

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: P596747

Luminaire Tested: **MSA-SA4A-827-U-SL4-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596747
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-827-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9426 lumens
Efficiency: N/A
Efficacy: 73.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

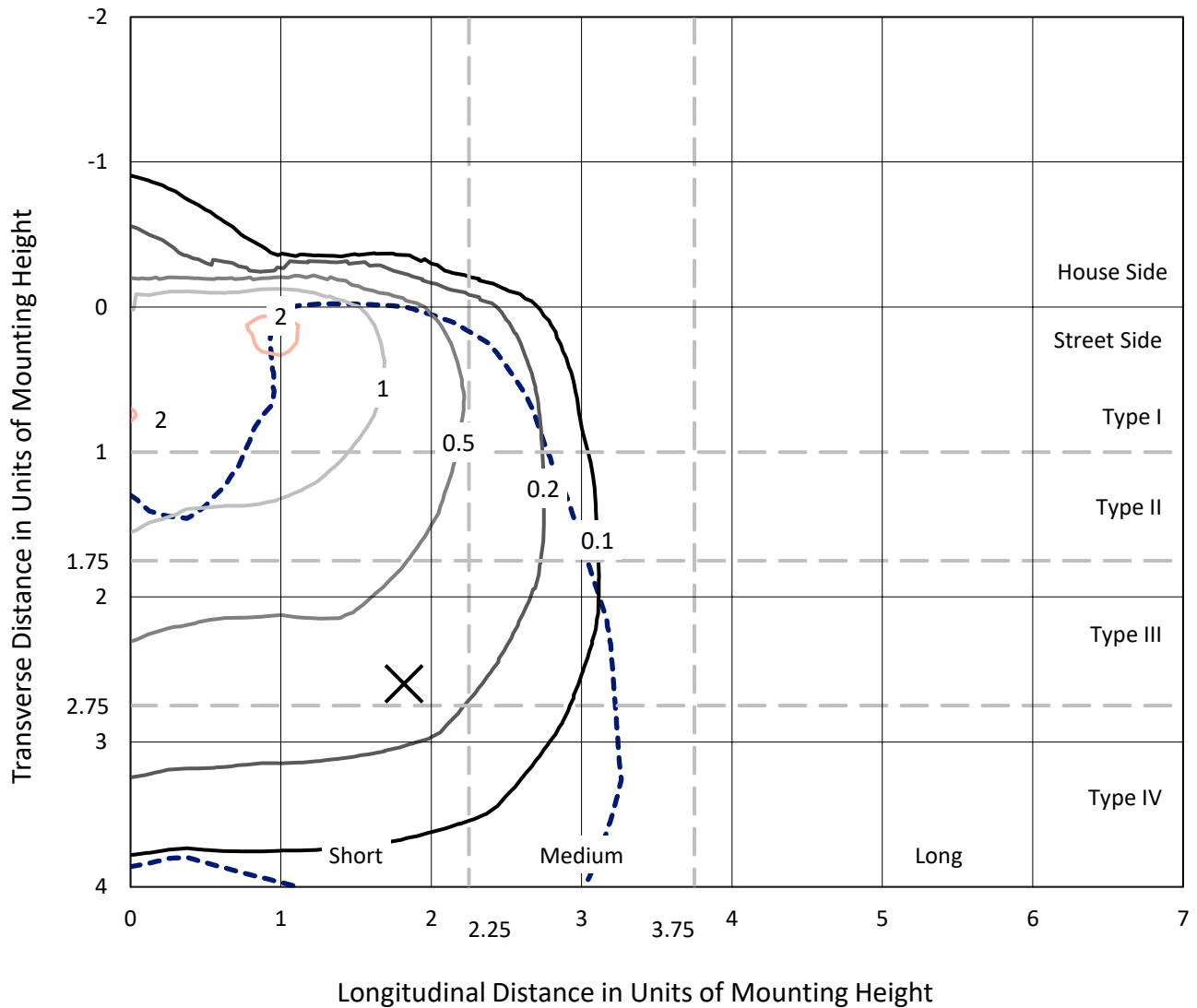
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

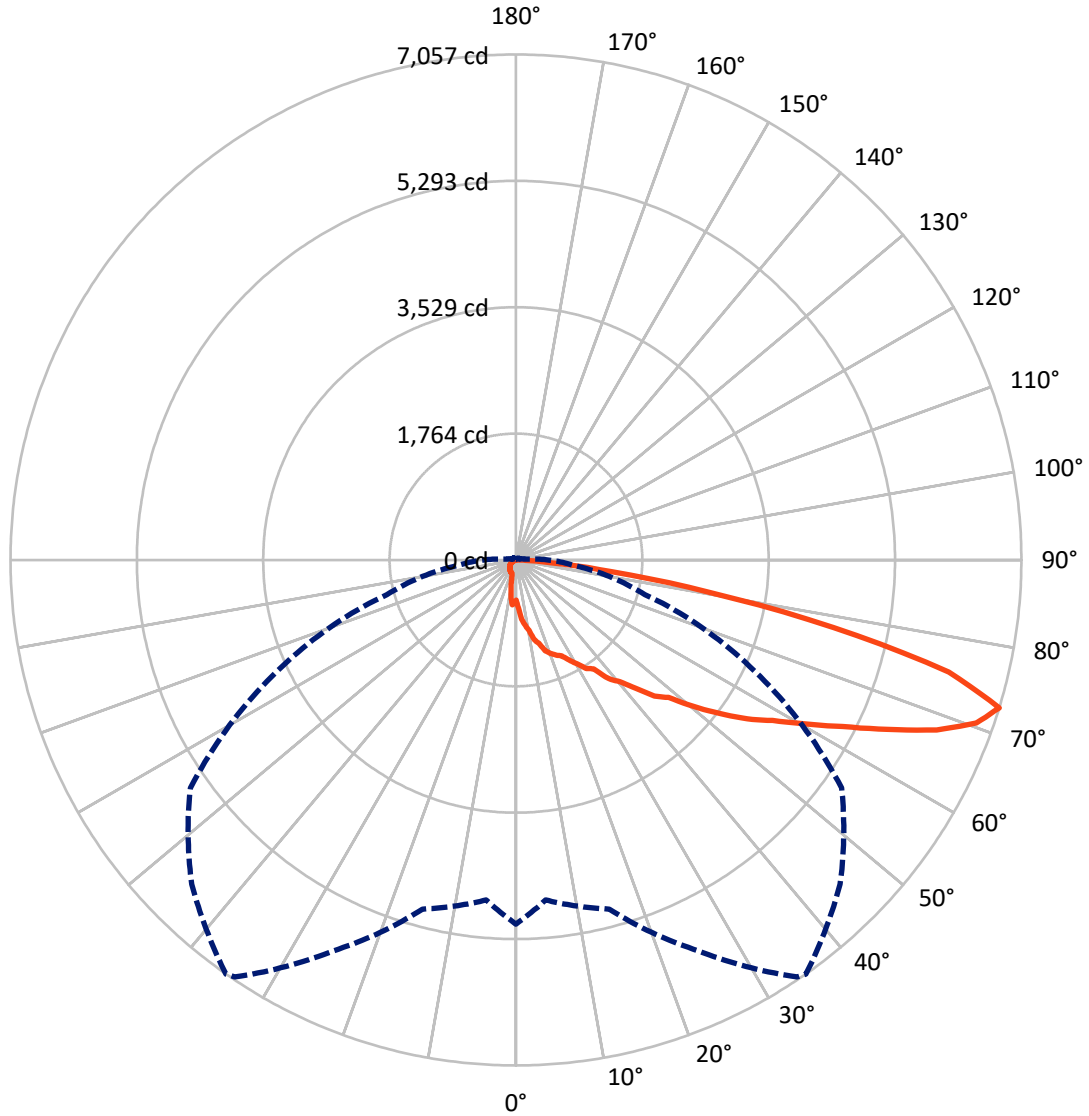
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 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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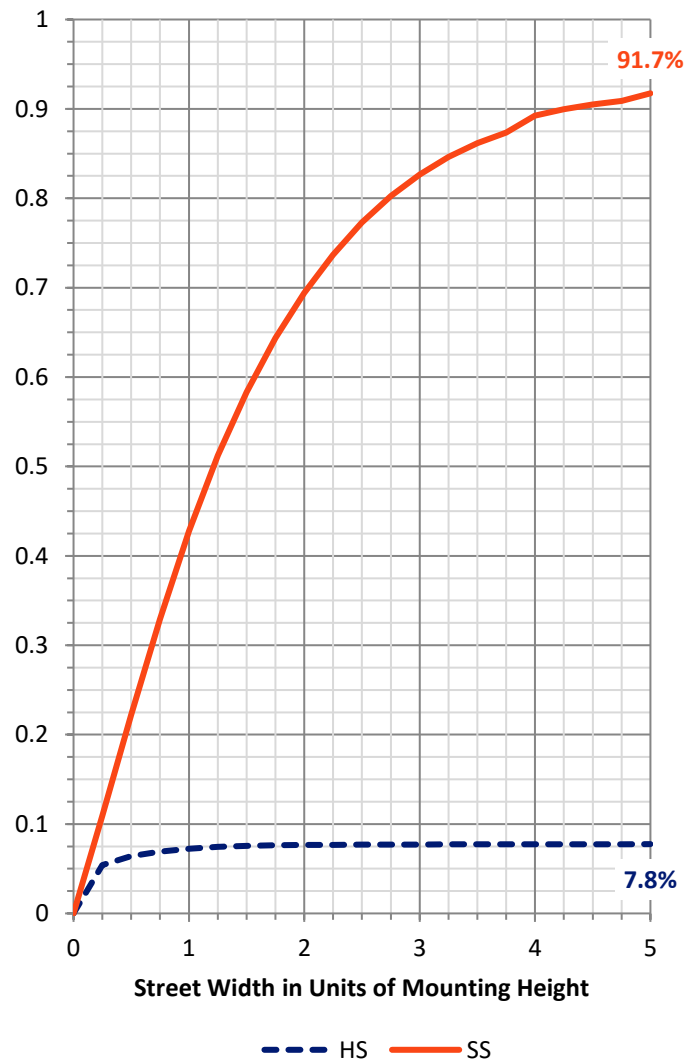
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	735.2	0.0	735.2
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	8690.8	0.0	8690.8
	% Fixture	92.2	0.0	92.2
Total	Lumens	9426.0	0.0	9426.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.6	0.8
10°-20°	241.2	2.6
20°-30°	439.3	4.7
30°-40°	757.7	8.0
40°-50°	1347.0	14.3
50°-60°	2010.0	21.3
60°-70°	2568.0	27.2
70°-80°	1786.7	19.0
80°-90°	204.4	2.2
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°	9426.0	100.0
