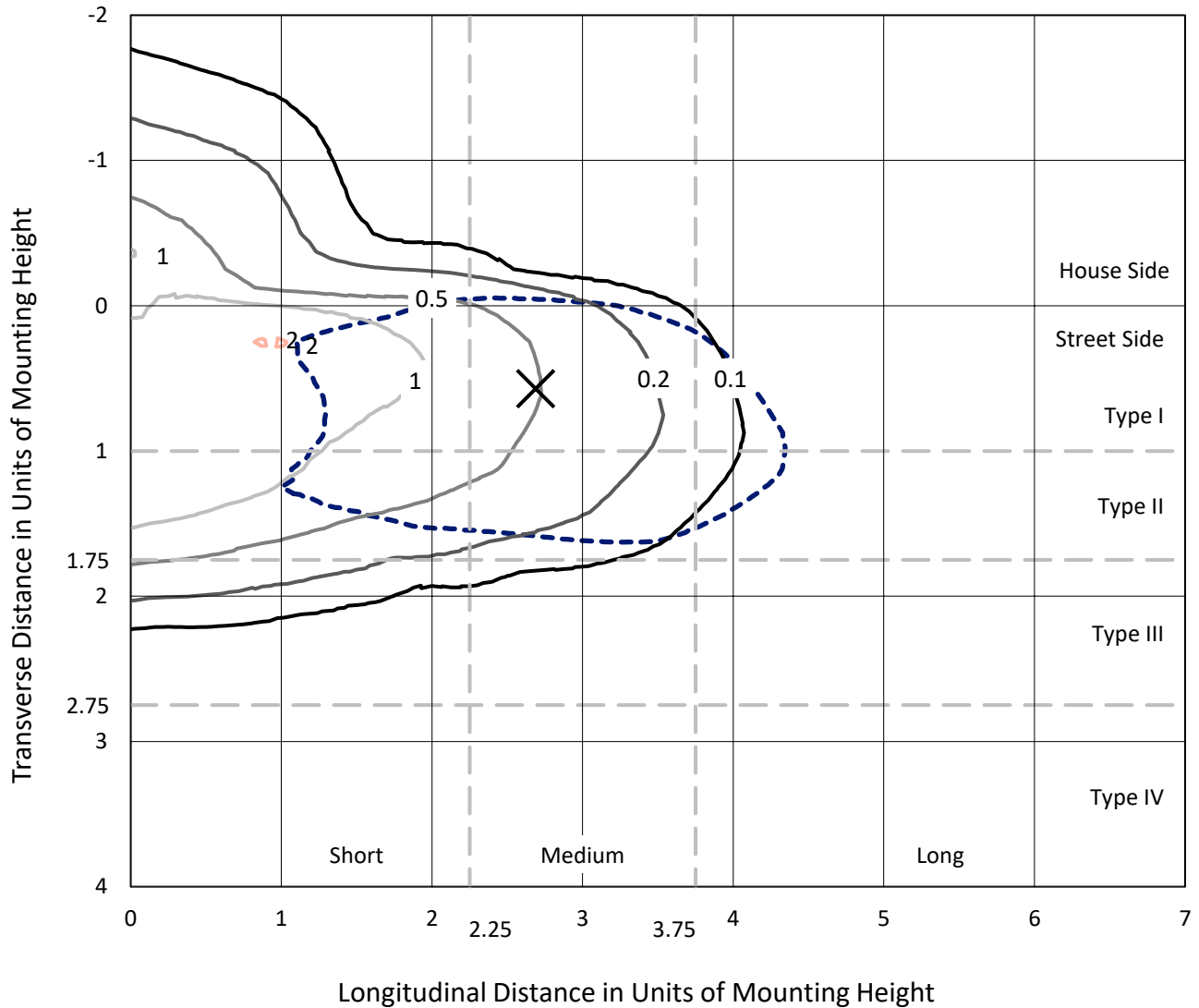
Input Watts (W): 96  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

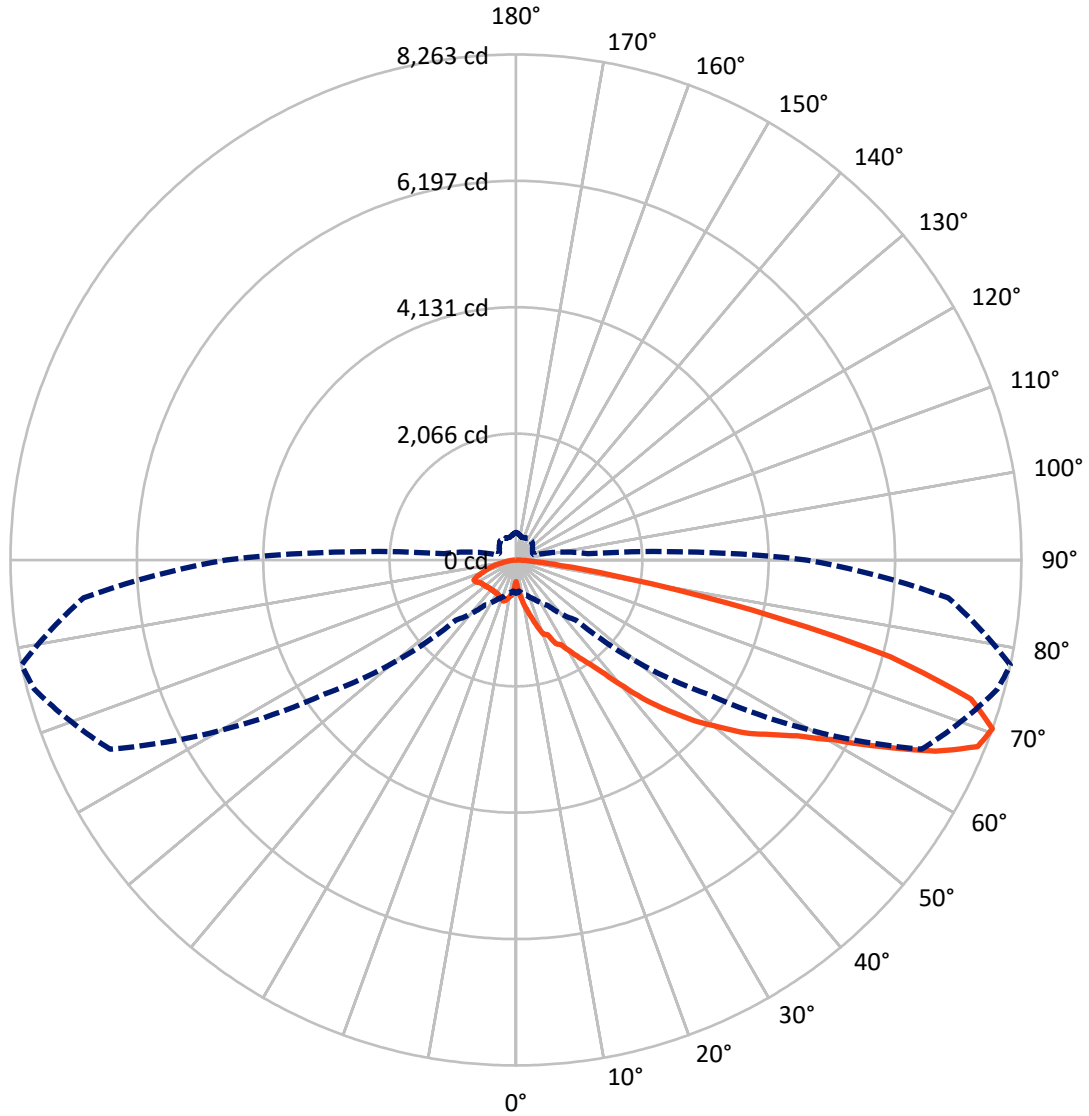
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 78-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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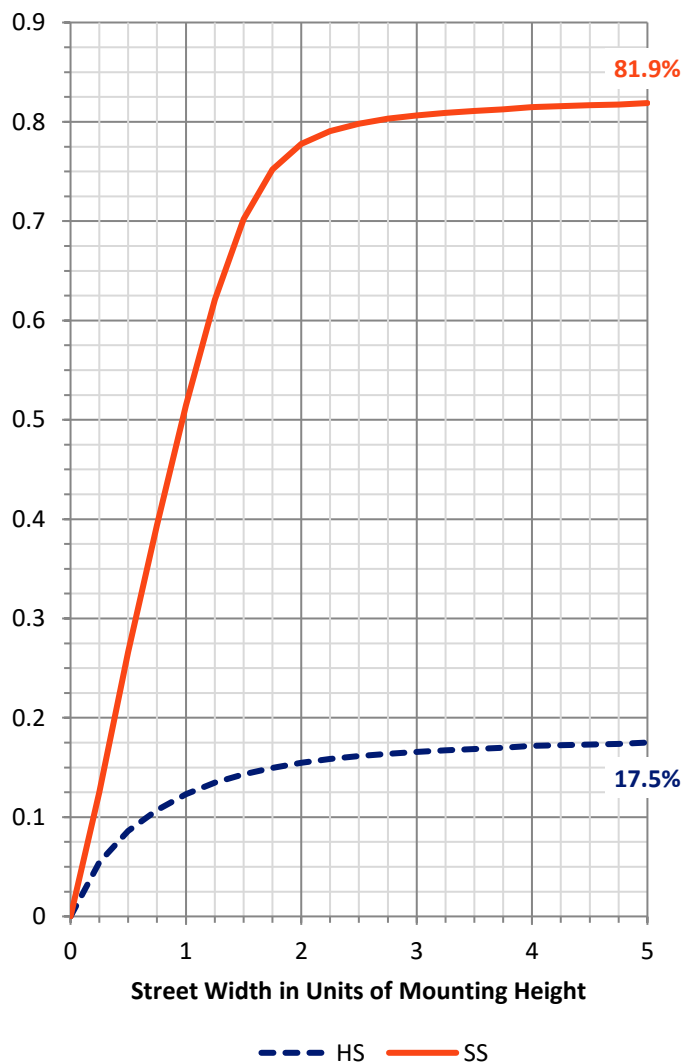
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1535.2	0.0	1535.2
	% Fixture	17.8	0.0	17.8
<b>Street Side</b>	Lumens	7065.8	0.0	7065.8
	% Fixture	82.2	0.0	82.2
<b>Total</b>	Lumens	8601.0	0.0	8601.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.2	0.6
10°-20°	238.8	2.8
20°-30°	459.6	5.3
30°-40°	774.1	9.0
40°-50°	1339.4	15.6
50°-60°	2022.3	23.5
60°-70°	2240.0	26.0
70°-80°	1291.4	15.0
80°-90°	181.1	2.1
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°	8601.0	100.0
0°-180°	8601.0	100.0

**Coefficient of Utilization**

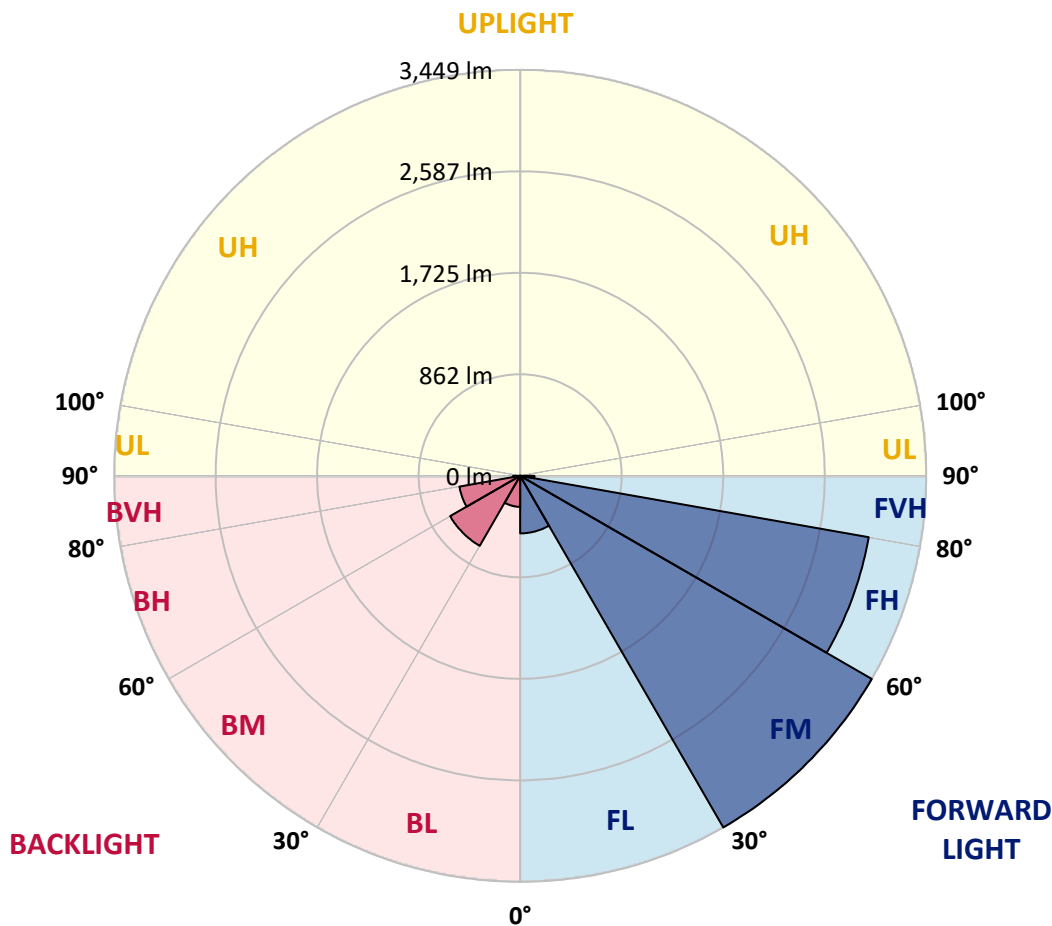


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	488.9	5.7			
FM (30°-60°)	3449.3	40.1			
FH (60°-80°)	3006.8	35.0			G2/5000
FVH (80°-90°)	120.8	1.4			G2/225
BL (0°-30°)	263.6	3.1	B1/500		
