

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: P596524

Luminaire Tested: **MSA-SA1C-827-U-SL2**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596524  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-16)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-827-U-SL2  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4580 lumens  
Efficiency: N/A  
Efficacy: 77.6 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Medium  
BUG Rating: B1 - U0 - G2

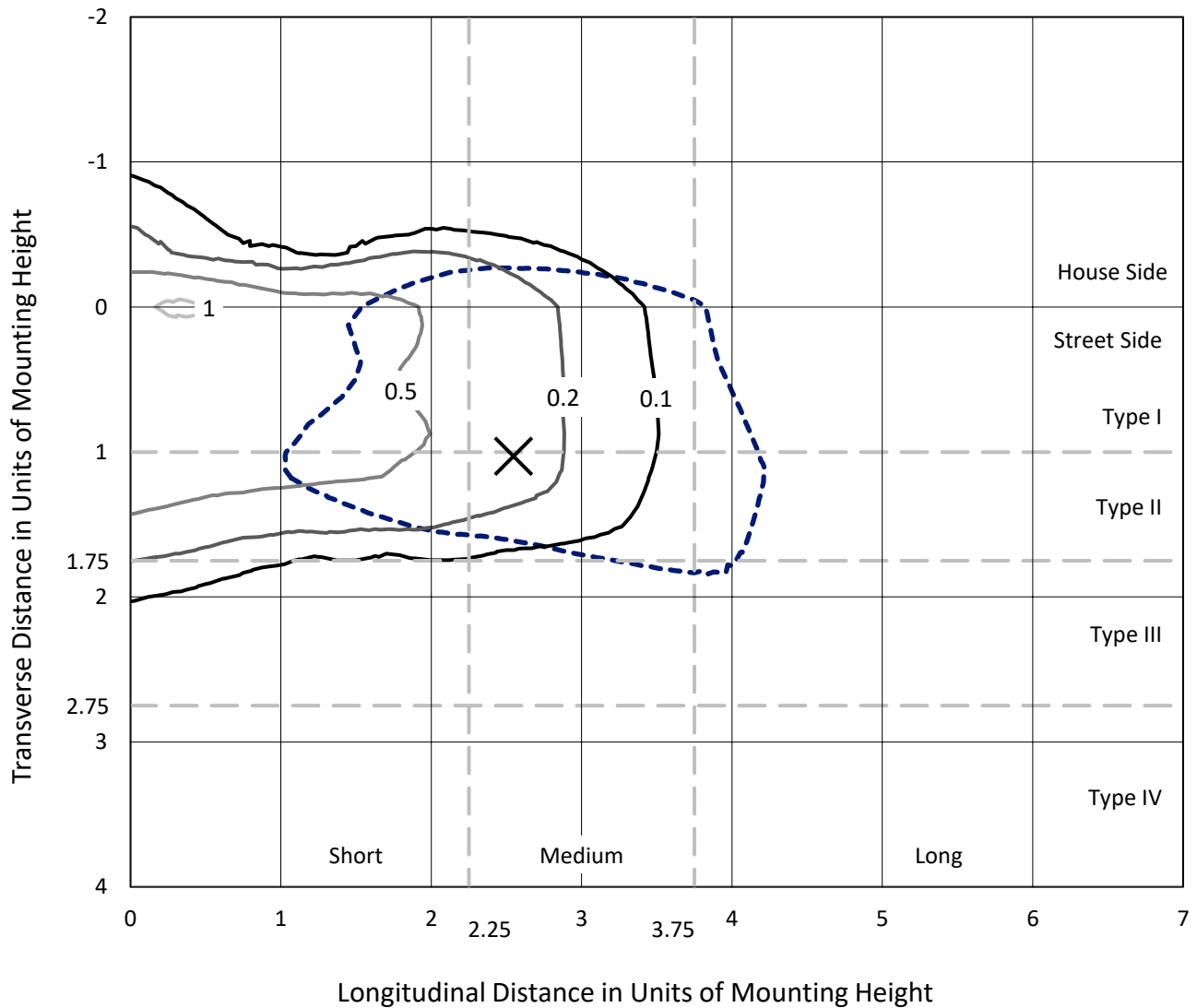
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

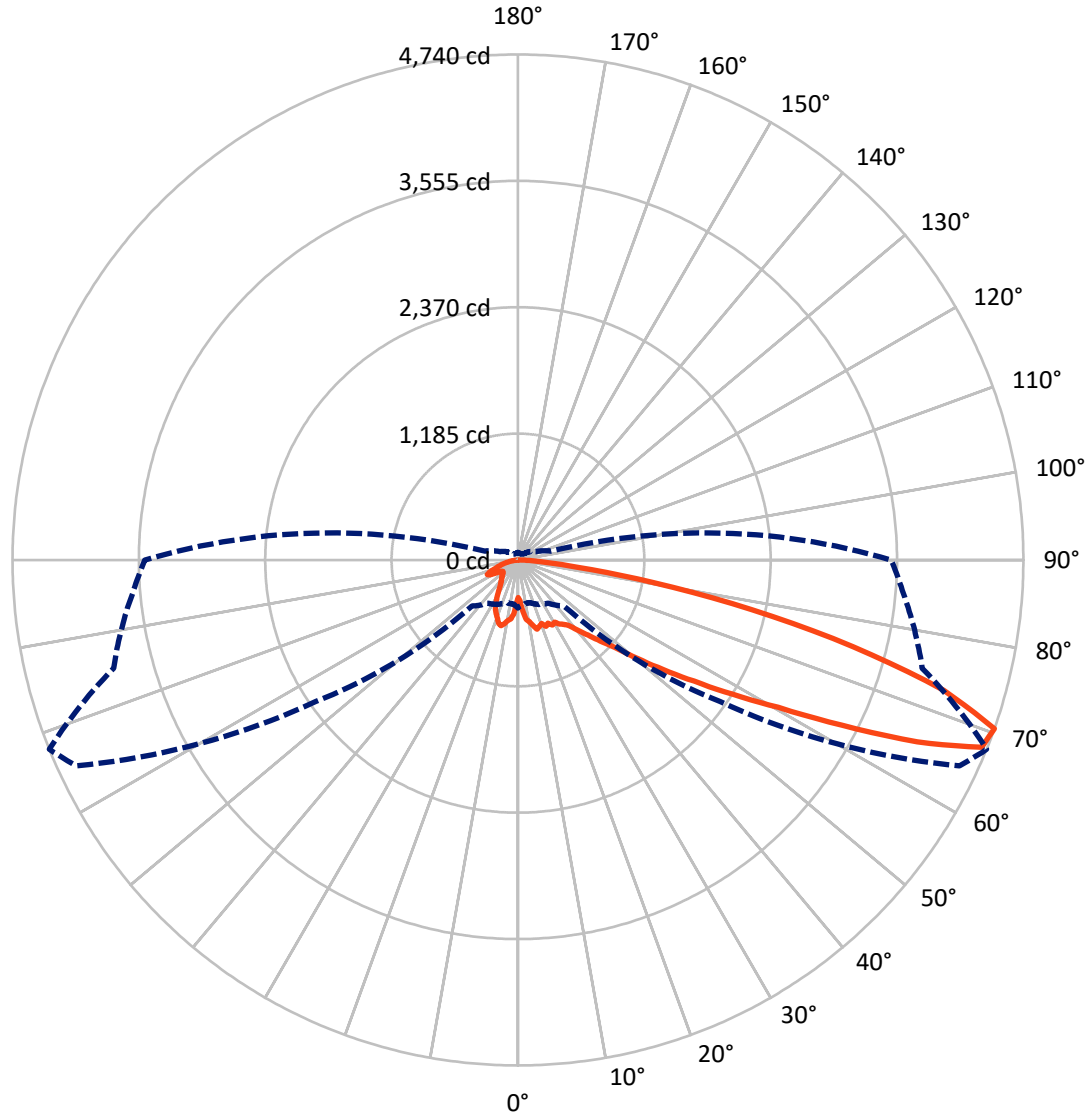
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc  
 Type III - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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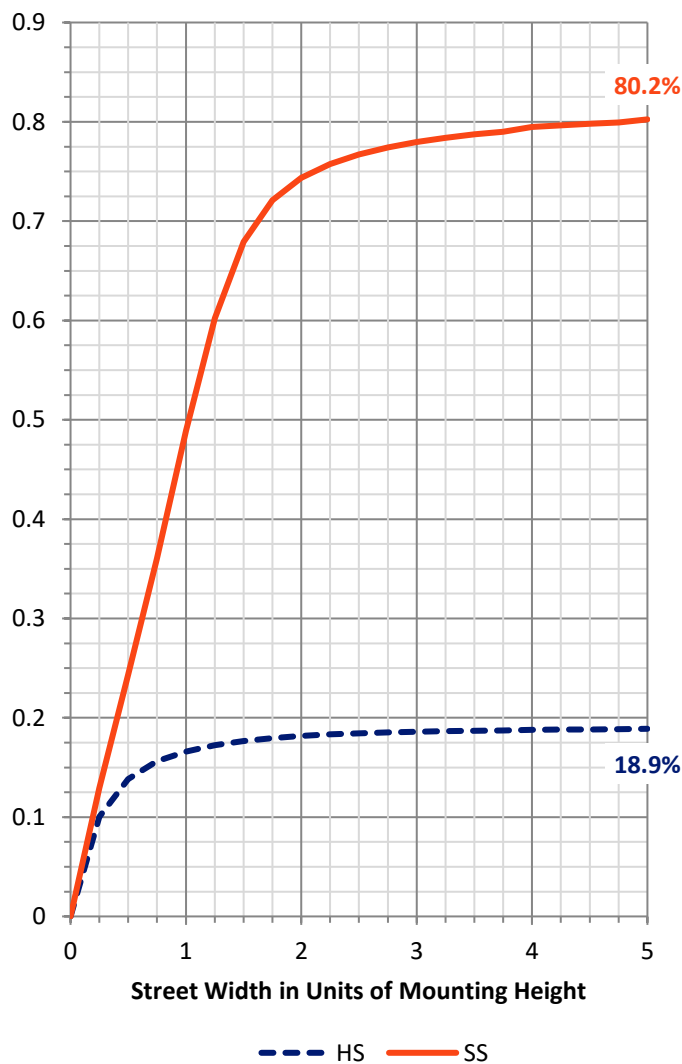
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	874.4	0.0	874.4
	% Fixture	19.1	0.0	19.1
<b>Street Side</b>	Lumens	3705.6	0.0	3705.6
	% Fixture	80.9	0.0	80.9
<b>Total</b>	Lumens	4580.0	0.0	4580.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	46.9	1.0
10°-20°	152.9	3.3
20°-30°	232.5	5.1
30°-40°	355.2	7.8
40°-50°	610.7	13.3
50°-60°	1010.9	22.1
