

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: P596756

Luminaire Tested: **MSA-SA4A-827-U-T3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596756
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-SA4A-827-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11380 lumens
Efficiency: N/A
Efficacy: 88.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

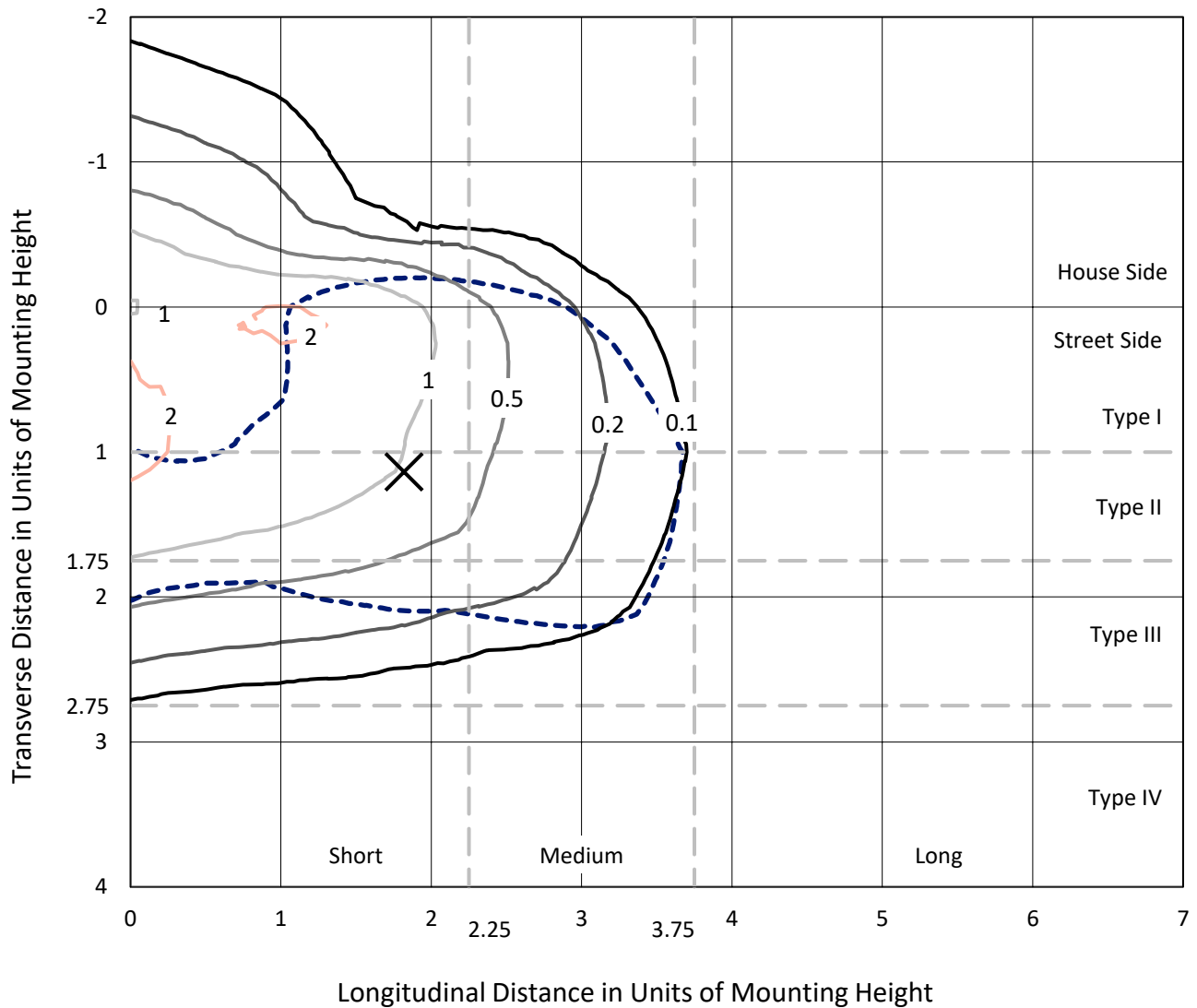
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

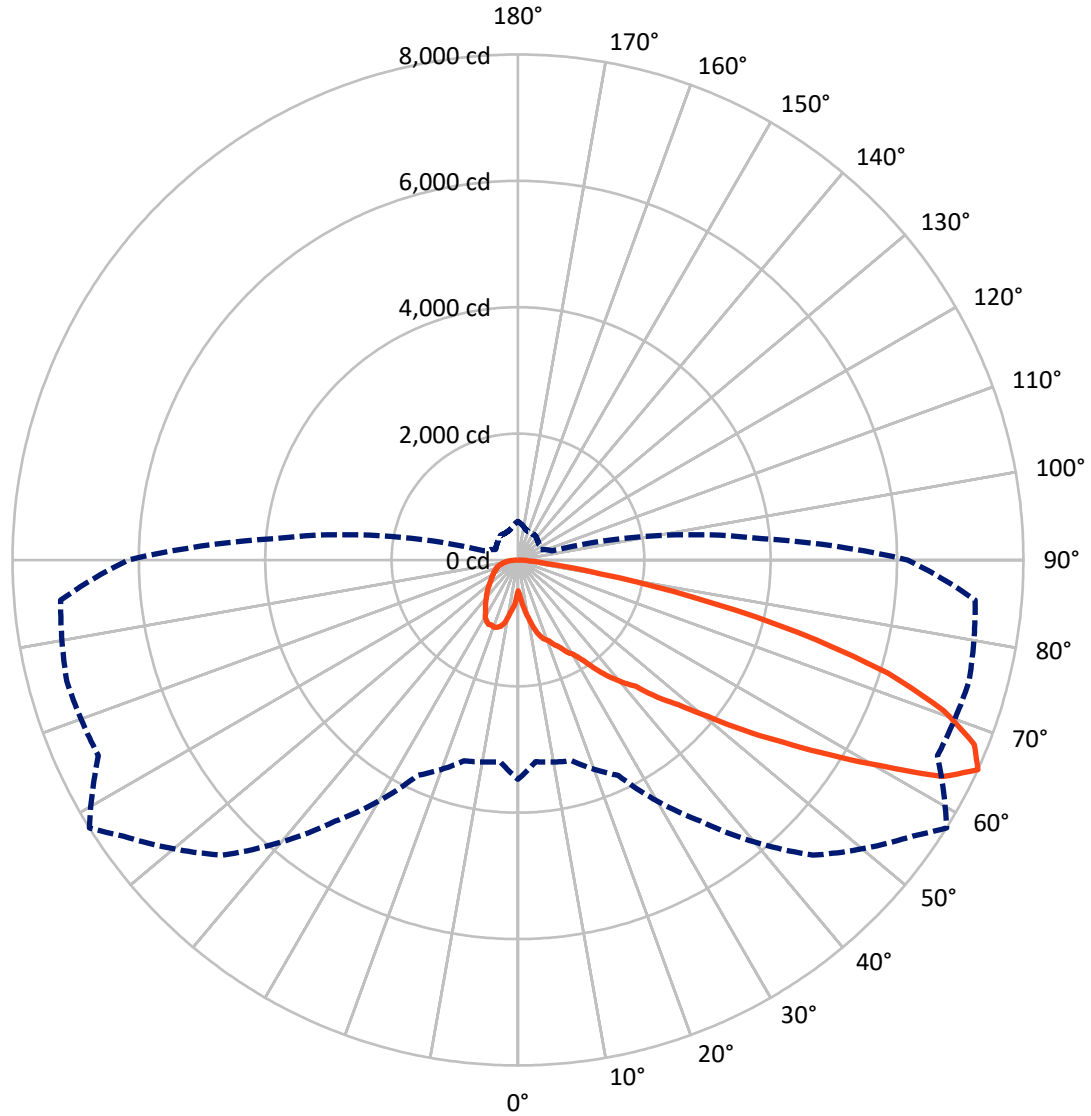
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.4 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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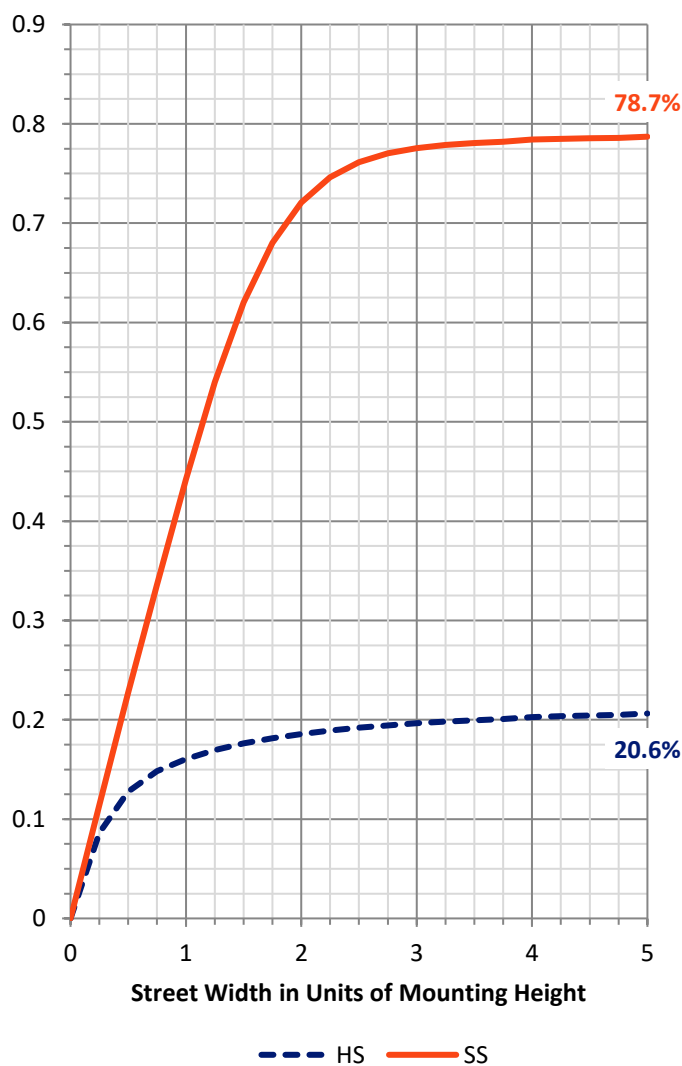
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2397.0	0.0	2397.0
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	8983.0	0.0	8983.0
	% Fixture	78.9	0.0	78.9
Total	Lumens	11380.0	0.0	11380.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.4	0.7
10°-20°	324.8	2.9
20°-30°	623.2	5.5
30°-40°	1028.8	9.0
40°-50°	1710.1	15.0
50°-60°	2824.2	24.8
60°-70°	3168.2	27.8
70°-80°	1440.5	12.7
80°-90°	185.8	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°	11380.0	100.0
0°-180°	11380.0	100.0