BM (30°-60°)	686.6	8.0	B1/1000		
BH (60°-80°)	524.6	6.1	B2/1000		G2/1000
BVH (80°-90°)	60.3	0.7			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**  
 Type II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	78°	85°
0°	350.7	350.7	350.7	350.7	350.7	350.7	350.7	350.7	350.7	350.7	350.7
2.5°	451.4	435.3	410.9	420.9	433.1	434.6	430.6	408.4	400.9	417.7	422.7
5°	632.5	605.2	588.7	583.4	565.1	527.1	554.3	540.3	543.2	535.0	551.1
7.5°	784.9	766.6	742.2	735.4	693.4	663.7	682.3	676.2	646.8	635.4	653.6
10°	862.3	842.2	843.3	828.6	817.5	820.4	811.1	784.2	762.3	746.9	702.8
12.5°	908.9	914.0	940.8	933.3	975.3	1009.7	983.5	943.7	874.5	860.5	816.8
15°	1019.7	1038.4	1013.3	1024.7	1042.7	1108.7	1097.9	1089.3	1016.1	988.9	908.2
17.5°	1133.8	1137.3	1099.3	1093.2	1136.3	1169.6	1211.6	1163.2	1172.1	1153.1	1022.6
20°	1158.1	1182.9	1128.4	1090.7	1179.3	1245.3	1297.3	1246.0	1293.3	1298.3	1116.9
22.5°	1247.4	1217.7	1145.9	1109.0	1186.5	1267.5	1352.1	1380.8	1365.7	1323.4	1208.0
25°	1309.4	1293.7	1220.5	1179.6	1209.0	1283.6	1432.1	1507.0	1520.3	1514.5	1294.7
27.5°	1424.5	1432.4	1281.8	1293.3	1252.4	1259.2	1480.1	1674.5	1591.6	1568.7	1402.3
