

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: P596986

Luminaire Tested: **MSA-SA2D-835-U-SL2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596986
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-SA2D-835-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 11046 lumens
Efficiency: N/A
Efficacy: 85.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B2 - U0 - G3

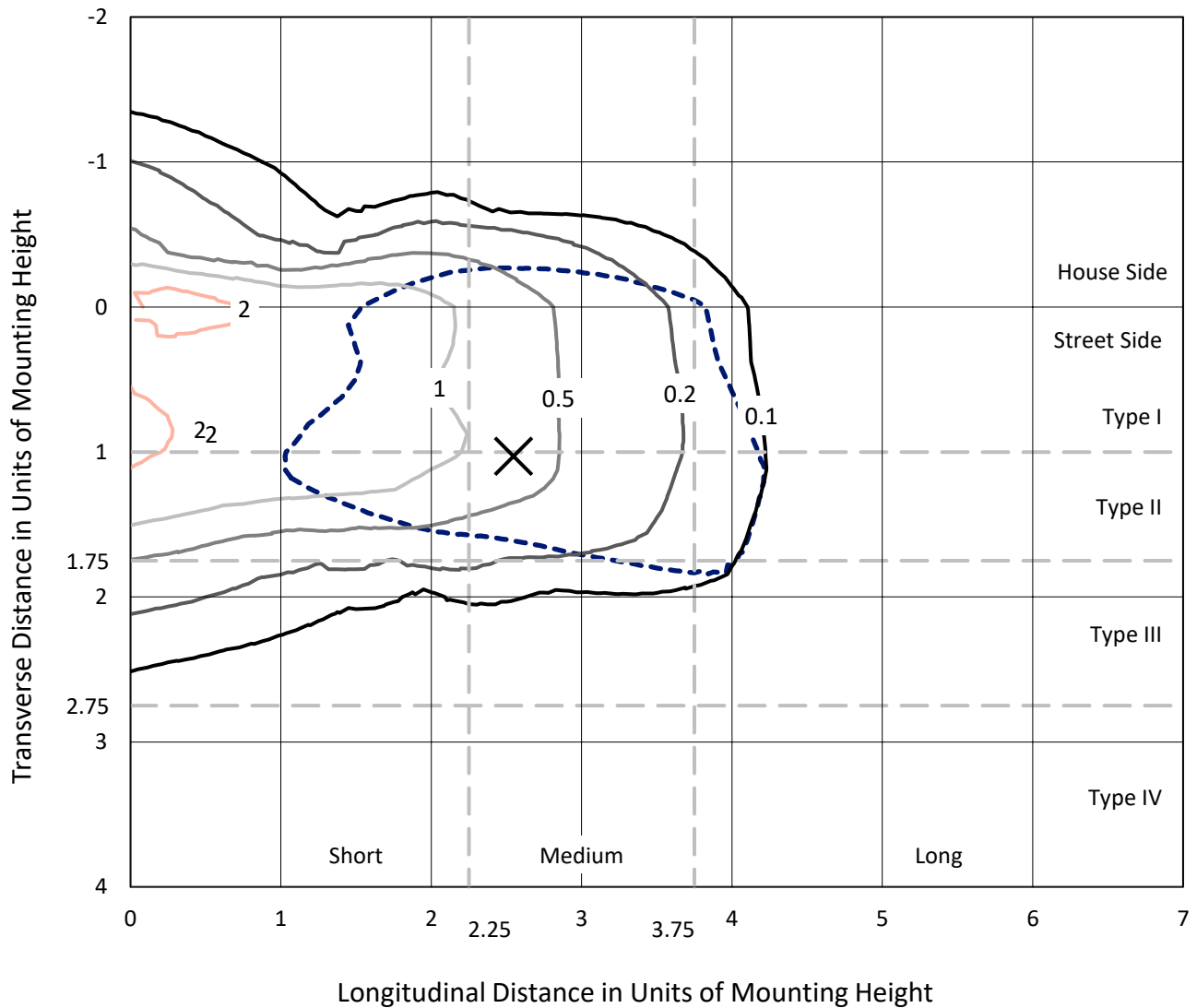
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

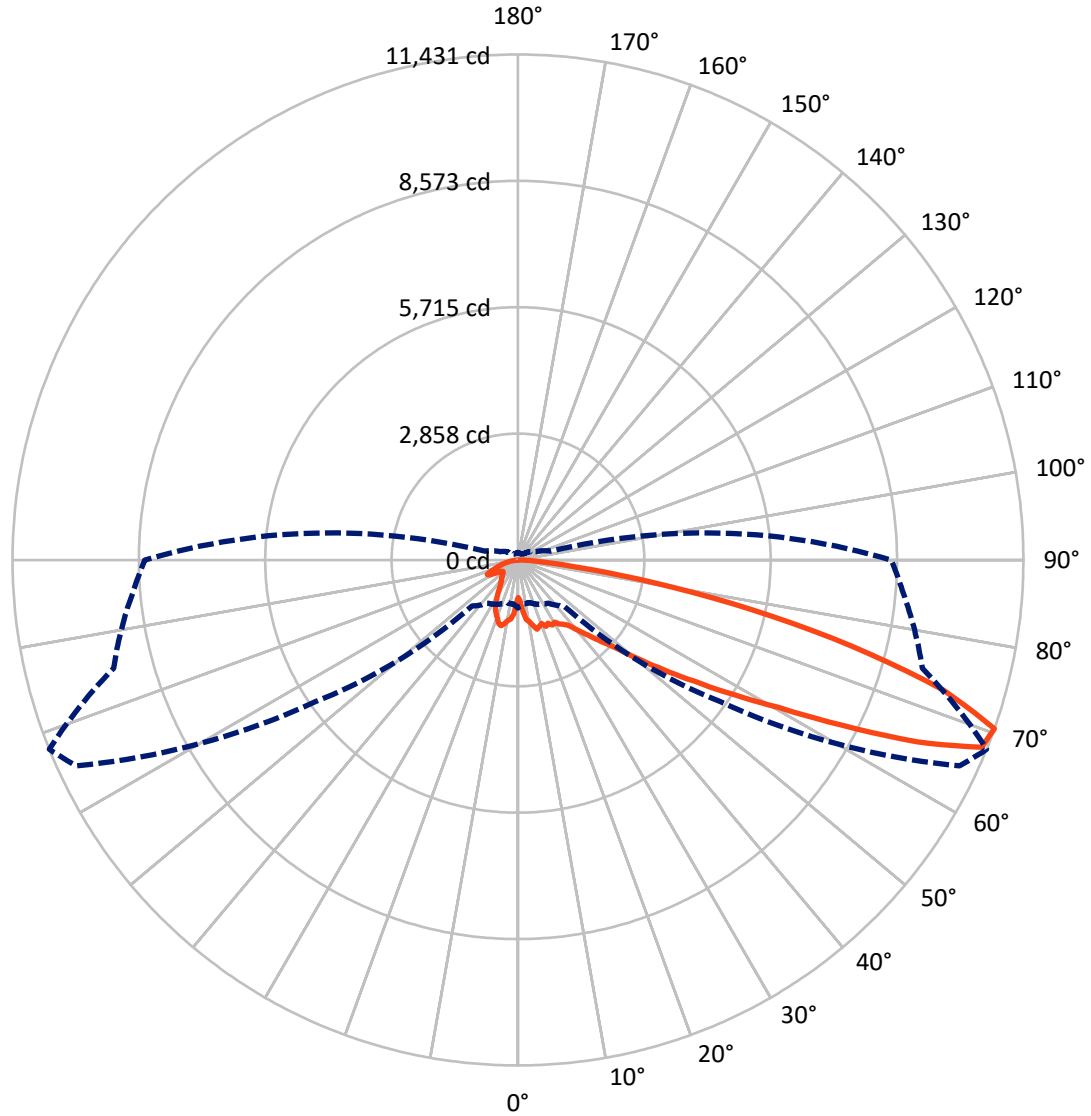
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 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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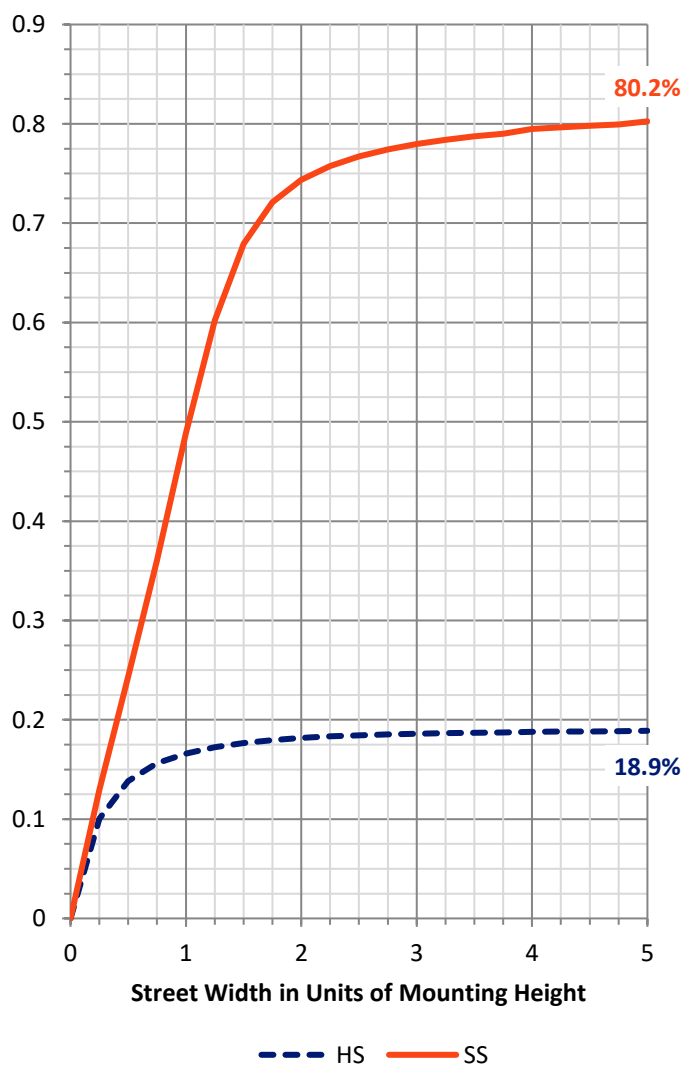
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2108.9	0.0	2108.9
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	8937.1	0.0	8937.1
	% Fixture	80.9	0.0	80.9
Total	Lumens	11046.0	0.0	11046.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	113.1	1.0
10°-20°	368.7	3.3
20°-30°	560.8	5.1
30°-40°	856.6	7.8
40°-50°	1472.9	13.3
50°-60°	2438.0	22.1
60°-70°	3005.7	27.2
70°-80°	1930.8	17.5
80°-90°	299.5	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°	11046.0	100.0