0°-180°	9426.0	100.0

Coefficient of Utilization



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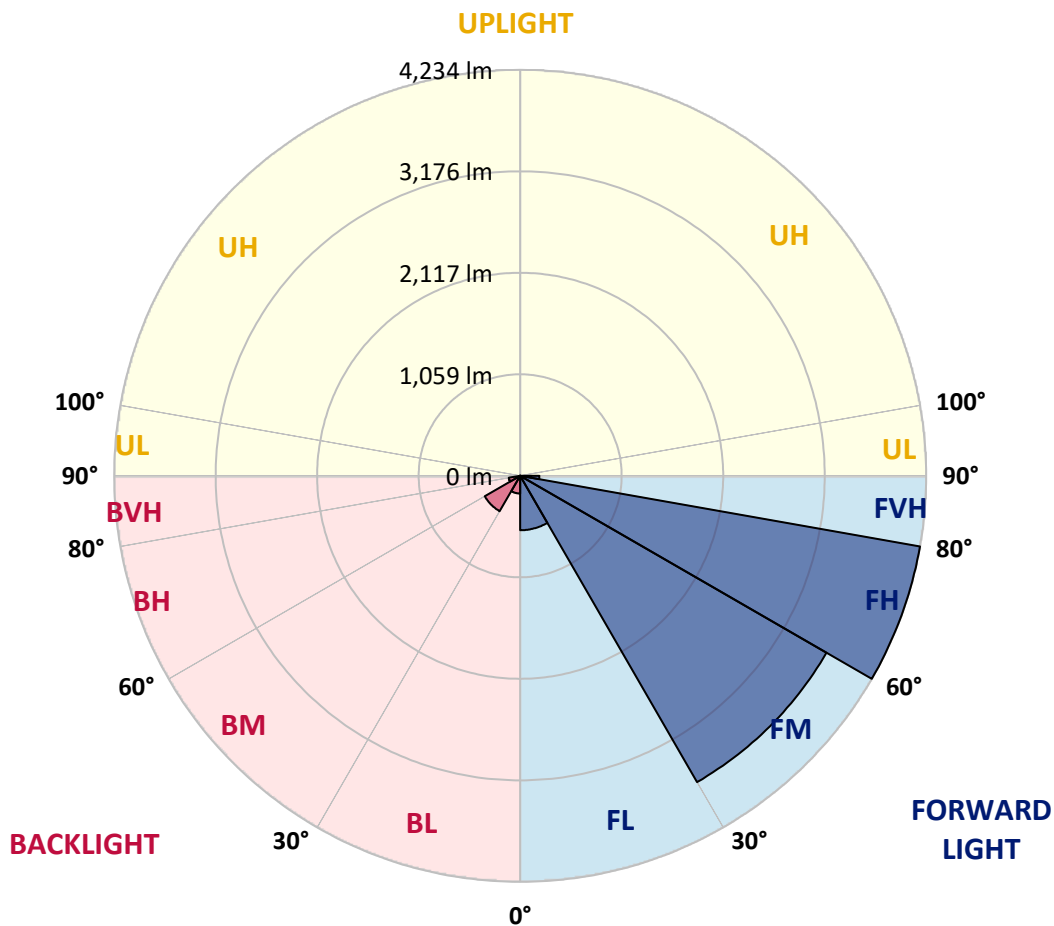
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	567.2	6.0			
FM (30°-60°)	3688.4	39.1			
FH (60°-80°)	4234.2	44.9			G2/5000
FVH (80°-90°)	200.9	2.1			G2/225
BL (0°-30°)	184.9	2.0	B1/500		
BM (30°-60°)	426.3	4.5	B1/1000		
BH (60°-80°)	120.5	1.3	B1/500		G1/500
BVH (80°-90°)	3.4	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	561.5	561.5	561.5	561.5	561.5	561.5	561.5	561.5	561.5	561.5	561.5
2.5°	714.6	686.6	641.1	644.4	664.8	669.1	675.2	659.1	644.9	619.8	668.6
5°	915.5	875.2	849.6	841.5	829.7	830.6	801.7	812.2	809.3	827.8	850.1
7.5°	1028.7	1006.4	974.2	965.2	921.6	916.9	881.4	929.2	933.9	927.3	963.8
10°	1073.7	1044.4	1048.1	1014.5	992.7	998.4	1004.1	1007.9	1014.0	1020.2	975.6
12.5°	1100.3	1105.5	1157.1	1122.1	1143.9	1143.9	1182.2	1141.5	1142.9	1098.4	1106.0
15°	1219.7	1248.6	1225.4	1224.9	1201.2	1207.4	1251.9	1219.7	1236.3	1223.0	1171.8
17.5°	1369.4	1375.1	1331.0	1311.6	1332.9	1333.4	1314.4	1313.0	1255.2	1352.8	1290.8
20°	1417.3	1449.5	1386.9	1311.1	1399.7	1395.5	1394.1	1371.8	1275.6	1411.1	1359.9