30°	1606.3	1571.2	1402.3	1411.6	1343.9	1332.4	1581.6	1818.9	1744.7	1717.1	1490.9
32.5°	1796.0	1799.2	1594.1	1514.5	1478.3	1466.8	1561.5	1894.6	1938.3	1902.5	1624.6
35°	2063.5	2044.8	1802.1	1697.4	1566.5	1546.4	1704.6	2114.0	2194.4	2094.0	1783.5
37.5°	2470.8	2414.5	2132.0	1889.9	1793.1	1770.2	1908.9	2310.9	2491.6	2366.8	2043.0
40°	2797.8	2683.4	2426.7	2132.0	1968.1	1996.4	2054.2	2549.7	2800.0	2729.7	2283.3
42.5°	3058.5	2957.0	2635.4	2428.1	2205.5	2170.3	2233.4	2845.5	3219.5	3150.6	2583.0
45°	3308.4	3101.9	2869.9	2683.4	2469.4	2512.0	2502.7	3147.4	3734.0	3522.1	2848.0
47.5°	3555.1	3361.1	3118.4	2867.7	2652.2	2917.9	2818.6	3371.9	4081.1	3924.0	3127.0
50°	3872.0	3658.7	3382.2	3130.2	3001.1	3195.4	3028.7	3561.9	4469.7	4285.4	3390.1
52.5°	4082.5	3874.9	3632.5	3452.5	3440.7	3365.8	3323.1	3802.5	4810.4	4698.5	3669.1
55°	4057.8	3857.7	3748.0	3767.7	3914.0	3661.2	3626.4	4158.5	5165.7	5036.3	3970.3
57.5°	3747.6	3529.3	3552.6	3669.5	4062.4	4180.0	4120.9	4538.9	5482.7	5423.9	4342.8
60°	2919.4	2807.1	2996.8	3210.5	3863.8	4332.1	4748.0	5002.9	5872.8	5966.7	4928.0
62.5°	1896.4	1746.5	2046.3	2409.1	3271.1	4231.7	5386.6	5882.8	6511.7	6725.1	5817.2