0°-180°	11046.0	100.0

Coefficient of Utilization



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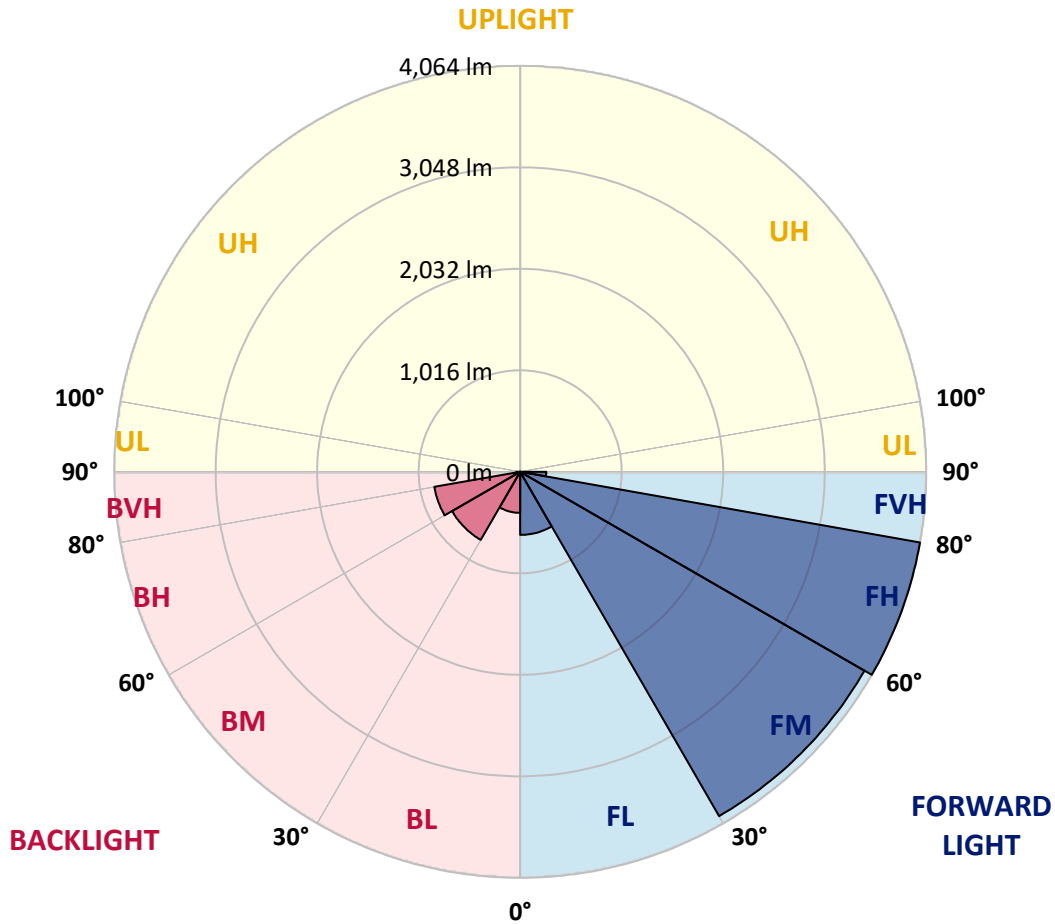
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	631.6	5.7			
FM (30°-60°)	3980.3	36.0			
FH (60°-80°)	4064.1	36.8			G2/5000
FVH (80°-90°)	261.0	2.4			G3/500
BL (0°-30°)	410.9	3.7	B1/500		
BM (30°-60°)	787.2	7.1	B1/1000		
BH (60°-80°)	872.4	7.9	B2/1000		G2/1000
BVH (80°-90°)	38.4	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	846.9	846.9	846.9	846.9	846.9	846.9	846.9	846.9	846.9	846.9	846.9
2.5°	973.1	933.8	894.1	913.5	944.5	971.8	966.2	969.4	932.0	926.9	1025.4
5°	1146.5	1079.0	1077.6	1078.5	1081.3	1049.9	1126.6	1166.4	1175.2	1215.9	1312.5
7.5°	1206.6	1179.3	1151.6	1165.5	1130.3	1133.6	1227.9	1331.4	1355.9	1385.5	1517.7
10°	1194.1	1168.2	1176.6	1178.9	1185.3	1237.6	1298.1	1397.5	1418.3	1512.6	1546.9
12.5°	1196.0	1191.4	1230.2	1231.6	1300.9	1394.8	1418.8	1510.3	1518.7	1588.0	1730.9
15°	1259.3	1291.2	1269.5	1281.0	1294.4	1406.8	1441.5	1572.7	1622.7	1711.9	1819.2
17.5°	1382.7	1392.0	1326.8	1309.7	1353.6	1387.8	1466.9	1523.7	1576.0	1825.2	1973.1
20°	1411.4	1436.4	1358.7	1270.4	1363.3	1410.9	1466.0	1491.8	1532.5	1841.8	2051.7
