

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: P596765

Luminaire Tested: **MSA-SA4B-827-U-SL2-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596765  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA4B-827-U-SL2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 11706 lumens  
Efficiency: N/A  
Efficacy: 68.5 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Short  
BUG Rating: B2 - U0 - G2

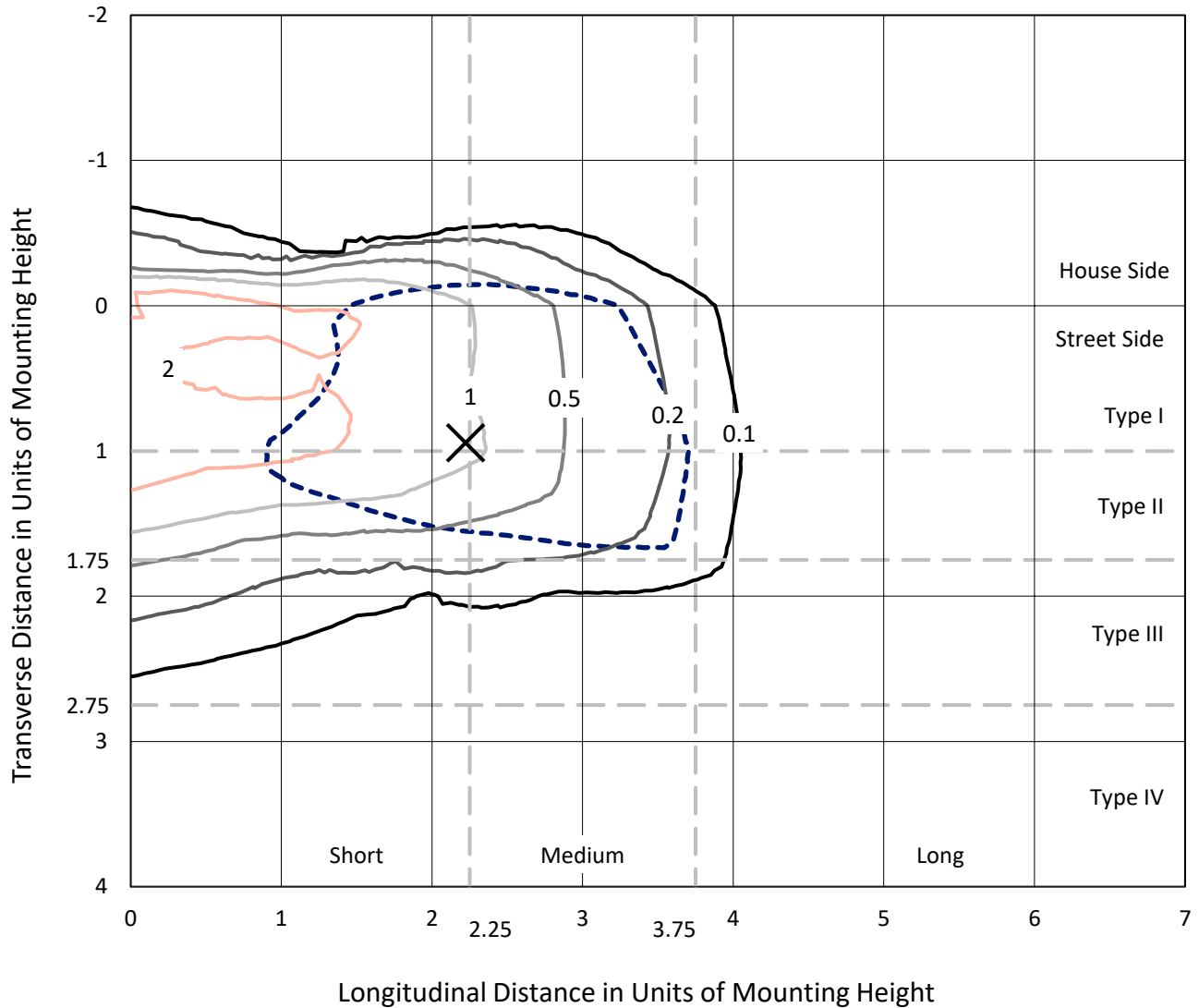
Input Watts (W): 171  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

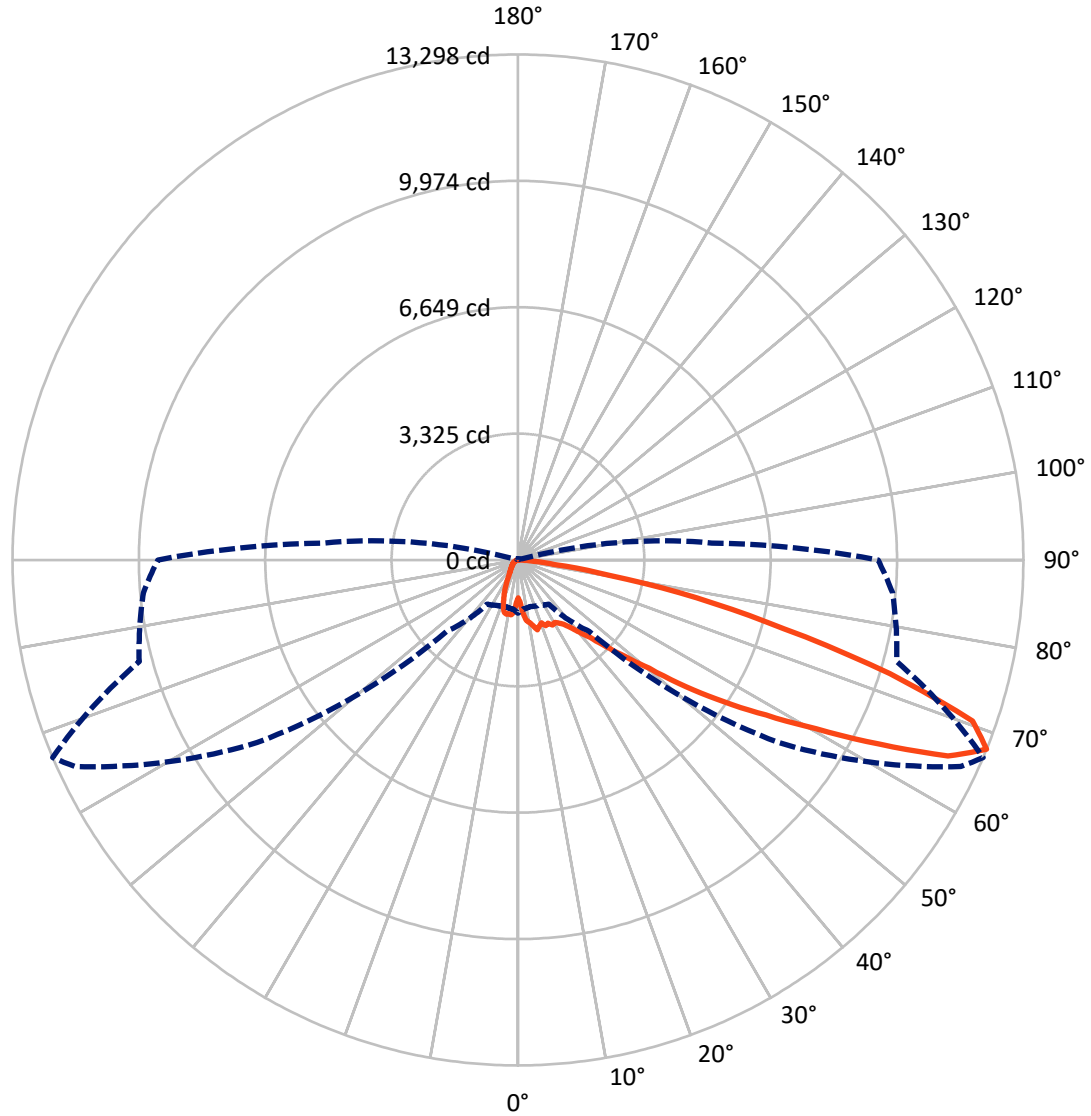
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc  
 Type II - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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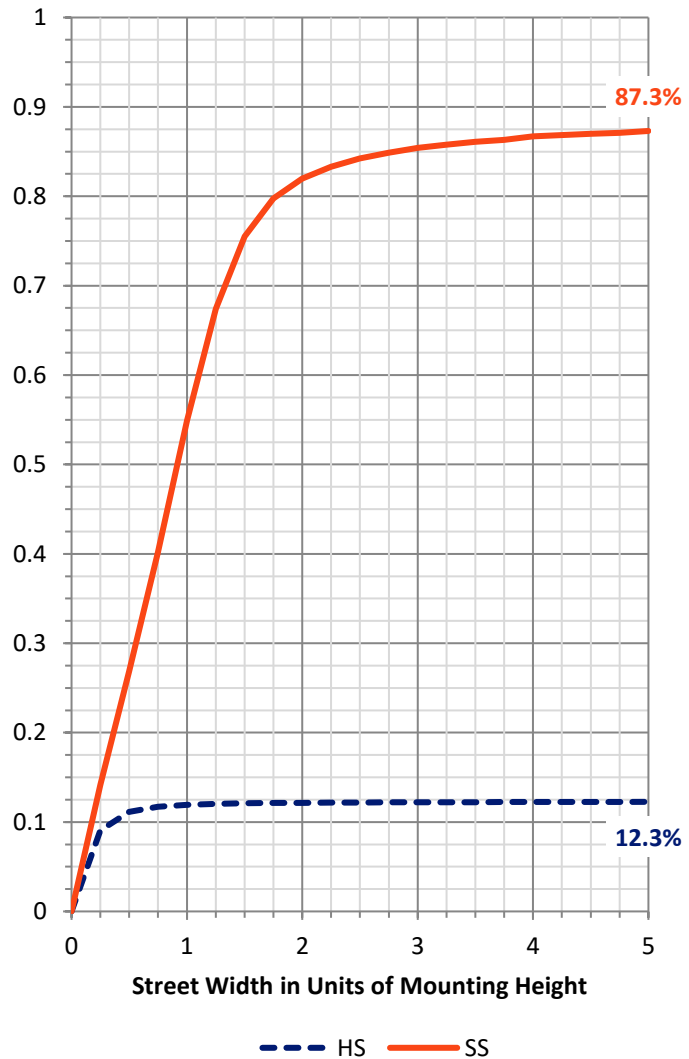
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1447.7	0.0	1447.7
	% Fixture	12.4	0.0	12.4
<b>Street Side</b>	Lumens	10258.3	0.0	10258.3
	% Fixture	87.6	0.0	87.6
<b>Total</b>	Lumens	11706.0	0.0	11706.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	125.1	1.1
10°-20°	370.3	3.2
20°-30°	580.3	5.0
30°-40°	935.7	8.0
40°-50°	1719.4	14.7
50°-60°	2903.9	24.8
60°-70°	3210.4	27.4
70°-80°	1680.3	14.4
80°-90°	180.5	1.5