Coefficient of Utilization



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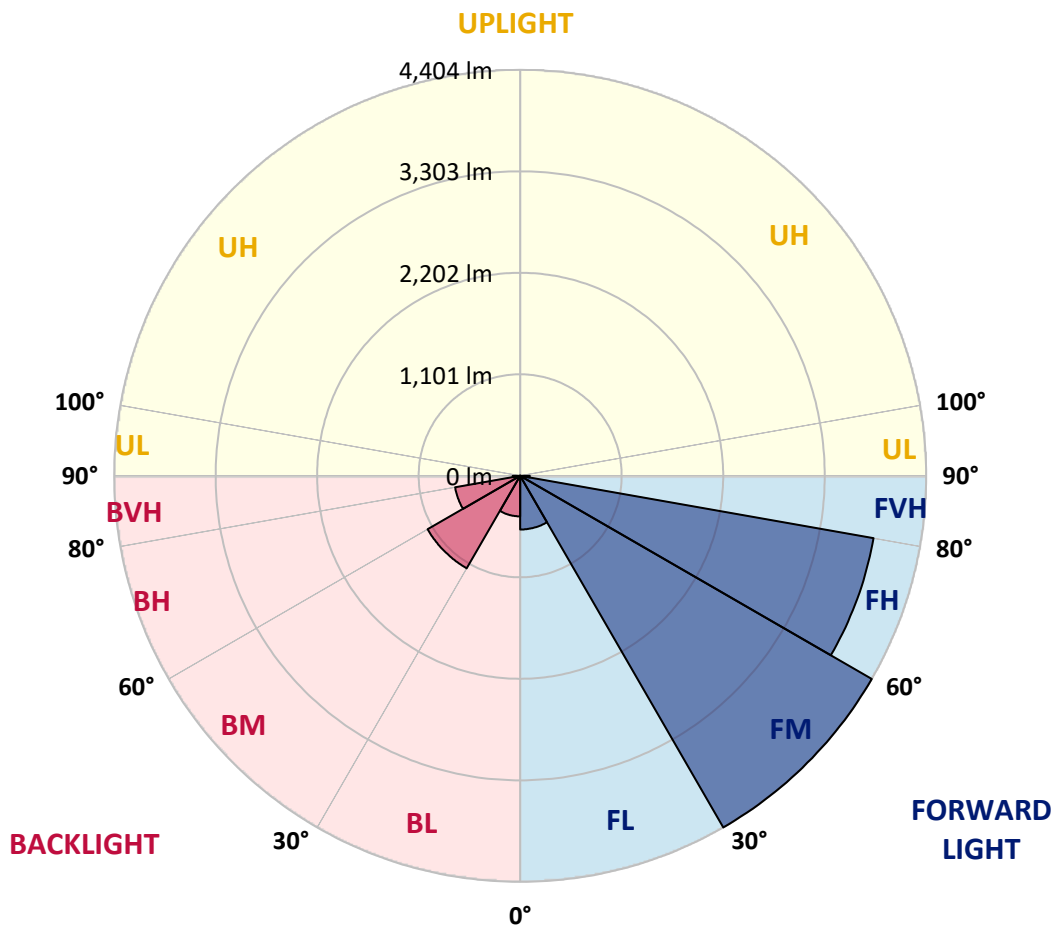
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	582.3	5.1			
FM (30°-60°)	4403.9	38.7			
FH (60°-80°)	3892.2	34.2			G2/5000
FVH (80°-90°)	104.6	0.9			G2/225
BL (0°-30°)	440.0	3.9	B1/500		
BM (30°-60°)	1159.2	10.2	B2/2500		
BH (60°-80°)	716.5	6.3	B2/1000		G2/1000
BVH (80°-90°)	81.2	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°	488.6	488.6	488.6	488.6	488.6	488.6	488.6	488.6	488.6	488.6	488.6
2.5°	583.4	565.9	536.5	543.6	560.6	570.1	564.4	556.8	546.9	545.0	588.6
5°	755.4	721.8	708.0	702.3	681.5	669.2	690.5	687.6	699.0	719.9	762.5
7.5°	881.0	857.3	834.6	832.2	791.9	777.7	806.1	821.3	841.7	842.1	900.0
10°	948.3	927.9	927.4	906.1	902.8	929.8	930.3	941.7	944.0	968.2	956.8
12.5°	1021.3	1019.9	1045.9	1045.5	1075.8	1120.3	1098.1	1098.1	1104.7	1075.3	1111.3
15°	1195.2	1210.4	1161.6	1169.6	1169.6	1213.2	1211.8	1220.3	1240.7	1233.1	1217.0
17.5°	1376.2	1385.7	1331.7	1281.5	1285.3	1275.8	1309.9	1313.2	1293.8	1381.9	1362.5
20°	1492.8	1529.8	1416.1	1353.0	1365.3	1376.2	1377.7	1357.3	1347.3	1482.9	1456.3
22.5°	1636.9	1605.6	1501.4	1431.7	1450.2	1435.5	1432.6	1448.3	1462.0	1513.2	1556.3
