

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: P367906

Luminaire Tested: **MSA-SA3B-830-U-SL4**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367906  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)  
Test Lab: INNOVATION CENTER  
Issue Date: 12/2/2019  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3B-830-U-SL4  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11379 lumens  
Efficiency: N/A  
Efficacy: 90.3 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G3

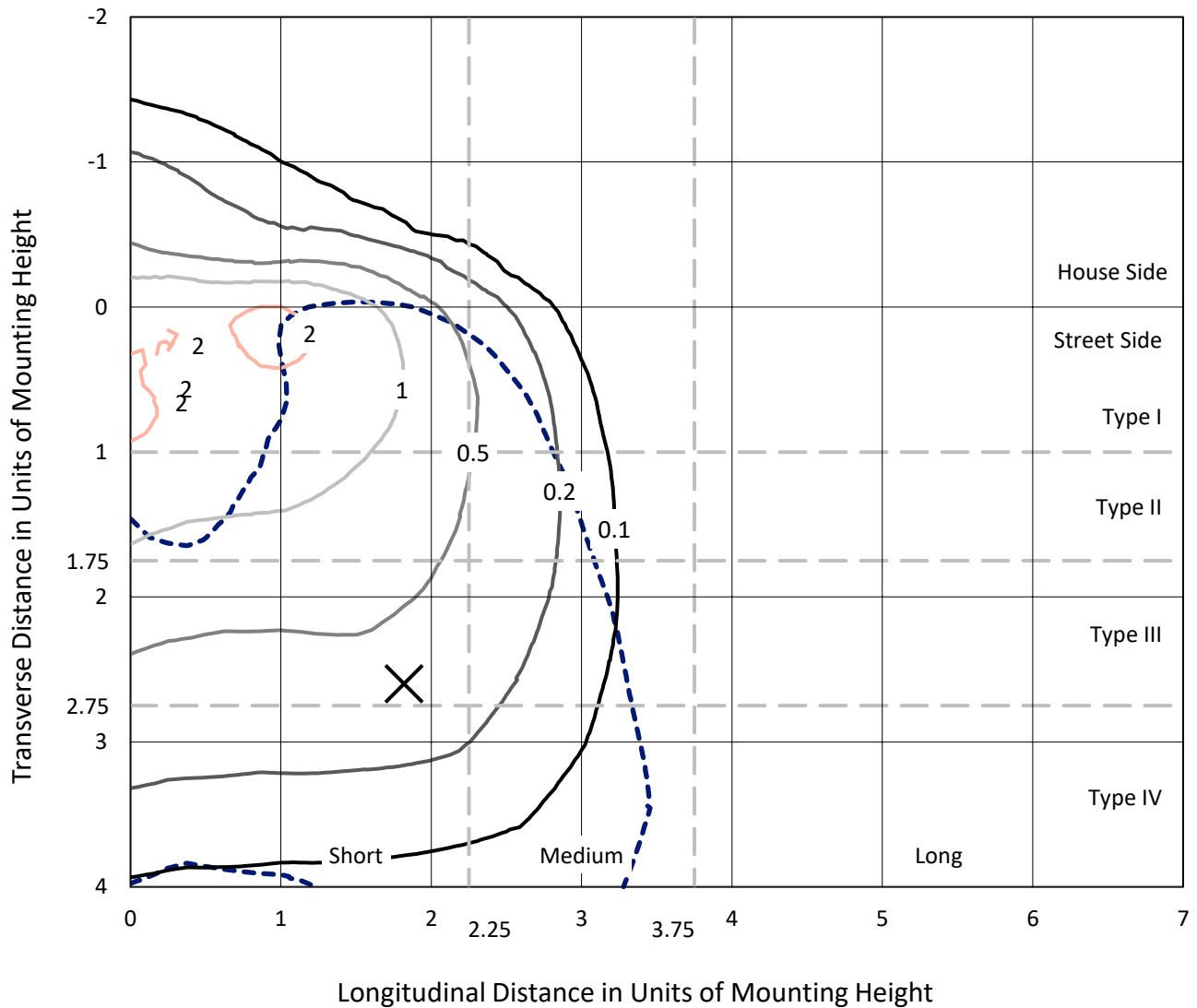
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

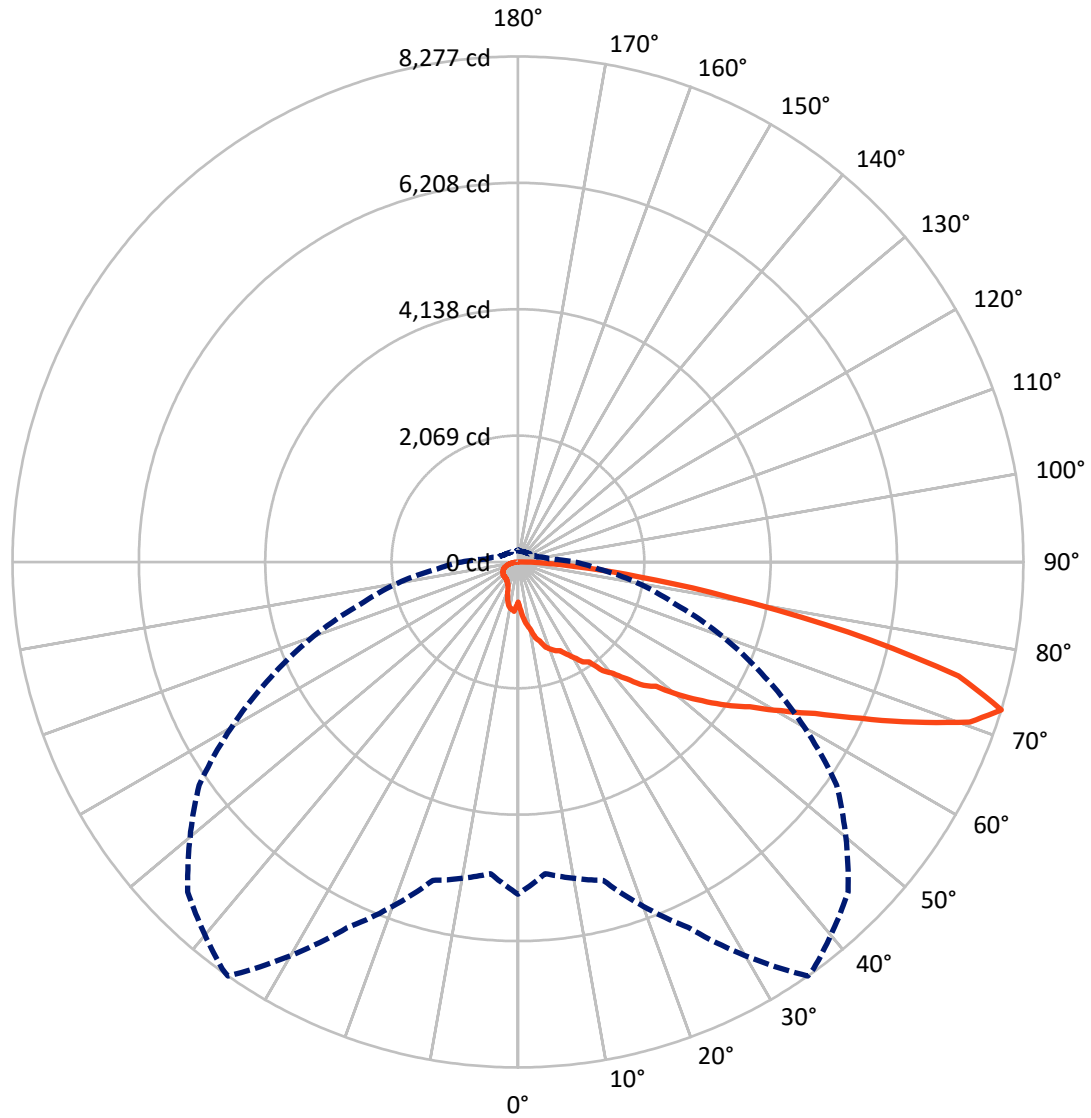
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.3 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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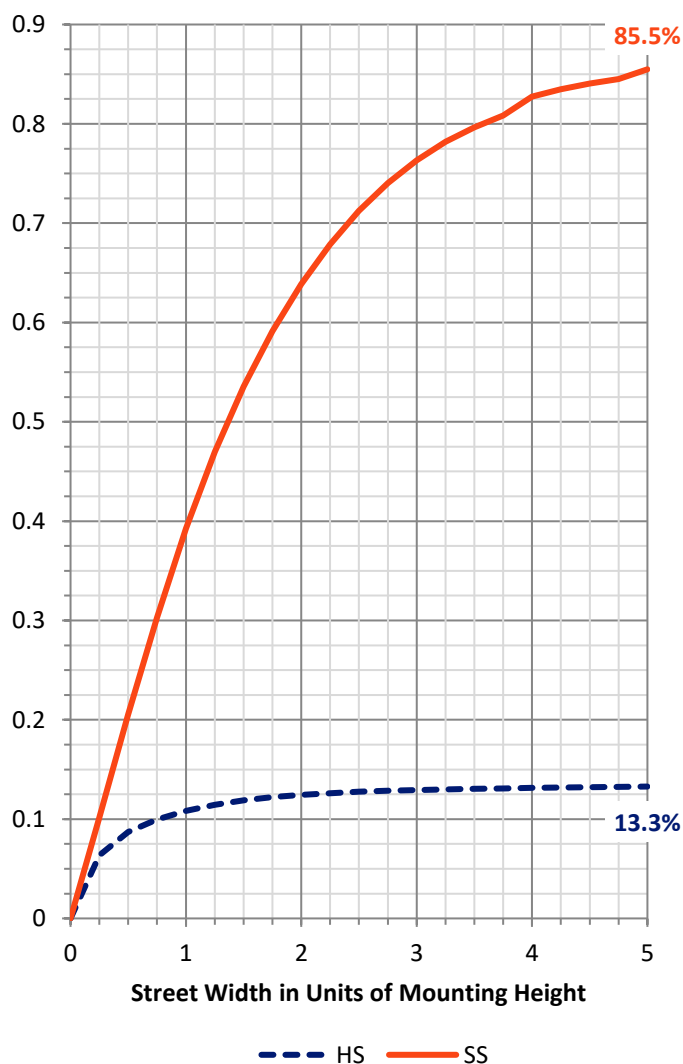
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1527.0	0.0	1527.0
	% Fixture	13.4	0.0	13.4
<b>Street Side</b>	Lumens	9852.0	0.0	9852.0
	% Fixture	86.6	0.0	86.6
<b>Total</b>	Lumens	11379.0	0.0	11379.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	87.4	0.8
10°-20°	307.9	2.7
20°-30°	534.9	4.7
30°-40°	894.0	7.9
40°-50°	1551.7	13.6
50°-60°	2345.8	20.6
60°-70°	3039.0	26.7
