

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: P596624

Luminaire Tested: **MSA-SA2C-827-U-T3**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596624  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA2C-827-U-T3  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 9055 lumens  
Efficiency: N/A  
Efficacy: 80.1 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B2 - U0 - G2

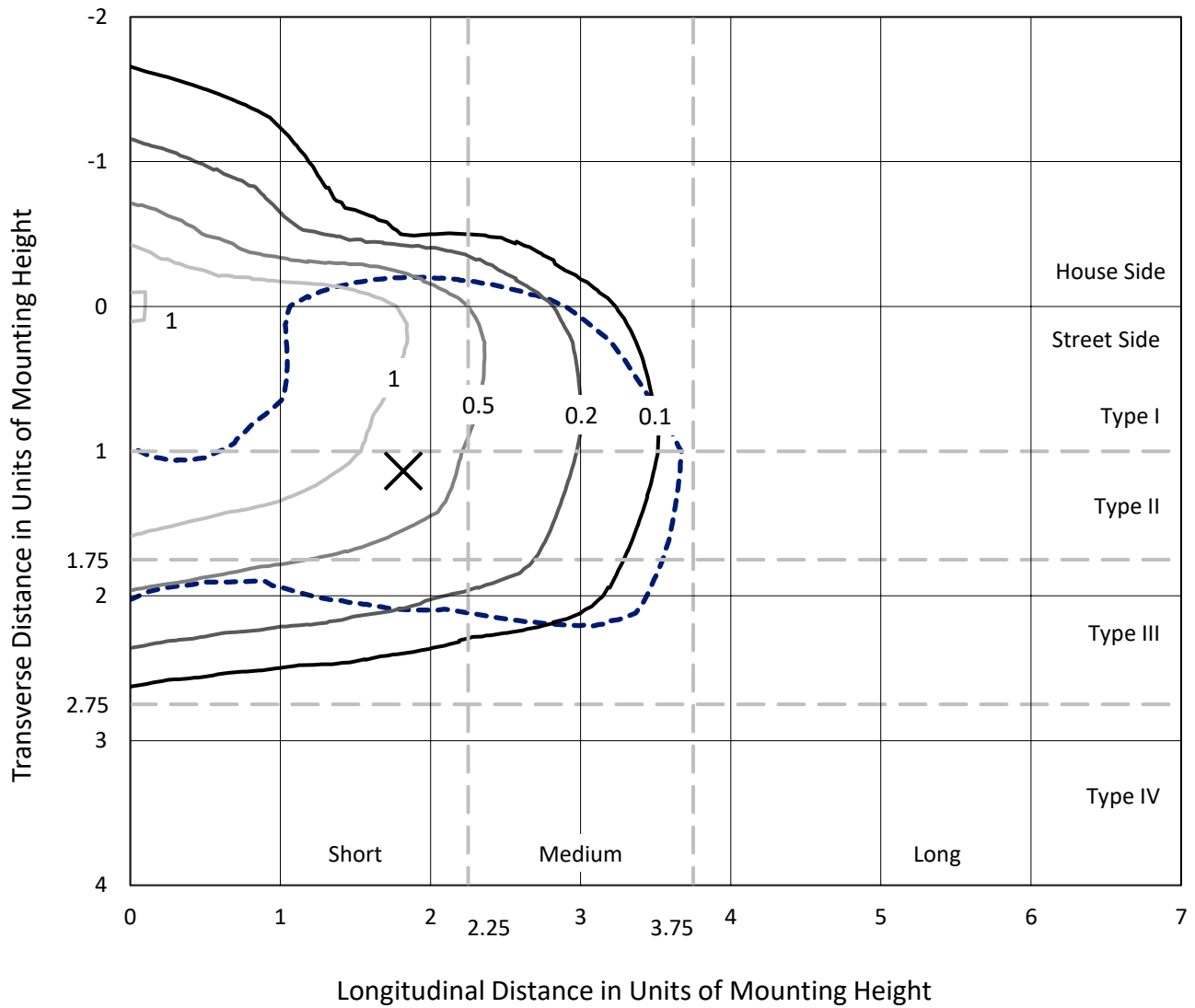
Input Watts (W): 113  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

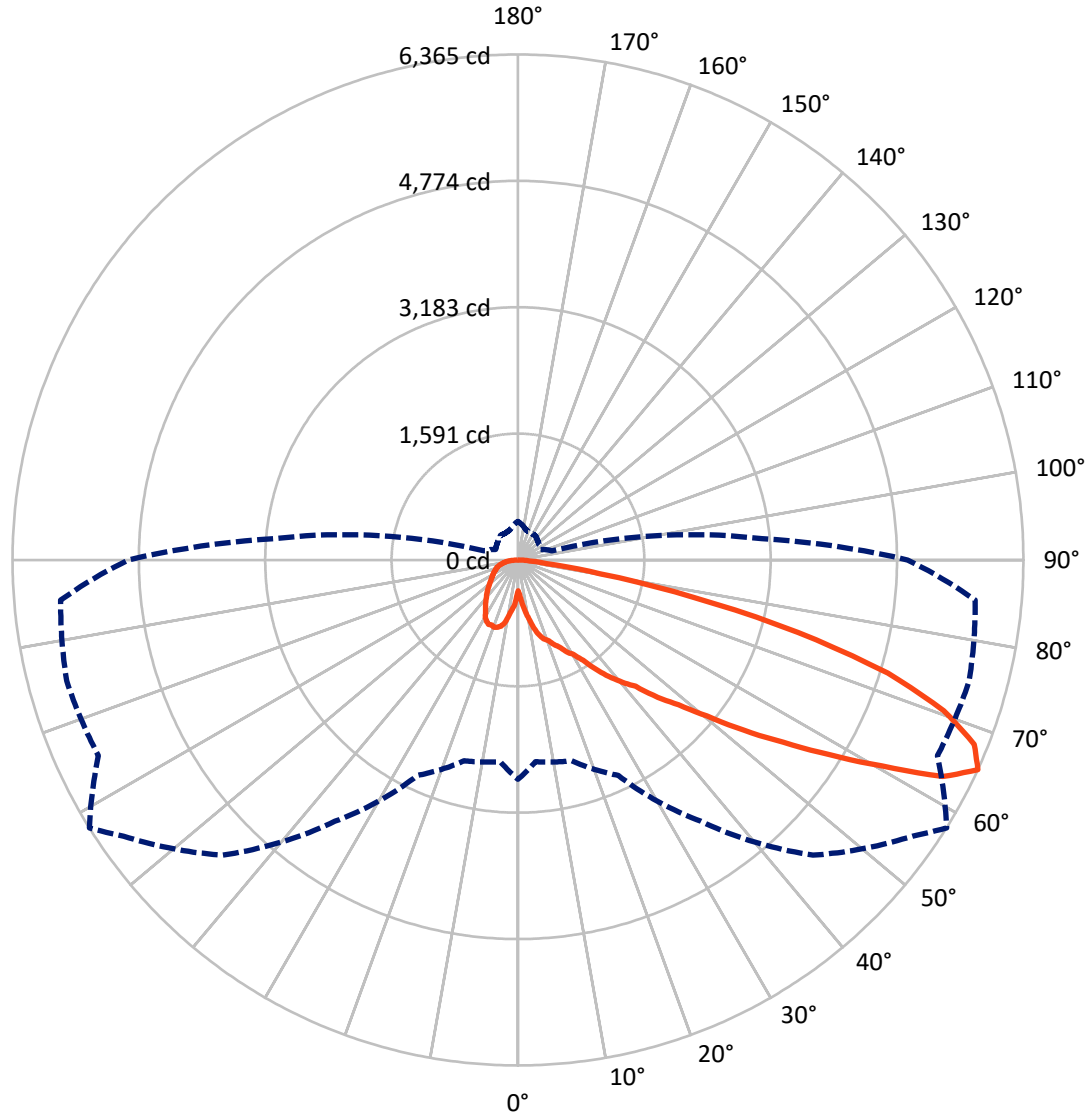
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.9 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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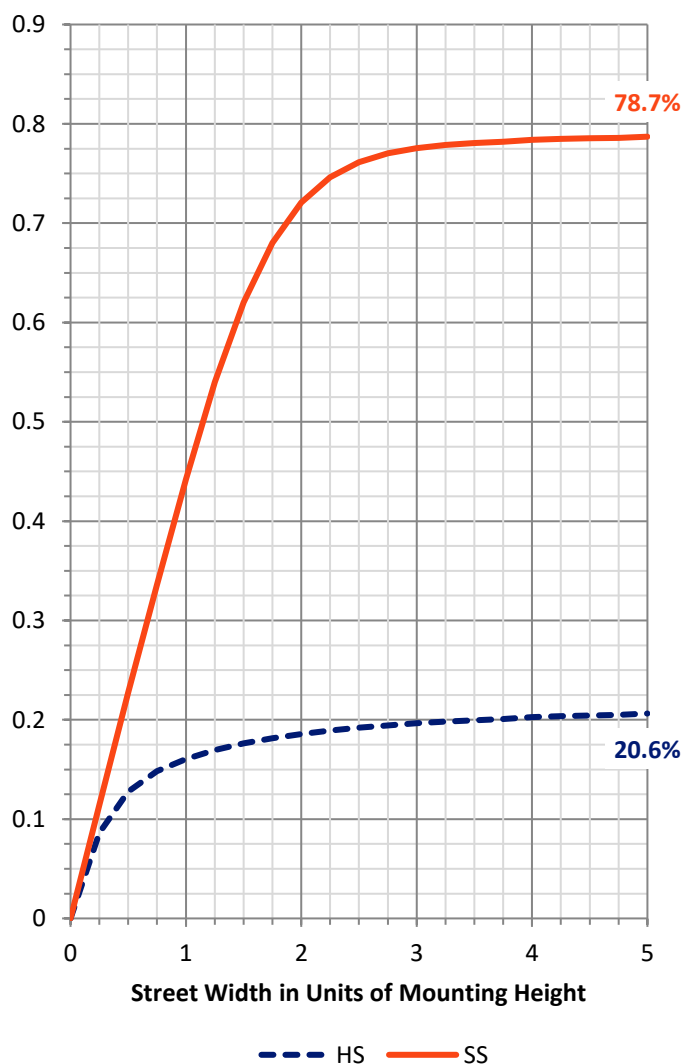
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1907.3	0.0	1907.3
	% Fixture	21.1	0.0	21.1
<b>Street Side</b>	Lumens	7147.7	0.0	7147.7
	% Fixture	78.9	0.0	78.9
<b>Total</b>	Lumens	9055.0	0.0	9055.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	59.2	0.7
10°-20°	258.4	2.9
20°-30°	495.9	5.5
30°-40°	818.6	9.0
40°-50°	1360.7	15.0
50°-60°	2247.2	24.8
60°-70°	2520.9	27.8
70°-80°	1146.2	12.7
80°-90°	147.8	1.6
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°	9055.0	100.0