25°	1733.1	1730.7	1605.6	1529.3	1508.9	1504.7	1533.6	1527.4	1560.1	1653.0	1626.0
27.5°	1872.9	1916.5	1694.7	1713.7	1624.1	1529.8	1622.7	1650.6	1709.4	1694.2	1754.4
30°	2144.0	2111.3	1879.5	1874.3	1772.9	1693.8	1758.2	1734.5	1840.2	1836.9	1881.4
32.5°	2365.3	2388.1	2096.6	2042.1	1966.7	1871.5	1828.8	1894.7	1951.6	2044.9	2070.1
35°	2599.4	2594.2	2318.9	2208.9	2084.3	2044.9	2097.5	2125.0	2245.9	2331.7	2271.9
37.5°	2963.4	2922.2	2607.0	2399.0	2305.6	2291.4	2381.4	2341.6	2472.4	2492.8	2526.4
40°	3301.8	3177.6	2870.5	2632.1	2483.8	2536.9	2539.7	2544.9	2615.1	2670.5	2836.8
42.5°	3623.5	3536.3	3138.3	2959.1	2740.6	2689.0	2721.2	2732.1	2909.4	3022.6	3252.9
45°	4063.3	3829.7	3523.1	3339.2	3094.7	3028.8	3006.0	3099.9	3271.0	3528.8	3726.4
47.5°	4435.4	4224.5	3932.1	3689.9	3416.4	3604.6	3475.7	3423.1	3652.9	3972.3	4287.0
50°	4743.9	4511.7	4224.9	4085.1	4041.5	4209.3	3874.7	3880.9	4091.3	4542.0	4902.6
52.5°	4982.7	4734.9	4480.9	4409.8	4653.4	4750.0	4508.3	4471.9	4625.4	5158.1	5591.2
55°	5205.9	4942.9	4746.7	4891.7	5302.1	5313.0	5296.0	5093.6	5278.5	5818.2	6304.0
57.5°	5263.3	4979.9	4849.6	5057.6	5612.6	6044.3	6214.0	5816.8	6005.0	6418.7	6914.4
60°	4968.0	4725.4	4673.3	4955.7	5780.3	6411.6	6854.7	6617.3	6546.6	6900.7	7341.9