22.5°	1547.6	1501.6	1459.0	1409.2	1443.8	1443.8	1438.6	1389.8	1352.4	1405.9	1427.7
25°	1588.3	1594.0	1538.6	1522.5	1523.4	1480.8	1477.0	1456.1	1420.1	1511.6	1468.0
27.5°	1728.6	1726.2	1593.1	1638.1	1580.7	1581.2	1476.5	1523.4	1529.6	1516.8	1565.6
30°	1866.5	1904.9	1703.9	1760.8	1700.6	1682.6	1580.3	1622.0	1632.9	1618.2	1679.8
32.5°	2042.3	2098.7	1903.4	1847.5	1755.6	1806.8	1736.2	1637.6	1691.6	1822.9	1857.5
35°	2228.5	2256.0	2048.0	1969.8	1866.0	1865.5	1863.2	1871.2	1930.9	2078.8	2108.1
37.5°	2563.0	2498.1	2310.0	2130.9	2154.1	2102.4	2066.4	2104.3	2166.4	2410.0	2535.5
40°	2749.7	2702.8	2437.9	2331.8	2216.6	2235.6	2333.2	2328.9	2494.3	2749.2	2937.4
42.5°	2931.2	2886.7	2626.0	2540.3	2392.4	2444.1	2486.7	2540.8	2879.6	3290.8	3394.1
45°	3092.8	2962.0	2778.1	2781.5	2704.7	2710.9	2786.2	2836.0	3325.9	3747.6	3820.1
47.5°	3190.4	3082.8	2906.6	2903.2	2898.5	2869.6	3224.5	3270.0	3681.8	4182.6	4189.3
50°	3327.8	3193.2	3038.8	3041.6	3151.1	3212.2	3635.8	3631.1	4025.3	4545.6	4392.5
52.5°	3498.9	3334.4	3164.3	3290.8	3460.0	3559.5	3903.5	4043.8	4394.4	4773.5	4472.1
55°	3717.8	3512.1	3348.2	3510.2	3879.4	3917.7	4165.6	4461.7	4796.7	5006.2	4497.7