0°-180°	9055.0	100.0

**Coefficient of Utilization**



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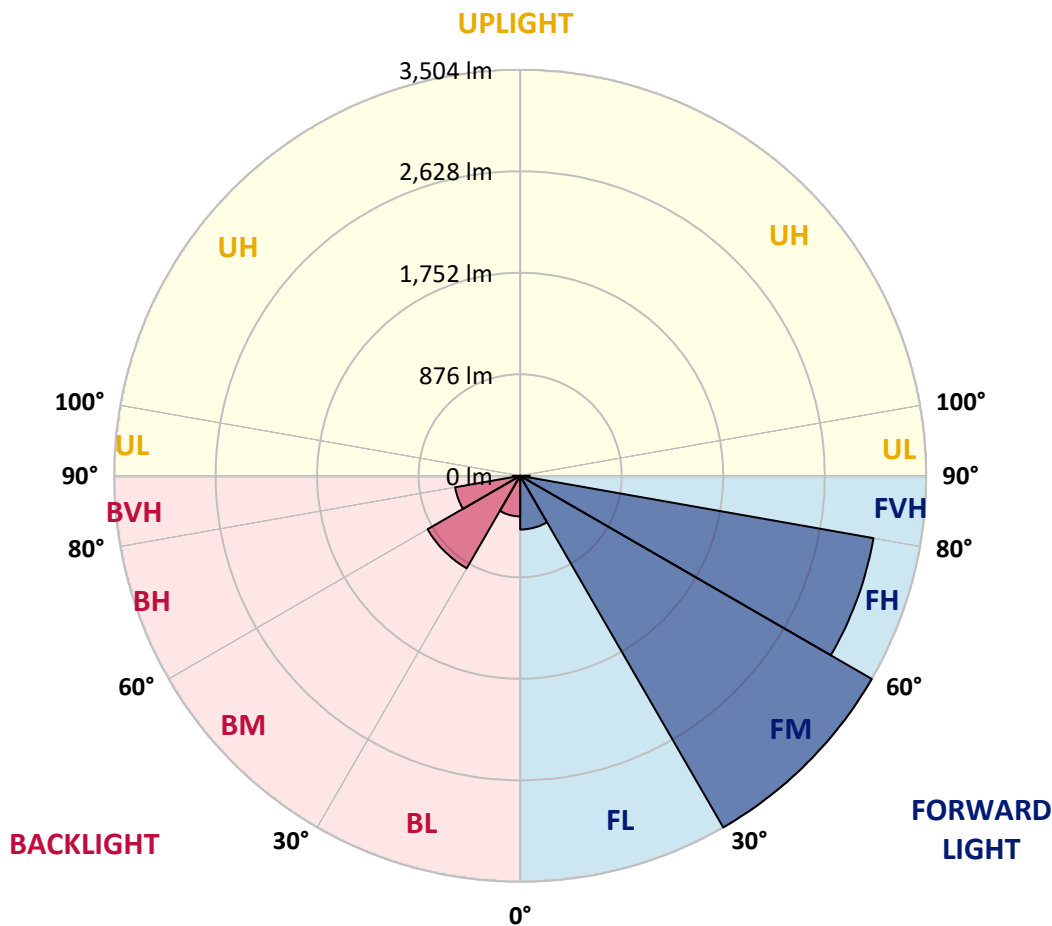
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	463.4	5.1			
FM (30°-60°)	3504.1	38.7			
FH (60°-80°)	3097.0	34.2			G2/5000
FVH (80°-90°)	83.2	0.9			G1/100
BL (0°-30°)	350.1	3.9	B1/500		
BM (30°-60°)	922.4	10.2	B1/1000		
BH (60°-80°)	570.1	6.3	B2/1000		G2/1000
BVH (80°-90°)	64.6	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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	388.8	388.8	388.8	388.8	388.8	388.8	388.8	388.8	388.8	388.8	388.8
2.5°	464.2	450.2	426.9	432.5	446.1	453.6	449.1	443.1	435.2	433.7	468.3
5°	601.1	574.3	563.4	558.8	542.3	532.5	549.4	547.2	556.2	572.8	606.7
7.5°	701.0	682.2	664.1	662.2	630.1	618.8	641.4	653.5	669.7	670.1	716.1
10°	754.6	738.3	738.0	721.0	718.4	739.9	740.2	749.3	751.2	770.4	761.3
12.5°	812.6	811.5	832.2	831.9	856.0	891.4	873.7	873.7	879.0	855.6	884.3
15°	951.0	963.1	924.2	930.7	930.7	965.4	964.2	971.0	987.2	981.2	968.4
17.5°	1095.1	1102.6	1059.6	1019.7	1022.7	1015.1	1042.3	1044.9	1029.5	1099.6	1084.1
20°	1187.8	1217.2	1126.7	1076.6	1086.4	1095.1	1096.2	1080.0	1072.1	1179.9	1158.8