62.5°	4363.3	4081.8	4124.0	4516.4	5603.6	6557.1	7360.8	7546.1	7118.7	7284.1	7528.6
65°	3472.8	3204.1	3289.4	3761.5	5048.6	6605.4	7619.6	7999.7	7325.3	7392.6	7264.2
67.5°	2449.2	2205.1	2312.7	2923.1	4199.8	5986.5	7664.1	7788.3	7105.4	7083.1	6541.9
70°	1387.6	1234.5	1351.1	1860.1	2964.3	4769.0	7314.9	7151.4	6711.1	6395.5	5473.7
72.5°	636.5	583.9	639.8	946.9	1706.6	3173.3	5971.8	6120.1	5782.7	5387.9	4164.3
75°	338.4	319.9	343.6	473.0	798.5	1726.5	4243.0	4576.6	4397.0	4086.6	2716.5
77.5°	251.6	237.4	248.8	306.6	426.5	675.3	2410.8	2831.6	2899.9	2614.1	1508.5
80°	192.9	181.5	192.9	231.7	295.2	320.8	1030.8	1319.9	1503.3	1214.6	599.5
82.5°	143.1	135.5	153.1	173.9	207.6	200.5	365.9	455.4	587.2	401.4	233.6
85°	113.7	104.3	110.9	118.0	132.7	109.9	167.3	187.2	198.1	165.9	86.3
87.5°	44.5	41.2	80.6	63.5	54.0	33.2	50.2	56.9	58.3	55.9	25.1
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°	488.6	488.6	488.6	488.6	488.6	488.6	488.6	488.6	488.6	488.6	488.6
2.5°	593.3	588.6	560.6	569.6	584.3	587.2	593.3	576.3	567.7	599.0	600.4
5°	766.3	740.7	727.5	728.9	719.4	704.7	727.0	741.7	747.4	770.6	779.1
7.5°	900.4	869.6	847.4	821.8	785.7	762.5	801.4	829.8	845.0	893.3	912.3