57.5°	3974.6	3729.2	3596.5	3857.6	4225.7	4226.7	4547.0	4907.1	5043.6	5100.9	4468.8
60°	4251.3	3965.1	3831.5	4066.5	4607.7	4646.5	4971.1	5153.1	5294.3	5148.8	4417.2
62.5°	4494.9	4178.8	4075.1	4351.3	5026.5	5118.5	5340.7	5314.6	5475.3	5209.0	4285.9
65°	4784.9	4455.6	4387.3	4795.3	5573.4	5699.9	5755.8	5601.3	5535.9	5162.5	3944.3
67.5°	5072.0	4764.0	4762.1	5287.6	6290.3	6333.9	6275.1	6005.5	5465.3	4753.1	3318.3
70°	5274.4	4943.6	5068.2	5826.9	6941.8	6819.6	6572.2	6196.5	4955.5	3642.9	2167.8
72.5°	5084.3	4765.5	5046.4	6018.8	7022.4	7057.4	6400.2	5550.6	3681.8	1863.2	784.7
75°	3863.7	3668.5	4381.6	5339.8	6234.8	6242.9	5342.1	3914.9	1812.9	506.1	217.0
77.5°	1946.1	1884.0	2773.4	3790.8	4548.9	4535.6	3670.4	2097.2	583.3	168.2	109.5
80°	985.1	935.4	1180.3	2045.1	2701.4	2721.3	2095.8	939.2	294.3	91.5	75.8
82.5°	605.1	574.3	645.8	925.4	1311.1	1342.9	795.1	594.7	182.4	54.0	69.2
85°	117.0	123.2	371.0	463.4	523.6	511.3	235.5	489.5	55.0	32.2	50.2
87.5°	0.0	1.9	85.8	151.2	151.6	134.6	53.5	108.5	7.6	9.0	6.2
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°	561.5	561.5	561.5	561.5	561.5	561.5	561.5	561.5	561.5	561.5	561.5
2.5°	676.6	669.5	610.3	603.7	605.1	595.1	591.8	571.0	565.8	598.0	603.7