22.5°	1534.4	1482.6	1388.8	1312.0	1342.5	1388.8	1428.5	1526.1	1632.8	1794.2	2130.3
25°	1604.2	1574.1	1490.5	1408.2	1382.3	1383.7	1460.4	1547.8	1584.8	1864.0	2146.0
27.5°	1772.9	1724.8	1536.7	1521.0	1423.4	1347.6	1465.5	1601.4	1666.1	1809.4	2222.7
30°	1984.2	1947.7	1700.8	1680.0	1531.1	1398.9	1530.2	1641.2	1631.9	1845.0	2275.9
32.5°	2155.2	2216.3	1967.1	1803.0	1697.1	1570.4	1509.9	1634.2	1726.2	1927.8	2366.1
35°	2399.3	2456.7	2174.7	2063.7	1833.9	1650.0	1651.8	1729.5	1786.3	2024.4	2466.8
37.5°	2821.9	2771.5	2544.5	2369.3	2222.3	1947.7	1865.4	1838.1	1883.9	2142.8	2664.2
40°	3126.5	3084.0	2816.8	2716.9	2430.8	2271.3	2045.7	2019.8	2100.7	2264.8	2825.6
42.5°	3487.6	3411.8	3163.1	3080.8	2781.7	2494.1	2266.7	2281.5	2320.8	2495.0	3043.8
45°	3855.1	3671.1	3530.1	3523.7	3323.9	2926.8	2621.2	2609.2	2610.6	2833.9	3288.8
47.5°	4146.8	3981.3	3820.0	3743.3	3642.5	3675.3	3136.3	2995.3	2952.7	3175.1	3656.3
50°	4344.2	4153.8	3971.2	3953.1	4222.2	4399.3	3619.8	3469.1	3495.5	3663.3	4146.4
52.5°	4348.4	4122.3	3931.9	4058.1	4691.9	4945.2	4452.9	4031.7	4115.9	4230.1	4785.7
55°	4046.1	3811.7	3687.8	3975.3	4875.4	5592.9	5623.4	4933.2	4836.1	4878.2	5549.9
57.5°	3408.5	3171.8	3099.7	3444.1	4527.3	6217.5	7037.2	6010.4	5725.6	5549.9	6333.1