70°-80°	2242.4	19.7
80°-90°	375.8	3.3
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°	11379.0	100.0
0°-180°	11379.0	100.0

**Coefficient of Utilization**



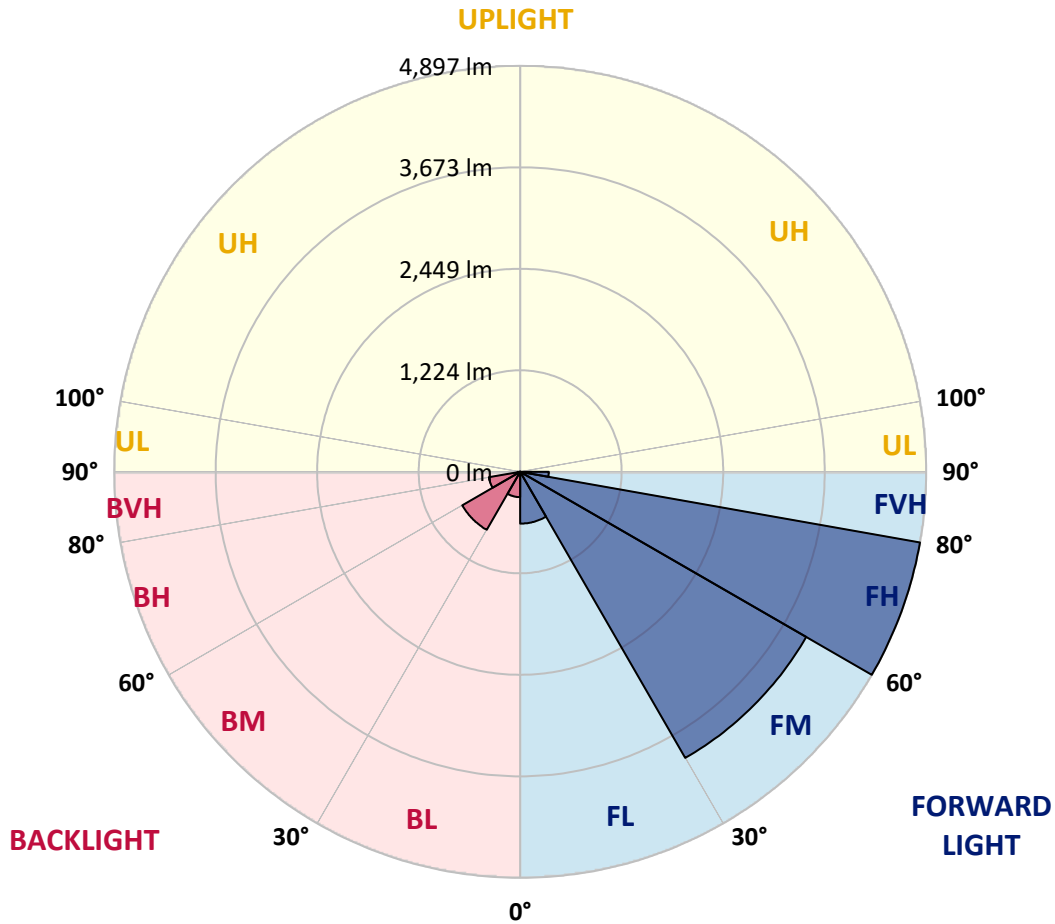
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	625.0	5.5			
FM (30°-60°)	3984.5	35.0			
FH (60°-80°)	4897.4	43.0			G2/5000
FVH (80°-90°)	345.1	3.0			G3/500
BL (0°-30°)	305.2	2.7	B1/500		
BM (30°-60°)	807.1	7.1	B1/1000		
BH (60°-80°)	384.0	3.4	B1/500		G1/500
BVH (80°-90°)	30.8	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-G3**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6
2.5°	820.3	781.0	747.0	745.5	777.1	789.2	784.4	773.7	761.0	734.3	792.6
5°	1027.7	971.3	960.7	948.0	919.4	927.1	880.5	916.0	927.1	952.9	991.7
7.5°	1150.1	1117.0	1091.3	1080.6	1031.1	1025.2	990.8	1041.3	1062.6	1059.2	1117.0
10°	1198.1	1168.0	1170.0	1135.0	1119.0	1125.8	1129.7	1130.6	1143.8	1154.4	1125.3
12.5°	1222.9	1234.6	1277.3	1253.5	1273.9	1282.2	1323.0	1281.2	1282.7	1227.8	1257.9
15°	1347.7	1376.9	1352.1	1351.1	1344.8	1358.4	1393.4	1365.2	1387.1	1369.6	1330.7
17.5°	1498.3	1507.0	1459.4	1440.0	1465.3	1460.9	1452.2	1456.5	1402.1	1503.1	1455.6
20°	1544.4	1578.9	1516.3	1440.0	1523.5	1534.7	1532.8	1513.8	1420.6	1566.3	1520.1