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°	11706.0	100.0
0°-180°	11706.0	100.0

**Coefficient of Utilization**



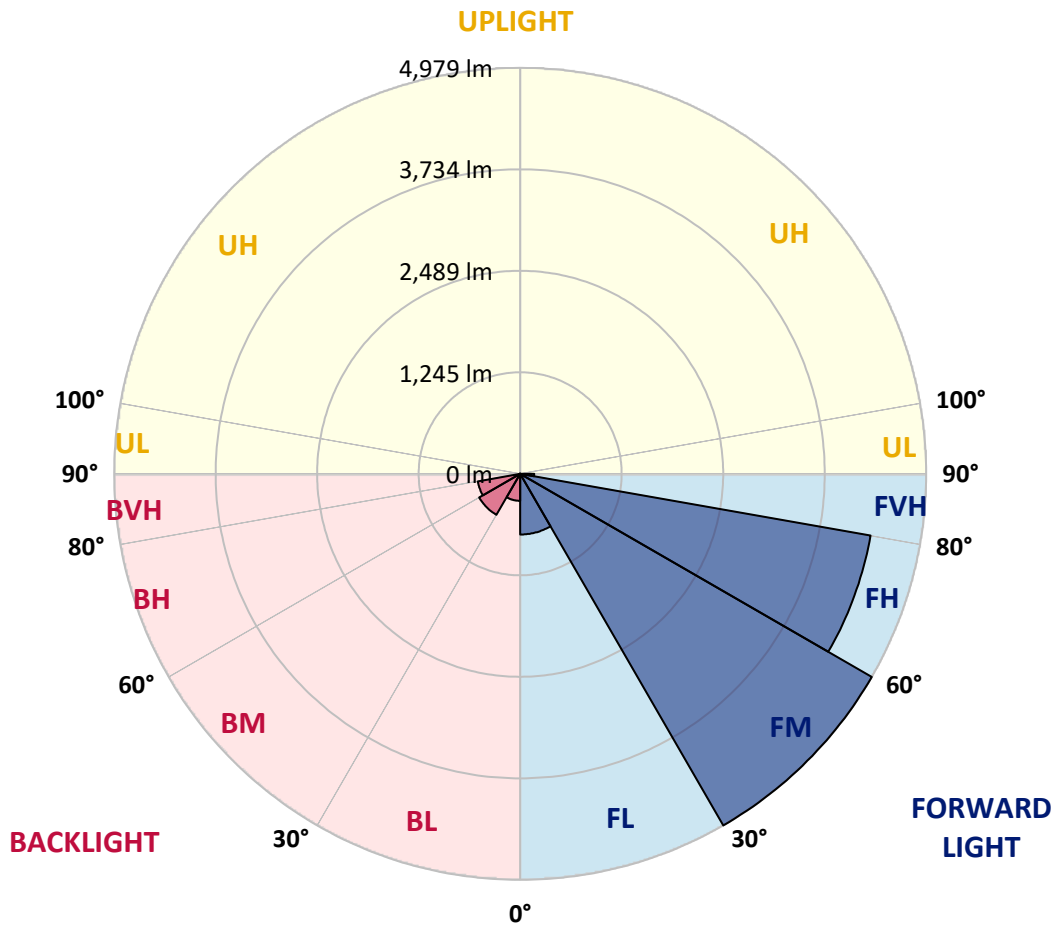
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	744.3	6.4			
FM (30°-60°)	4978.6	42.5			
FH (60°-80°)	4362.6	37.3			G2/5000
FVH (80°-90°)	172.8	1.5			G2/225
BL (0°-30°)	331.5	2.8	B1/500		
BM (30°-60°)	580.5	5.0	B1/1000		
BH (60°-80°)	528.1	4.5	B2/1000		G2/1000
BVH (80°-90°)	7.7	0.1			G0/10
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 Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	997.0	997.0	997.0	997.0	997.0	997.0	997.0	997.0	997.0	997.0	997.0
2.5°	1177.0	1137.2	1069.5	1089.1	1128.3	1160.9	1145.5	1115.2	1115.8	1084.9	1196.0
5°	1369.3	1315.9	1276.7	1290.4	1288.6	1287.4	1360.4	1388.3	1400.2	1451.3	1526.7
7.5°	1424.6	1405.6	1364.6	1377.1	1336.1	1339.1	1467.3	1588.5	1607.5	1638.9	1773.1
10°	1403.2	1366.4	1381.2	1381.2	1381.8	1448.3	1534.4	1650.2	1673.4	1794.5	1808.8
12.5°	1380.0	1381.8	1440.6	1429.9	1510.7	1630.0	1659.1	1789.2	1777.9	1883.0	2039.2
15°	1466.1	1511.3	1473.3	1488.1	1495.8	1636.0	1682.9	1855.7	1905.6	2038.6	2140.1
17.5°	1614.0	1619.9	1541.0	1519.6	1575.4	1615.2	1709.6	1792.7	1826.0	2175.2	2318.9