60°-70°	1246.2	27.2
70°-80°	800.6	17.5
80°-90°	124.2	2.7
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°	4580.0	100.0
0°-180°	4580.0	100.0

**Coefficient of Utilization**



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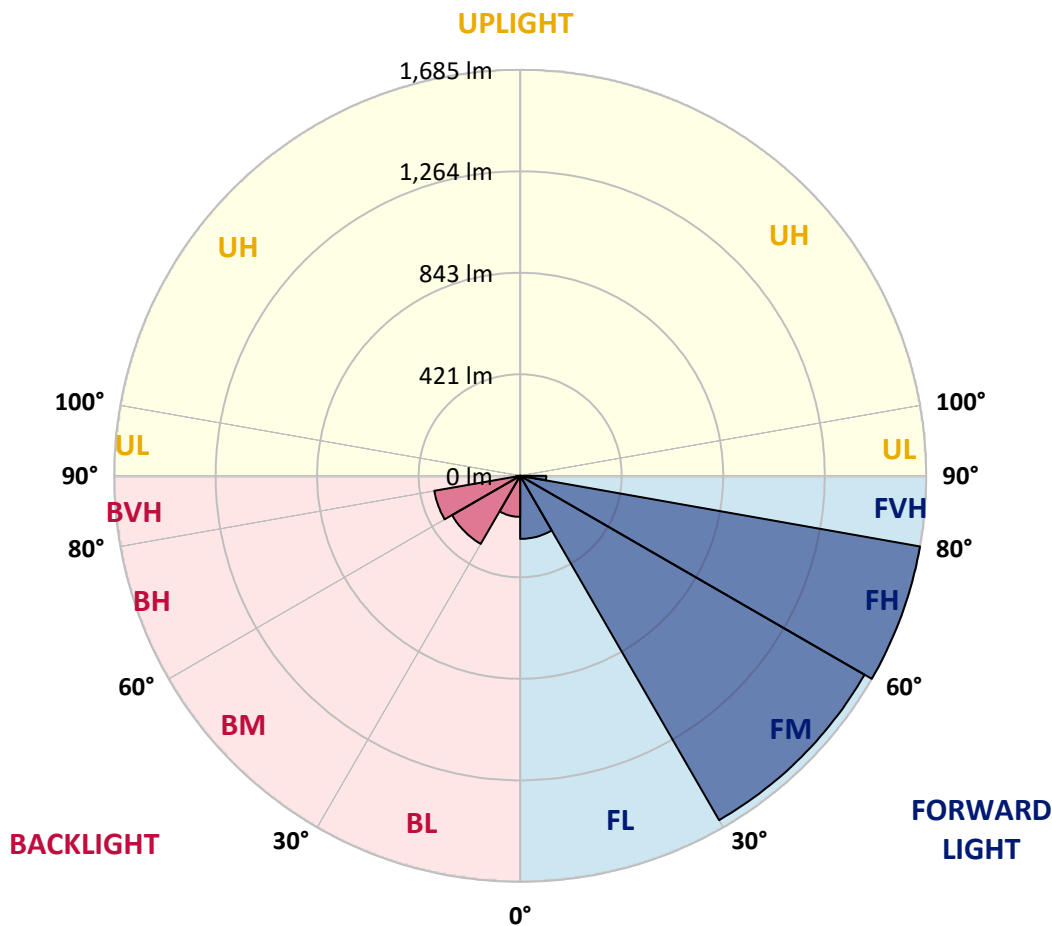
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	261.9	5.7			
FM (30°-60°)	1650.4	36.0			
FH (60°-80°)	1685.1	36.8			G1/1800
FVH (80°-90°)	108.2	2.4			G2/225
BL (0°-30°)	170.4	3.7	B1/500		
BM (30°-60°)	326.4	7.1	B1/1000		
BH (60°-80°)	361.7	7.9	B1/500		G1/500
BVH (80°-90°)	15.9	0.3			G1/100
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 Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	351.2	351.2	351.2	351.2	351.2	351.2	351.2	351.2	351.2	351.2	351.2
2.5°	403.5	387.2	370.7	378.8	391.6	402.9	400.6	402.0	386.4	384.3	425.2
5°	475.4	447.4	446.8	447.2	448.3	435.3	467.1	483.6	487.3	504.1	544.2
7.5°	500.3	489.0	477.5	483.2	468.7	470.0	509.1	552.0	562.2	574.5	629.3
10°	495.1	484.4	487.8	488.8	491.5	513.1	538.2	579.5	588.1	627.2	641.4
12.5°	495.9	494.0	510.1	510.6	539.4	578.3	588.3	626.2	629.7	658.4	717.7
15°	522.1	535.4	526.4	531.2	536.7	583.3	597.7	652.1	672.8	709.8	754.3