22.5°	1678.5	1631.9	1582.3	1533.7	1576.5	1582.8	1572.1	1526.9	1495.9	1551.2	1587.7
25°	1739.2	1728.0	1664.9	1659.0	1611.9	1589.6	1608.1	1594.9	1564.3	1662.9	1622.6
27.5°	1878.1	1865.0	1719.8	1779.5	1711.0	1705.2	1607.6	1651.3	1681.9	1674.6	1734.8
30°	2035.4	2050.5	1838.3	1898.0	1818.8	1808.1	1710.0	1765.4	1786.3	1793.1	1868.4
32.5°	2210.3	2251.6	2040.8	1991.7	1949.5	1956.8	1873.7	1772.7	1853.8	2012.6	2045.2
35°	2399.7	2416.7	2195.7	2121.9	2011.6	2003.9	2005.3	2018.0	2100.0	2281.2	2306.4
37.5°	2749.9	2671.2	2477.4	2290.4	2253.5	2181.1	2230.2	2269.1	2351.1	2628.9	2734.8
40°	2965.5	2907.2	2611.9	2503.6	2401.6	2408.4	2500.2	2499.7	2693.5	2980.1	3141.8
42.5°	3165.1	3101.5	2823.2	2714.4	2617.8	2641.6	2667.8	2713.9	3085.5	3547.3	3621.2
45°	3325.9	3186.5	2986.4	2962.1	2882.5	2850.9	2962.1	3035.9	3554.1	4006.3	4049.0
47.5°	3435.1	3320.5	3124.8	3103.4	3044.7	3121.9	3425.4	3473.0	3917.4	4467.2	4463.8
50°	3601.2	3444.4	3267.6	3256.4	3422.0	3463.3	3833.4	3828.5	4271.0	4849.9	4769.8
52.5°	3792.6	3594.9	3403.1	3523.1	3775.6	3796.0	4117.0	4247.7	4657.1	5219.0	5009.7
55°	4012.6	3791.6	3606.1	3766.4	4142.3	4082.1	4407.0	4726.1	5140.3	5608.0	5183.1
57.5°	4285.1	4017.0	3866.9	4110.7	4476.9	4530.3	4822.2	5223.9	5529.4	5849.9	5309.3