20°	1640.7	1678.7	1598.6	1475.0	1593.2	1647.8	1713.8	1753.5	1767.8	2217.3	2419.8
22.5°	1801.6	1759.5	1631.2	1537.4	1571.2	1630.6	1671.6	1791.6	1877.1	2137.7	2516.6
25°	1884.2	1872.9	1750.6	1670.4	1636.0	1631.2	1725.0	1815.9	1843.2	2220.3	2540.4
27.5°	2081.9	2056.4	1819.5	1809.4	1695.9	1596.2	1726.8	1890.1	1941.2	2142.5	2629.4
30°	2350.9	2341.4	2026.1	2019.6	1839.1	1659.7	1823.0	1935.9	1905.0	2182.3	2688.8
32.5°	2621.7	2698.9	2376.5	2192.4	2057.0	1893.1	1795.7	1921.6	1976.8	2279.1	2798.1
35°	2948.9	3004.7	2676.3	2542.7	2241.7	2002.4	1976.8	2057.6	2081.3	2394.3	2922.2
37.5°	3521.3	3437.0	3157.3	2929.9	2771.9	2392.5	2266.6	2202.5	2257.7	2550.5	3175.7
40°	3944.1	3890.7	3546.3	3410.3	3046.9	2824.8	2495.8	2435.8	2497.6	2710.8	3352.1
42.5°	4454.2	4343.2	4019.0	3926.9	3552.8	3124.7	2791.0	2811.7	2773.1	3027.3	3661.5
45°	4915.6	4665.0	4484.5	4505.3	4305.8	3727.4	3283.2	3273.1	3241.1	3485.7	3986.9
47.5°	5226.2	5007.1	4831.3	4773.7	4750.0	4787.4	3994.6	3815.3	3791.5	3967.3	4499.4
50°	5393.1	5153.2	4935.8	4947.7	5429.9	5792.7	4728.6	4473.8	4482.7	4666.2	5200.1
52.5°	5280.8	5009.5	4780.2	5002.9	5957.2	6463.1	5943.5	5334.3	5540.9	5494.0	6140.1
55°	4762.4	4526.7	4364.0	4762.4	6014.8	7184.6	7439.4	6629.4	6583.1	6476.2	7098.5