65°	982.4	958.4	1168.2	1501.6	2277.2	3608.1	5611.7	6805.7	7288.3	7536.8	6666.6
67.5°	714.2	669.8	766.9	963.1	1390.1	2460.4	5185.1	7511.7	7911.9	8139.6	7160.3
70°	543.9	510.9	585.2	706.7	907.9	1389.8	3827.6	7319.2	8152.5	8262.9	7094.7
72.5°	407.3	379.0	443.9	557.2	699.5	782.4	2262.5	6018.0	7741.9	7779.6	6367.6
75°	325.2	303.3	331.3	439.9	570.1	532.5	1201.9	4360.0	6290.1	6322.4	4863.8
77.5°	266.8	248.1	259.6	329.9	443.5	400.5	596.3	2773.4	3993.6	3944.1	2736.5
80°	217.6	201.5	206.9	238.4	337.8	299.0	334.9	1446.8	1905.0	1828.3	1138.1
82.5°	167.4	153.8	164.6	175.3	244.5	214.8	195.4	658.3	780.2	726.8	417.4
85°	112.2	99.7	143.1	131.6	159.9	131.9	106.8	262.1	290.8	271.1	146.6
87.5°	30.8	29.0	48.0	65.6	65.6	49.8	39.1	63.5	81.0	71.0	34.4
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°	350.7	350.7	350.7	350.7	350.7	350.7	350.7	350.7	350.7	350.7	350.7
2.5°	424.9	417.0	396.2	394.4	399.4	400.1	396.9	389.4	385.4	407.0	403.7
5°	547.2	519.2	502.3	486.9	465.4	450.0	453.9	464.7	468.3	484.4	486.2
7.5°	642.2	605.2	568.3	518.8	486.2	465.4	481.2	492.7	501.6	524.6	533.9
10°	683.4	643.2	590.9	538.9	529.9	533.5	524.6	527.4	541.4	542.5	547.2