60°	4572.6	4257.9	4120.4	4352.6	4945.6	5006.8	5292.3	5637.7	5965.5	6077.7	5285.5
62.5°	4847.0	4506.5	4382.2	4668.7	5465.2	5616.8	5827.6	6047.6	6328.3	6133.0	4997.5
65°	5152.5	4811.5	4733.3	5163.2	6170.0	6320.5	6595.9	6529.8	6452.6	5936.8	4521.1
67.5°	5475.9	5129.6	5144.2	5736.7	7000.9	7026.7	7449.7	7010.6	6306.4	5417.2	3721.2
70°	5649.8	5295.3	5445.3	6348.2	7846.5	7809.6	7896.0	7139.8	5710.5	4282.2	2564.8
72.5°	5439.0	5122.8	5397.7	6605.6	8276.8	8237.0	7645.4	6373.0	4464.8	2662.9	1329.8
75°	4605.1	4300.1	4720.7	5888.3	7451.2	7488.1	6506.5	4739.2	2556.1	1070.9	552.2
77.5°	3129.2	2971.8	3332.2	4389.0	5534.7	5662.4	4827.6	2771.2	1073.3	443.4	334.1
80°	1653.7	1578.9	1845.1	2528.4	3504.6	3599.8	2838.7	1380.3	549.8	287.0	238.5
82.5°	898.5	866.9	1009.7	1300.1	1991.2	2074.3	1472.1	916.9	370.6	179.7	145.7
85°	603.7	591.5	686.3	698.4	941.7	968.9	771.2	706.2	222.4	87.9	96.2
87.5°	302.1	289.9	361.3	319.1	359.4	359.9	353.6	450.7	56.3	29.1	17.5
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°	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6	657.6
2.5°	793.6	776.6	717.8	717.3	726.1	720.2	724.6	700.8	690.6	737.2	734.8
5°	986.4	935.4	886.3	869.3	849.4	806.2	808.6	809.1	801.8	829.5	831.5