60°	2565.8	2361.0	2316.1	2535.7	3753.4	6034.0	8181.8	7351.1	6770.9	6300.2	7118.5
62.5°	1924.1	1777.1	1709.6	1741.0	2597.2	5437.1	8933.5	9044.9	8223.4	7119.4	7885.9
65°	1563.5	1444.7	1384.6	1343.9	1615.3	4204.2	8797.6	10470.7	9920.1	7979.8	8483.2
67.5°	1306.0	1200.6	1172.9	1212.6	1276.9	2439.1	7734.3	11268.1	11305.6	8828.6	8832.3
70°	1084.1	1006.0	995.8	1108.6	1193.2	1472.0	5586.4	11017.6	11430.9	9465.2	8750.4
72.5°	837.7	795.6	794.2	971.3	1185.3	1254.7	3326.7	9517.9	10073.1	9261.7	7949.7
75°	581.1	552.0	574.2	798.4	1158.1	1272.7	1898.7	7413.5	7829.1	7881.3	6368.2
77.5°	399.9	375.4	399.4	577.4	1034.2	1303.2	1328.2	5360.4	5406.6	5285.0	3647.6
80°	278.3	261.2	279.7	408.7	804.9	1289.8	1130.8	3374.8	3096.5	2358.7	1167.8
82.5°	172.4	167.4	187.7	291.2	566.8	1173.3	1071.6	1741.5	1329.6	650.9	417.0
85°	90.6	83.2	109.1	190.0	354.6	920.9	1004.1	794.7	513.2	231.2	167.4
87.5°	26.8	24.0	42.1	76.7	150.2	412.8	574.6	337.0	191.4	68.0	52.2
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°	846.9	846.9	846.9	846.9	846.9	846.9	846.9	846.9	846.9	846.9	846.9
2.5°	1032.3	1027.2	958.8	967.6	982.4	986.1	985.6	960.7	934.3	1007.8	1005.5
5°	1314.8	1269.0	1234.8	1227.4	1185.3	1143.3	1158.1	1153.0	1146.5	1179.8	1184.0