5°	840.6	793.2	738.2	718.3	687.5	635.4	627.8	614.6	599.9	605.6	601.3
7.5°	941.1	878.0	819.3	714.6	627.8	552.0	539.7	517.0	494.2	494.7	509.4
10°	957.2	904.1	823.1	695.6	596.6	501.8	419.4	359.6	332.6	308.5	315.6
12.5°	1050.5	1001.2	852.0	689.9	551.1	403.2	295.2	236.9	211.3	202.8	201.9
15°	1125.4	1086.5	901.3	672.4	450.2	283.8	211.3	194.3	189.5	197.6	195.2
17.5°	1236.7	1166.6	896.0	599.9	343.1	215.6	194.8	192.4	198.1	202.8	204.2
20°	1285.5	1184.6	860.5	486.2	256.8	197.6	190.0	185.3	195.7	209.9	207.1
22.5°	1334.8	1215.4	818.8	398.0	206.6	189.1	184.8	181.0	189.1	202.8	206.1
25°	1357.1	1264.7	772.4	310.8	191.9	179.1	176.3	177.7	184.3	196.6	195.2
27.5°	1469.4	1270.4	683.8	245.5	185.7	172.0	172.0	175.3	175.3	191.9	190.5
30°	1539.5	1366.6	611.7	206.6	178.6	162.1	167.7	169.2	166.8	184.8	186.2
32.5°	1662.7	1393.1	541.6	189.5	167.3	160.6	159.7	160.6	162.5	180.1	180.5
35°	1852.3	1523.9	445.9	182.9	161.6	153.5	146.9	152.1	156.8	169.6	172.0
37.5°	2222.8	1658.0	363.4	177.7	158.7	146.9	144.5	143.6	152.1	166.8	171.5
40°	2522.7	1895.4	295.7	173.4	153.1	143.1	136.9	137.4	145.0	155.9	163.0
42.5°	2947.3	2066.9	250.7	166.8	145.0	135.0	127.9	132.2	135.5	146.9	151.6