7.5°	1099.6	1038.4	993.2	902.9	832.0	776.6	783.9	792.1	783.9	820.8	834.4
10°	1116.1	1067.5	1013.6	913.1	865.9	815.9	765.4	720.7	715.4	698.4	703.7
12.5°	1214.2	1173.9	1061.2	950.9	896.1	819.3	727.0	676.1	633.3	640.6	627.0
15°	1294.8	1266.1	1131.1	986.9	855.8	760.6	662.5	592.5	554.1	549.8	536.2
17.5°	1404.1	1363.3	1137.4	962.1	803.8	689.7	578.9	499.8	483.2	476.4	469.6
20°	1456.5	1383.2	1114.6	884.4	743.1	605.1	496.4	428.4	423.5	435.6	433.2
22.5°	1502.2	1399.7	1094.2	837.3	648.4	519.7	440.0	395.3	390.0	405.5	408.4
25°	1528.9	1446.8	1071.9	789.2	589.6	456.0	397.8	372.5	373.5	393.9	391.5
27.5°	1649.3	1463.3	1015.5	732.4	522.1	408.9	377.4	364.3	358.9	387.1	389.5
30°	1725.1	1571.1	1002.9	672.2	472.1	374.5	358.9	353.6	352.6	386.6	389.0
32.5°	1865.9	1607.1	1008.7	606.6	426.9	363.8	345.3	344.8	354.5	387.1	391.0
35°	2061.2	1758.6	980.6	569.2	402.1	347.3	334.6	338.5	355.0	390.5	395.8
37.5°	2441.9	1901.4	989.3	534.2	393.9	341.9	331.7	334.1	360.9	399.2	413.8
40°	2743.6	2160.3	975.7	516.8	382.7	340.9	325.4	335.1	360.4	404.1	417.2
42.5°	3180.7	2366.7	977.2	499.3	382.2	337.1	324.4	336.1	359.4	399.7	417.7
45°	3555.6	2551.7	998.1	489.1	377.4	343.4	323.0	337.5	353.1	384.2	404.1