57.5°	3890.1	3687.0	3586.7	4007.1	5384.8	7766.0	8941.7	8093.2	7698.3	7250.5	7894.2
60°	2898.4	2748.8	2644.3	2866.4	4242.8	7201.2	9925.7	9472.6	9015.4	7997.0	8609.2
62.5°	2146.7	2024.9	1913.9	1934.1	2921.6	6193.5	10303.4	10934.0	10671.5	8785.0	9283.8
65°	1713.2	1602.1	1524.3	1479.8	1809.4	4659.7	9777.8	12131.7	12434.6	9527.2	9770.7
67.5°	1399.0	1305.2	1266.6	1317.7	1419.2	2656.2	8374.0	12858.6	13298.0	10314.6	9890.7
70°	1138.4	1061.2	1057.0	1194.8	1307.0	1619.3	6159.7	12356.8	12687.5	10448.8	9171.5
72.5°	793.3	759.5	813.5	1008.9	1295.1	1348.6	3537.4	10225.6	10237.4	9228.5	7543.9
75°	448.9	443.6	529.1	804.6	1261.3	1334.9	1972.1	7226.2	7231.5	6979.8	5226.2
77.5°	247.0	231.0	308.2	543.9	1083.1	1304.0	1272.0	4934.0	4807.6	3884.2	2387.2
80°	114.0	107.5	166.9	348.6	792.2	1233.4	1019.6	2712.0	2445.3	1265.4	582.5
82.5°	46.9	44.5	76.6	223.9	500.6	993.5	859.3	1203.1	965.6	240.5	179.9
85°	8.3	8.9	31.5	135.4	280.3	457.8	696.6	571.3	419.8	66.5	98.6
87.5°	0.0	0.0	6.5	32.7	67.7	125.3	282.7	159.7	109.9	19.6	29.1
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°	997.0	997.0	997.0	997.0	997.0	997.0	997.0	997.0	997.0	997.0	997.0
2.5°	1217.9	1207.8	1105.7	1110.4	1117.6	1111.0	1109.8	1081.3	1055.2	1141.3	1140.1