22.5°	1302.5	1277.6	1194.6	1139.2	1153.9	1142.2	1139.9	1152.4	1163.3	1204.1	1238.4
25°	1379.0	1377.1	1277.6	1216.9	1200.7	1197.3	1220.3	1215.4	1241.4	1315.3	1293.8
27.5°	1490.3	1525.0	1348.5	1363.6	1292.3	1217.2	1291.2	1313.4	1360.2	1348.1	1396.0
30°	1706.0	1679.9	1495.5	1491.4	1410.7	1347.7	1399.0	1380.2	1464.2	1461.6	1497.0
32.5°	1882.1	1900.2	1668.2	1624.9	1564.9	1489.1	1455.2	1507.6	1552.9	1627.1	1647.1
35°	2068.3	2064.2	1845.1	1757.6	1658.4	1627.1	1669.0	1690.9	1787.0	1855.3	1807.8
37.5°	2357.9	2325.1	2074.4	1908.8	1834.5	1823.2	1894.9	1863.2	1967.3	1983.5	2010.3
40°	2627.2	2528.4	2284.0	2094.4	1976.3	2018.6	2020.8	2025.0	2080.8	2124.9	2257.3
42.5°	2883.2	2813.9	2497.1	2354.6	2180.7	2139.6	2165.3	2173.9	2315.0	2405.1	2588.3
45°	3233.2	3047.3	2803.3	2657.0	2462.4	2410.0	2391.9	2466.5	2602.7	2807.8	2965.1
47.5°	3529.2	3361.4	3128.7	2936.0	2718.4	2868.2	2765.6	2723.7	2906.6	3160.8	3411.2
50°	3774.7	3589.9	3361.8	3250.5	3215.8	3349.3	3083.1	3088.0	3255.4	3614.0	3901.0
52.5°	3964.7	3767.5	3565.4	3508.8	3702.7	3779.6	3587.3	3558.2	3680.4	4104.3	4448.9
55°	4142.3	3933.1	3776.9	3892.3	4218.9	4227.6	4214.0	4053.0	4200.0	4629.5	5016.1
57.5°	4188.0	3962.5	3858.8	4024.3	4465.9	4809.4	4944.4	4628.4	4778.1	5107.3	5501.8