47.5°	3863.0	2758.1	1019.4	479.4	375.4	349.2	321.5	327.3	342.4	366.7	384.7
50°	4113.6	2903.3	1046.6	477.4	375.4	346.3	317.6	317.1	329.8	349.2	366.2
52.5°	4308.9	3005.8	1065.1	479.8	375.4	335.1	312.8	308.9	316.7	330.7	347.7
55°	4450.2	3037.4	1050.0	486.2	374.9	324.9	304.0	300.6	304.5	314.2	330.3
57.5°	4507.0	2954.3	960.2	475.0	374.9	317.6	293.3	289.5	293.3	300.6	316.7
60°	4364.7	2687.2	830.5	446.3	367.7	307.9	281.2	278.8	284.6	290.9	306.5
62.5°	4007.7	2332.2	692.1	412.3	352.6	299.7	269.5	270.0	279.3	288.0	303.5
65°	3453.1	1902.9	577.0	377.9	333.7	286.5	257.4	260.8	273.9	285.6	301.1
67.5°	2717.3	1409.9	485.7	344.3	306.9	265.2	243.8	244.8	254.0	265.2	280.2
70°	1816.4	897.0	399.2	305.0	272.0	237.5	222.9	219.5	217.1	226.8	239.9
72.5°	921.3	529.9	327.8	260.8	234.1	207.4	196.2	187.5	180.7	186.5	196.7
75°	482.8	370.6	264.7	216.6	193.3	176.3	168.0	156.4	151.5	154.9	162.2
77.5°	341.4	289.9	214.2	171.4	157.4	139.9	141.3	129.2	125.3	127.2	135.0
80°	262.3	229.7	164.6	129.7	121.4	104.4	109.3	102.0	97.1	96.2	102.0
82.5°	178.7	172.9	117.0	90.8	85.0	72.9	79.6	76.7	70.4	66.5	69.5
85°	120.4	114.6	71.4	52.5	50.0	37.9	48.6	46.6	41.3	35.5	35.9
87.5°	20.9	38.4	20.4	13.1	12.1	4.4	11.2	10.7	9.7	4.9	3.9
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)