10°	960.1	935.5	930.8	898.5	897.6	897.1	895.2	885.3	918.0	913.2	926.5
12.5°	1083.4	1078.2	1033.1	1020.3	1021.8	1020.3	980.5	978.6	979.1	1022.7	1007.1
15°	1198.1	1199.0	1157.8	1111.3	1069.6	1056.8	1041.2	1034.1	1044.5	1069.1	1054.0
17.5°	1339.8	1344.5	1226.5	1153.0	1098.1	1096.6	1059.2	1015.1	1078.6	1093.8	1077.2
20°	1431.2	1411.3	1266.3	1143.1	1127.4	1084.8	1038.3	977.7	1032.7	1069.6	1080.0
22.5°	1517.9	1483.4	1303.3	1160.6	1085.7	1035.0	990.0	950.7	968.2	1009.4	1002.8
25°	1576.7	1567.2	1354.4	1202.8	1084.3	971.5	910.9	885.7	894.7	958.7	952.6
27.5°	1717.0	1614.6	1345.4	1213.7	1038.8	884.8	854.5	827.5	818.4	887.6	906.6
30°	1810.8	1768.6	1405.6	1196.6	981.5	813.7	769.2	763.5	766.3	845.0	850.2
32.5°	1970.1	1860.6	1504.2	1131.2	898.1	761.1	709.9	712.3	725.1	782.4	794.3
35°	2135.9	2070.5	1517.5	1084.3	830.3	705.2	684.3	667.7	674.9	725.1	727.5
37.5°	2444.0	2217.9	1599.0	1011.8	780.5	683.9	644.0	629.4	633.1	661.6	682.0
40°	2715.1	2514.1	1561.1	941.7	718.9	655.4	605.7	594.8	583.4	611.3	624.1
42.5°	3149.6	2725.5	1548.3	864.4	690.0	617.0	582.9	554.0	543.1	566.8	590.0
45°	3584.2	2949.6	1478.6	786.2	649.3	614.2	549.7	522.3	525.1	546.4	570.1
47.5°	4068.6	3250.6	1360.6	710.4	604.7	600.4	516.6	504.7	513.2	536.9	560.6