17.5°	573.3	577.2	550.1	543.0	561.3	575.4	608.2	631.8	653.5	756.8	818.1
20°	585.2	595.6	563.4	526.7	565.3	585.0	607.8	618.6	635.4	763.7	850.7
22.5°	636.2	614.7	575.8	544.0	556.6	575.8	592.3	632.7	677.0	743.9	883.3
25°	665.1	652.7	618.0	583.9	573.1	573.7	605.5	641.8	657.1	772.9	889.8
27.5°	735.1	715.2	637.2	630.6	590.2	558.8	607.6	664.0	690.8	750.3	921.6
30°	822.7	807.6	705.2	696.6	634.9	580.0	634.5	680.5	676.6	765.0	943.7
32.5°	893.6	918.9	815.6	747.6	703.7	651.2	626.0	677.6	715.7	799.3	981.0
35°	994.8	1018.6	901.7	855.7	760.4	684.1	684.9	717.1	740.7	839.4	1022.8
37.5°	1170.0	1149.1	1055.0	982.4	921.4	807.6	773.4	762.1	781.1	888.5	1104.7
40°	1296.4	1278.7	1167.9	1126.5	1007.9	941.7	848.2	837.5	871.0	939.1	1171.6
42.5°	1446.1	1414.6	1311.5	1277.4	1153.4	1034.1	939.8	946.0	962.3	1034.5	1262.0
45°	1598.5	1522.2	1463.7	1461.0	1378.2	1213.6	1086.8	1081.9	1082.4	1175.0	1363.6
47.5°	1719.4	1650.8	1583.9	1552.1	1510.3	1523.9	1300.4	1241.9	1224.3	1316.5	1516.0
50°	1801.3	1722.3	1646.6	1639.1	1750.6	1824.1	1500.9	1438.4	1449.3	1518.9	1719.2
52.5°	1803.0	1709.2	1630.3	1682.6	1945.4	2050.4	1846.3	1671.7	1706.6	1753.9	1984.3
55°	1677.6	1580.4	1529.1	1648.3	2021.5	2319.0	2331.6	2045.5	2005.2	2022.6	2301.2