60°	3953.0	3760.0	3718.5	3943.2	4599.4	5101.7	5454.2	5265.3	5209.1	5490.8	5841.9
62.5°	3471.9	3247.9	3281.4	3593.7	4458.7	5217.4	5857.0	6004.4	5664.3	5795.9	5990.5
65°	2763.3	2549.5	2617.4	2993.0	4017.1	5255.9	6062.9	6365.3	5828.7	5882.2	5780.0
67.5°	1948.8	1754.6	1840.2	2325.9	3341.8	4763.4	6098.3	6197.1	5653.7	5636.0	5205.4
70°	1104.1	982.3	1075.1	1480.1	2358.7	3794.7	5820.4	5690.3	5340.0	5088.8	4355.4
72.5°	506.4	464.6	509.1	753.4	1357.9	2525.0	4751.7	4869.7	4601.3	4287.1	3313.5
75°	269.2	254.5	273.4	376.3	635.4	1373.7	3376.1	3641.6	3498.6	3251.7	2161.5
77.5°	200.2	188.9	198.0	244.0	339.4	537.4	1918.3	2253.1	2307.4	2080.0	1200.3
80°	153.5	144.4	153.5	184.4	234.9	255.3	820.2	1050.2	1196.1	966.5	477.0
82.5°	113.9	107.8	121.8	138.4	165.2	159.5	291.1	362.4	467.2	319.4	185.9
85°	90.5	83.0	88.2	93.9	105.6	87.5	133.1	149.0	157.6	132.0	68.6
87.5°	35.4	32.8	64.1	50.5	43.0	26.4	40.0	45.3	46.4	44.5	20.0
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°	388.8	388.8	388.8	388.8	388.8	388.8	388.8	388.8	388.8	388.8	388.8
2.5°	472.1	468.3	446.1	453.3	465.0	467.2	472.1	458.5	451.8	476.6	477.8
5°	609.8	589.4	578.8	580.0	572.4	560.7	578.5	590.1	594.7	613.1	619.9