12.5°	760.1	714.6	620.3	573.3	570.8	578.3	575.1	588.4	598.1	624.2	613.1
15°	833.6	775.6	642.5	594.5	584.1	599.1	616.7	638.9	659.7	684.5	671.9
17.5°	922.9	835.4	643.6	584.8	586.6	618.9	637.2	649.3	711.4	745.4	728.2
20°	979.2	841.5	619.6	560.8	586.6	615.6	641.1	654.4	723.9	775.2	787.0
22.5°	1030.1	843.7	600.9	547.9	564.4	602.7	641.1	670.5	715.0	764.1	765.9
25°	1058.1	841.9	576.9	548.9	564.0	583.0	617.1	644.0	677.0	745.4	747.2
27.5°	1129.8	818.6	553.3	553.3	561.1	561.9	605.2	621.0	625.7	688.1	699.2
30°	1150.6	823.6	550.4	552.5	556.5	549.3	568.3	578.7	585.5	639.3	641.1
32.5°	1183.9	783.4	559.0	546.1	541.1	540.0	544.6	554.0	556.8	589.8	595.9
35°	1224.5	767.3	561.9	544.3	534.2	528.9	542.9	531.4	540.3	579.1	583.4
37.5°	1356.4	745.1	576.6	544.3	531.4	525.3	518.5	523.8	555.8	593.0	616.0
40°	1440.7	751.9	573.0	549.7	521.7	516.0	504.5	524.2	573.7	639.7	656.9
42.5°	1588.4	755.8	577.3	547.2	524.9	502.7	510.2	531.7	583.7	621.4	647.9
45°	1741.1	768.0	574.4	539.6	517.8	528.2	517.8	537.1	561.9	562.9	583.0
47.5°	1891.0	817.1	568.3	524.2	516.0	543.2	516.7	519.9	521.7	528.2	551.8
50°	2067.1	869.5	559.7	502.7	518.5	543.9	520.6	504.8	503.1	524.2	550.7