57.5°	1413.3	1315.1	1285.2	1428.0	1877.2	2578.0	2917.8	2492.1	2374.0	2301.2	2625.9
60°	1063.8	978.9	960.3	1051.4	1556.3	2501.9	3392.4	3048.0	2807.4	2612.3	2951.5
62.5°	797.8	736.8	708.8	721.9	1076.9	2254.4	3704.1	3750.3	3409.7	2951.9	3269.7
65°	648.3	599.0	574.1	557.2	669.7	1743.2	3647.7	4341.4	4113.2	3308.7	3517.4
67.5°	541.5	497.8	486.3	502.8	529.4	1011.3	3206.9	4672.1	4687.6	3660.6	3662.1
70°	449.5	417.1	412.9	459.7	494.7	610.3	2316.3	4568.2	4739.6	3924.5	3628.2
72.5°	347.3	329.9	329.3	402.7	491.5	520.2	1379.4	3946.4	4176.6	3840.2	3296.2
75°	240.9	228.9	238.1	331.0	480.2	527.7	787.2	3073.8	3246.2	3267.8	2640.4
77.5°	165.8	155.6	165.6	239.4	428.8	540.4	550.7	2222.6	2241.7	2191.3	1512.4
80°	115.4	108.3	116.0	169.4	333.7	534.8	468.9	1399.3	1283.9	978.0	484.2
82.5°	71.5	69.4	77.8	120.8	235.0	486.5	444.3	722.1	551.3	269.9	172.9
85°	37.6	34.5	45.2	78.8	147.0	381.8	416.3	329.5	212.8	95.8	69.4
87.5°	11.1	10.0	17.4	31.8	62.3	171.2	238.3	139.7	79.4	28.2	21.7
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°	351.2	351.2	351.2	351.2	351.2	351.2	351.2	351.2	351.2	351.2	351.2
2.5°	428.0	425.9	397.6	401.2	407.3	408.9	408.7	398.3	387.4	417.9	416.9