5°	1540.4	1468.5	1397.9	1370.5	1311.7	1234.6	1235.1	1210.8	1185.9	1220.9	1220.9
7.5°	1770.2	1671.0	1581.3	1421.6	1266.0	1125.3	1112.8	1079.6	1041.6	1087.3	1096.2
10°	1823.6	1737.5	1621.7	1387.2	1239.9	1102.7	951.9	827.8	770.2	743.5	738.7
12.5°	1988.1	1924.0	1665.1	1405.6	1193.6	961.4	714.4	567.1	466.7	459.0	448.3
15°	2098.0	2052.8	1707.8	1359.8	997.6	691.2	448.9	344.4	304.0	300.5	295.1
17.5°	2268.4	2190.0	1666.9	1214.4	780.3	456.1	301.7	272.0	276.7	287.4	279.1
20°	2337.9	2184.7	1577.8	1003.6	548.1	305.8	261.9	245.8	258.3	268.4	263.7
22.5°	2409.1	2200.1	1498.8	827.2	358.1	253.0	233.4	225.1	226.2	236.3	236.9
25°	2408.5	2242.9	1407.4	644.3	266.6	225.1	210.8	200.1	196.0	203.1	201.3
27.5°	2525.5	2193.6	1240.5	478.0	234.6	201.3	187.6	174.6	159.7	166.9	166.9
30°	2526.1	2273.7	1124.1	343.2	215.0	179.3	167.5	147.3	130.0	136.0	136.6
32.5°	2593.2	2204.3	1016.6	262.5	199.5	166.3	140.1	121.7	111.6	115.2	115.2
35°	2669.8	2263.6	851.5	231.6	184.1	147.9	120.0	105.1	97.4	100.4	100.4
37.5°	2922.8	2251.2	736.9	215.6	174.0	133.6	109.3	92.6	89.1	90.9	93.2
40°	3014.2	2339.6	581.3	206.1	157.4	120.5	96.2	83.7	79.0	80.2	80.8
42.5°	3247.0	2359.2	464.4	198.3	142.5	104.5	85.5	76.6	70.7	70.7	72.4