7.5°	1518.2	1454.9	1415.1	1312.9	1215.9	1131.7	1158.5	1166.8	1150.2	1210.3	1228.3
10°	1571.8	1521.9	1478.9	1347.6	1294.0	1245.0	1172.4	1089.6	1078.5	1043.9	1048.0
12.5°	1710.1	1703.1	1556.6	1441.0	1371.2	1273.6	1116.9	1016.6	930.6	934.8	909.8
15°	1819.2	1822.9	1646.7	1484.9	1297.7	1148.8	964.4	839.5	751.2	733.7	715.6
17.5°	1965.7	1958.3	1654.1	1432.2	1195.0	976.8	750.8	626.9	612.1	622.3	606.5
20°	2029.5	1964.3	1607.0	1301.4	1034.6	742.0	567.2	501.6	530.3	570.9	571.9
22.5°	2086.8	1975.4	1582.5	1196.0	821.0	539.5	455.4	443.3	477.1	532.1	536.7
25°	2084.5	2026.7	1538.5	1089.6	636.6	421.2	395.7	404.5	444.7	502.1	505.3
27.5°	2189.5	1987.4	1424.4	950.0	479.4	360.6	367.1	383.2	402.2	456.8	467.4
30°	2188.5	2060.5	1367.0	780.4	385.1	330.5	347.2	361.1	376.8	426.7	432.7
32.5°	2240.3	2012.9	1332.4	607.0	345.3	323.1	327.3	341.2	363.8	397.6	401.7
35°	2302.7	2066.9	1221.4	482.2	330.5	316.7	319.9	327.8	348.6	379.5	383.7
37.5°	2502.9	2077.1	1177.5	406.4	329.6	313.9	313.4	317.6	341.2	369.4	381.9
40°	2581.0	2170.0	1049.4	379.5	326.4	313.9	307.4	309.7	329.2	365.2	374.9
42.5°	2768.3	2201.0	954.7	370.3	326.4	308.4	298.2	301.9	324.5	356.4	371.7
45°	2961.0	2244.9	841.9	368.5	325.9	307.9	288.5	296.8	315.3	342.1	358.7
47.5°	3235.6	2403.0	729.0	362.9	322.2	310.2	286.2	285.7	301.9	325.0	340.7