45°	3301.7	2200.1	220.8	162.5	136.9	127.5	121.8	126.5	123.2	128.9	135.5
47.5°	3583.7	2316.2	198.5	152.1	131.7	123.2	116.1	114.7	109.0	110.4	116.6
50°	3738.6	2296.7	180.1	141.7	125.1	118.9	109.0	99.0	91.5	91.0	94.8
52.5°	3793.6	2193.0	164.9	132.7	117.0	109.5	98.1	84.3	76.8	74.4	77.7
55°	3808.8	2043.7	151.2	122.7	109.5	97.6	85.8	71.1	63.0	59.2	62.5
57.5°	3759.5	1813.9	137.9	113.2	100.5	86.2	73.4	58.3	50.7	46.0	48.8
60°	3637.7	1522.0	126.0	101.4	91.0	76.3	62.1	46.9	38.9	34.6	36.0
62.5°	3368.1	1193.1	113.2	90.5	81.0	66.8	52.1	37.0	29.4	25.6	26.1
65°	2957.7	889.4	98.6	80.1	72.0	57.8	41.7	28.4	22.3	19.0	18.5
67.5°	2356.4	602.7	83.9	69.2	64.0	48.8	33.2	22.3	17.5	15.2	14.2
70°	1385.0	303.7	69.7	59.7	55.0	40.8	26.1	18.0	16.1	14.2	13.3
72.5°	456.8	131.3	54.5	49.3	45.5	32.7	20.4	16.6	15.6	13.7	12.8
75°	159.2	75.8	40.3	37.9	36.0	24.6	17.1	15.2	15.2	13.3	11.8
77.5°	104.2	58.8	29.9	27.5	27.0	18.0	14.7	14.2	13.3	10.9	9.0
80°	86.7	33.2	20.8	19.4	19.0	11.4	11.8	10.4	8.1	4.7	1.9
82.5°	80.1	19.9	10.9	11.8	10.9	4.3	6.6	5.7	4.3	1.9	0.0
85°	46.9	9.0	6.2	6.2	4.7	0.9	3.3	3.3	1.9	0.5	0.0
87.5°	5.2	4.3	3.3	3.3	2.4	0.0	1.4	0.9	0.0	0.0	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)