45°	3504.1	2408.5	369.4	191.8	130.0	93.8	77.2	70.1	61.2	60.0	62.4
47.5°	3876.5	2597.4	301.1	178.7	115.2	87.3	71.3	60.6	53.4	51.1	53.4
50°	4499.4	2918.0	266.0	162.7	104.5	81.9	62.9	51.7	46.3	43.3	45.1
52.5°	5378.2	3472.1	247.6	147.9	95.0	73.6	56.4	45.1	39.8	37.4	38.6
55°	6354.5	4107.4	238.7	133.0	86.7	64.7	49.3	39.8	35.0	32.1	32.7
57.5°	7257.1	4704.8	229.8	118.8	78.4	57.6	43.3	35.0	30.3	27.3	27.9
60°	8146.6	5181.7	208.4	102.1	70.7	51.7	38.0	30.3	27.3	23.8	23.8
62.5°	8933.4	5466.7	177.6	88.5	63.5	45.7	33.8	27.3	24.9	21.4	21.4
65°	9469.0	5479.8	143.1	76.0	55.8	39.2	29.7	25.5	23.2	19.0	18.4
67.5°	9476.8	5123.5	114.6	67.7	49.3	34.4	26.7	24.3	21.4	17.8	16.6
70°	8482.1	4232.7	95.6	59.4	42.8	30.3	23.2	23.2	20.8	17.2	15.4
72.5°	6785.0	3234.5	80.2	51.7	38.0	26.1	21.4	22.0	20.2	17.2	15.4
75°	4560.5	1855.1	66.5	43.9	33.3	22.0	20.8	21.4	20.8	17.2	14.8
77.5°	2100.3	590.9	51.7	36.2	28.5	18.4	20.2	20.2	19.0	15.4	13.1
80°	473.3	145.5	37.4	26.7	23.2	13.7	18.4	16.6	14.8	10.7	7.7
82.5°	172.2	44.5	22.6	16.6	14.3	5.3	11.9	11.9	10.7	7.7	4.8
85°	98.6	23.2	12.5	10.7	7.7	2.4	6.5	7.1	5.9	5.3	2.4
87.5°	32.1	5.3	5.9	6.5	5.9	1.2	2.4	2.4	1.8	1.2	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)