52.5°	2267.1	928.7	548.6	481.9	503.8	537.1	534.2	505.9	490.5	510.9	537.5
55°	2502.7	996.1	535.7	461.1	487.6	537.8	541.8	498.4	490.9	513.1	541.4
57.5°	2815.7	1093.6	510.6	431.0	467.9	526.7	522.4	489.8	482.6	506.3	535.7
60°	3350.0	1281.1	474.7	401.2	446.8	499.5	506.6	474.4	467.2	493.4	524.2
62.5°	4065.3	1506.6	431.3	372.2	420.9	470.1	486.9	452.1	451.4	484.8	517.0
65°	4731.1	1634.7	386.5	345.6	394.4	442.8	464.7	431.3	432.8	474.7	507.0
67.5°	5007.9	1484.1	346.4	322.0	363.9	411.6	446.4	415.2	410.5	461.1	490.9
70°	4748.0	1178.9	311.6	296.9	329.5	377.9	420.9	393.7	382.9	428.8	452.1
72.5°	4201.2	982.8	279.0	267.5	299.4	342.4	386.5	364.7	350.7	385.8	406.6
75°	3284.0	806.4	241.7	238.4	265.0	310.1	350.7	335.6	317.7	339.9	360.7
77.5°	1869.9	510.2	202.9	205.1	224.1	271.8	307.6	295.8	277.5	286.8	310.9
80°	748.3	257.4	163.1	164.6	180.7	223.4	254.9	250.6	231.6	239.2	255.6
82.5°	279.7	141.3	120.5	121.2	137.3	176.8	217.6	215.5	197.6	192.2	201.5
85°	111.2	69.9	73.9	77.1	92.5	127.3	174.6	154.9	133.7	117.2	123.0
87.5°	26.5	22.2	25.8	27.3	30.1	39.8	63.8	51.3	52.7	42.3	31.6
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)