50°	4641.0	3570.0	1263.0	642.2	573.0	559.2	512.3	498.1	506.1	534.1	557.3
52.5°	5267.1	3920.2	1191.9	579.1	536.9	526.5	518.0	504.2	513.7	537.9	562.1
55°	5889.3	4240.1	1143.6	536.0	506.1	512.8	529.8	519.9	524.6	542.6	566.8
57.5°	6350.9	4408.8	1046.4	490.0	481.0	504.7	531.3	514.7	517.5	542.6	568.7
60°	6619.2	4441.0	886.7	452.6	461.1	488.6	516.6	495.2	493.3	534.6	567.3
62.5°	6589.8	4253.9	703.3	418.5	438.4	464.4	494.3	473.9	479.1	535.5	570.1
65°	6168.9	3871.4	559.2	389.6	410.9	437.9	475.8	467.8	492.9	573.4	610.9
67.5°	5429.6	3312.7	449.3	362.5	385.3	419.9	488.6	509.9	520.8	612.3	650.7
70°	4400.3	2573.8	374.4	338.8	364.9	428.4	525.6	521.3	512.3	593.8	624.1
72.5°	3179.0	1764.4	329.4	315.6	339.8	402.8	526.5	503.8	492.4	542.2	564.0
75°	1989.0	1052.6	287.7	286.2	301.4	361.1	502.8	482.4	451.6	476.3	504.7
77.5°	1136.0	538.8	242.2	255.0	264.0	313.3	450.2	431.7	404.2	414.7	442.6
80°	433.6	260.7	204.3	226.5	224.2	265.4	381.5	377.2	346.0	349.3	366.3
82.5°	204.3	146.0	169.7	194.8	182.0	211.4	309.9	308.5	281.0	254.5	268.2
85°	75.8	77.7	124.2	148.3	126.5	136.5	224.2	218.0	191.5	161.6	178.7
87.5°	17.1	28.0	61.1	77.2	44.1	42.2	90.5	78.7	75.8	45.0	47.4
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)