7.5°	716.5	692.0	674.2	653.9	625.2	606.7	637.7	660.3	672.4	710.8	725.9
10°	764.0	744.4	740.6	715.0	714.2	713.8	712.3	704.4	730.4	726.7	737.2
12.5°	862.0	857.9	822.1	811.9	813.0	811.9	780.2	778.7	779.1	813.8	801.3
15°	953.3	954.0	921.2	884.3	851.1	840.9	828.5	822.8	831.1	850.7	838.6
17.5°	1066.0	1069.8	975.9	917.5	873.7	872.6	842.8	807.7	858.3	870.3	857.1
20°	1138.8	1123.0	1007.6	909.5	897.1	863.2	826.2	777.9	821.7	851.1	859.4
22.5°	1207.8	1180.3	1037.0	923.5	863.9	823.6	787.7	756.4	770.4	803.2	797.9
25°	1254.6	1247.0	1077.7	957.1	862.8	773.0	724.8	704.8	711.9	762.9	758.0
27.5°	1366.2	1284.7	1070.6	965.7	826.6	704.0	679.9	658.4	651.2	706.3	721.4
30°	1440.9	1407.3	1118.5	952.2	781.0	647.5	612.0	607.5	609.8	672.4	676.5
32.5°	1567.6	1480.5	1196.9	900.1	714.6	605.6	564.9	566.8	576.9	622.6	632.0
35°	1699.5	1647.5	1207.4	862.8	660.7	561.1	544.5	531.3	537.0	576.9	578.8
37.5°	1944.7	1764.8	1272.3	805.1	621.1	544.1	512.5	500.8	503.8	526.4	542.6
40°	2160.4	2000.5	1242.1	749.3	572.0	521.5	481.9	473.2	464.2	486.4	496.6
42.5°	2506.1	2168.6	1232.0	687.8	549.0	491.0	463.8	440.8	432.1	451.0	469.5
45°	2851.9	2347.0	1176.5	625.6	516.6	488.7	437.4	415.6	417.8	434.8	453.6
47.5°	3237.3	2586.5	1082.6	565.3	481.2	477.8	411.0	401.6	408.4	427.2	446.1