50°	3683.6	2649.9	641.7	356.0	322.7	308.4	281.5	275.1	285.7	306.0	321.3
52.5°	4307.3	3070.6	607.5	352.3	319.0	301.0	273.7	263.5	269.5	285.7	300.5
55°	5031.2	3638.8	641.2	352.3	311.6	289.4	262.6	250.6	253.8	264.9	279.2
57.5°	5877.2	4344.7	804.4	347.2	302.3	275.5	249.2	235.3	236.2	245.9	258.9
60°	6760.7	5133.4	1170.1	343.0	295.9	260.3	233.5	219.1	217.7	227.0	238.5
62.5°	7645.5	5861.1	1554.7	352.7	294.0	247.3	216.8	202.5	202.0	210.3	220.1
65°	8349.2	6358.5	1650.4	392.0	306.0	232.5	199.7	186.3	185.4	192.3	203.0
67.5°	8694.5	6430.6	1253.8	441.0	331.5	218.7	183.1	170.6	169.7	177.1	186.3
70°	8438.8	5937.8	773.9	446.1	330.1	202.5	166.0	155.3	153.5	161.3	168.3
72.5°	7493.0	5194.0	588.0	394.8	285.7	179.4	148.9	139.6	136.8	143.8	150.2
75°	6014.1	4123.7	471.1	318.5	225.1	151.2	131.8	123.0	119.7	126.2	131.8
77.5°	3503.3	2319.8	344.4	248.7	170.1	123.4	112.3	104.5	100.8	107.7	111.9
80°	1139.1	773.0	216.4	178.4	124.4	96.6	91.1	85.5	81.8	86.5	87.8
82.5°	409.1	287.6	119.7	109.6	82.8	69.3	68.9	65.6	61.0	62.9	62.9
85°	181.2	131.3	71.2	58.7	49.5	37.0	43.5	41.1	36.5	35.6	34.2
87.5°	50.9	43.5	25.9	19.9	16.2	6.0	13.9	12.5	10.2	9.2	6.5
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)