5°	545.1	526.2	512.0	508.9	491.5	474.0	480.2	478.1	475.4	489.2	490.9
7.5°	629.5	603.2	586.7	544.4	504.1	469.2	480.4	483.8	476.9	501.8	509.3
10°	651.7	631.0	613.2	558.8	536.5	516.2	486.1	451.8	447.2	432.8	434.5
12.5°	709.0	706.2	645.4	597.5	568.5	528.1	463.1	421.5	385.9	387.6	377.2
15°	754.3	755.8	682.8	615.7	538.1	476.3	399.9	348.1	311.5	304.2	296.7
17.5°	815.0	812.0	685.8	593.8	495.5	405.0	311.3	259.9	253.8	258.0	251.5
20°	841.5	814.5	666.3	539.6	429.0	307.7	235.2	208.0	219.9	236.7	237.1
22.5°	865.3	819.1	656.1	495.9	340.4	223.7	188.8	183.8	197.8	220.6	222.5
25°	864.3	840.3	637.9	451.8	263.9	174.6	164.1	167.7	184.4	208.2	209.5
27.5°	907.8	824.0	590.6	393.9	198.8	149.5	152.2	158.9	166.8	189.4	193.8
30°	907.4	854.3	566.8	323.6	159.7	137.1	144.0	149.7	156.2	176.9	179.4
32.5°	928.9	834.6	552.4	251.7	143.2	134.0	135.7	141.5	150.9	164.8	166.6
35°	954.8	857.0	506.4	199.9	137.1	131.3	132.6	135.9	144.5	157.4	159.1
37.5°	1037.8	861.2	488.2	168.5	136.7	130.2	130.0	131.7	141.5	153.2	158.3
40°	1070.2	899.8	435.1	157.4	135.3	130.2	127.5	128.4	136.5	151.4	155.5
42.5°	1147.8	912.6	395.8	153.5	135.3	127.9	123.6	125.2	134.6	147.8	154.1
45°	1227.7	930.8	349.1	152.8	135.1	127.7	119.6	123.1	130.7	141.8	148.7