50°	3692.8	2840.6	1004.9	511.0	455.9	445.0	407.6	396.3	402.7	425.0	443.5
52.5°	4191.0	3119.3	948.4	460.8	427.2	418.9	412.2	401.2	408.8	428.0	447.2
55°	4686.1	3373.8	909.9	426.5	402.7	408.0	421.6	413.7	417.4	431.8	451.0
57.5°	5053.4	3508.1	832.6	389.9	382.7	401.6	422.7	409.5	411.8	431.8	452.5
60°	5266.8	3533.7	705.5	360.1	366.9	388.8	411.0	394.1	392.6	425.4	451.4
62.5°	5243.4	3384.8	559.6	333.0	348.8	369.5	393.3	377.1	381.2	426.1	453.6
65°	4908.6	3080.5	445.0	310.0	326.9	348.4	378.6	372.2	392.2	456.3	486.1
67.5°	4320.3	2635.9	357.5	288.5	306.6	334.1	388.8	405.7	414.4	487.2	517.7
70°	3501.3	2048.0	297.9	269.6	290.4	340.9	418.2	414.8	407.6	472.5	496.6
72.5°	2529.5	1403.9	262.1	251.1	270.4	320.5	418.9	400.8	391.8	431.4	448.7
75°	1582.6	837.5	228.9	227.8	239.8	287.3	400.1	383.9	359.4	379.0	401.6
77.5°	903.9	428.8	192.7	202.9	210.0	249.3	358.2	343.5	321.7	330.0	352.2
80°	345.0	207.4	162.5	180.2	178.4	211.2	303.6	300.2	275.3	277.9	291.5
82.5°	162.5	116.1	135.0	155.0	144.8	168.2	246.6	245.5	223.6	202.5	213.4
85°	60.3	61.8	98.8	118.0	100.7	108.6	178.4	173.5	152.3	128.6	142.2
87.5°	13.6	22.2	48.6	61.5	35.1	33.6	72.0	62.6	60.3	35.8	37.7
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)