47.5°	1341.6	996.4	302.3	150.5	133.6	128.6	118.7	118.5	125.2	134.8	141.3
50°	1527.3	1098.7	266.1	147.6	133.8	127.9	116.7	114.1	118.5	126.9	133.2
52.5°	1785.9	1273.2	251.9	146.1	132.3	124.8	113.5	109.3	111.8	118.5	124.6
55°	2086.1	1508.7	265.9	146.1	129.2	120.0	108.9	103.9	105.2	109.8	115.8
57.5°	2436.9	1801.4	333.5	144.0	125.4	114.2	103.3	97.6	98.0	102.0	107.3
60°	2803.2	2128.5	485.2	142.2	122.7	107.9	96.8	90.9	90.3	94.1	98.9
62.5°	3170.1	2430.2	644.6	146.3	121.9	102.6	89.9	84.0	83.8	87.2	91.2
65°	3461.8	2636.4	684.3	162.5	126.9	96.4	82.8	77.2	76.9	79.7	84.1
67.5°	3605.0	2666.3	519.8	182.9	137.4	90.7	75.9	70.7	70.3	73.4	77.2
70°	3499.0	2462.0	320.9	185.0	136.9	84.0	68.8	64.4	63.6	66.9	69.8
72.5°	3106.8	2153.6	243.8	163.7	118.5	74.4	61.7	57.9	56.7	59.6	62.3
75°	2493.6	1709.8	195.3	132.1	93.4	62.7	54.6	51.0	49.6	52.3	54.6
77.5°	1452.6	961.9	142.8	103.1	70.5	51.2	46.6	43.3	41.8	44.7	46.4
80°	472.3	320.5	89.7	74.0	51.6	40.1	37.8	35.5	33.9	35.8	36.4
82.5°	169.6	119.2	49.6	45.4	34.3	28.8	28.6	27.2	25.3	26.1	26.1
85°	75.1	54.4	29.5	24.3	20.5	15.3	18.0	17.1	15.1	14.8	14.2
87.5°	21.1	18.0	10.7	8.2	6.7	2.5	5.8	5.2	4.2	3.8	2.7
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)