

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: P596704

Luminaire Tested: **MSA-SA3C-827-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596704
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-20)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3C-827-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: 13036 lumens
Efficiency: N/A
Efficacy: 78.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

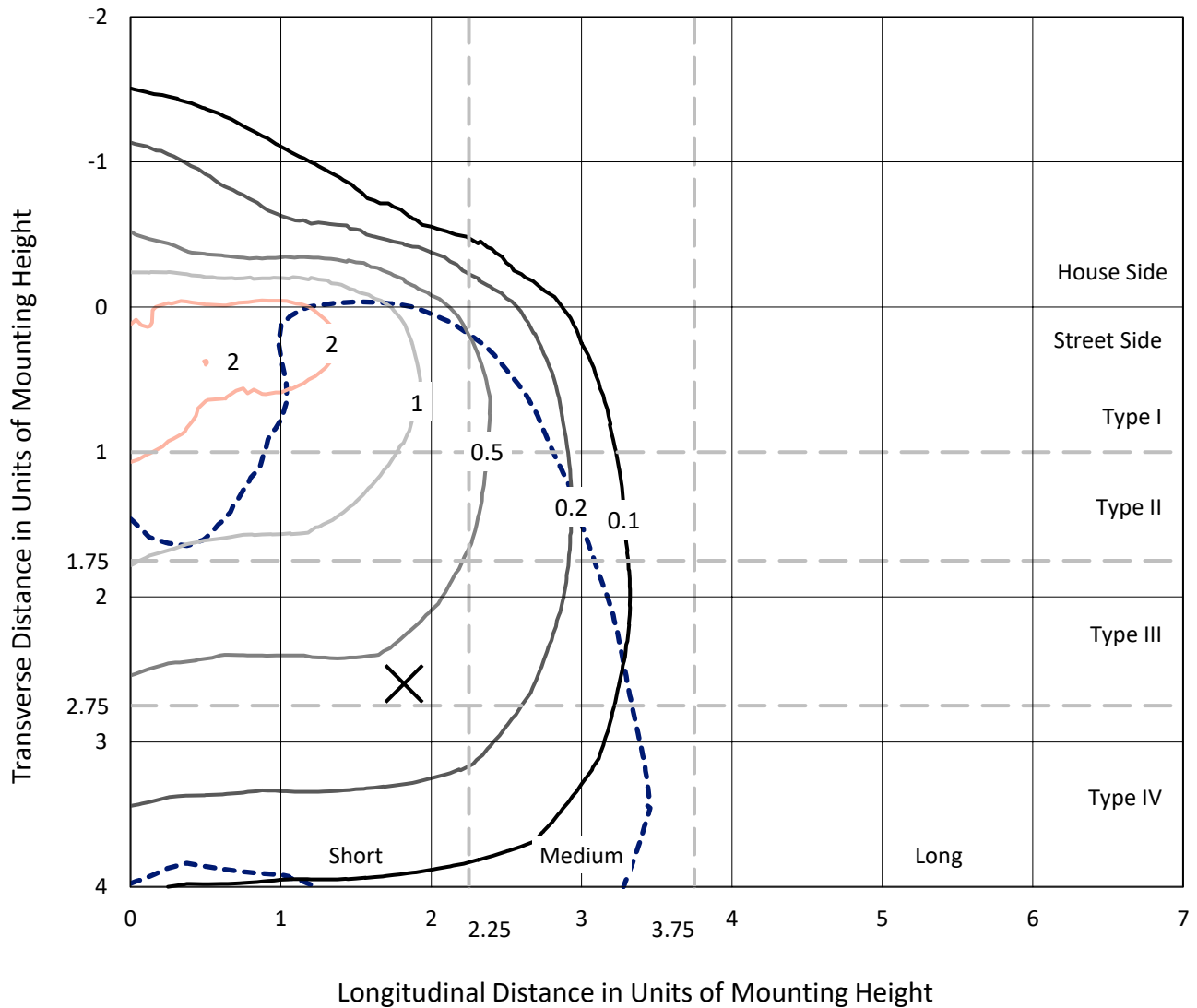
Input Watts (W): 166
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

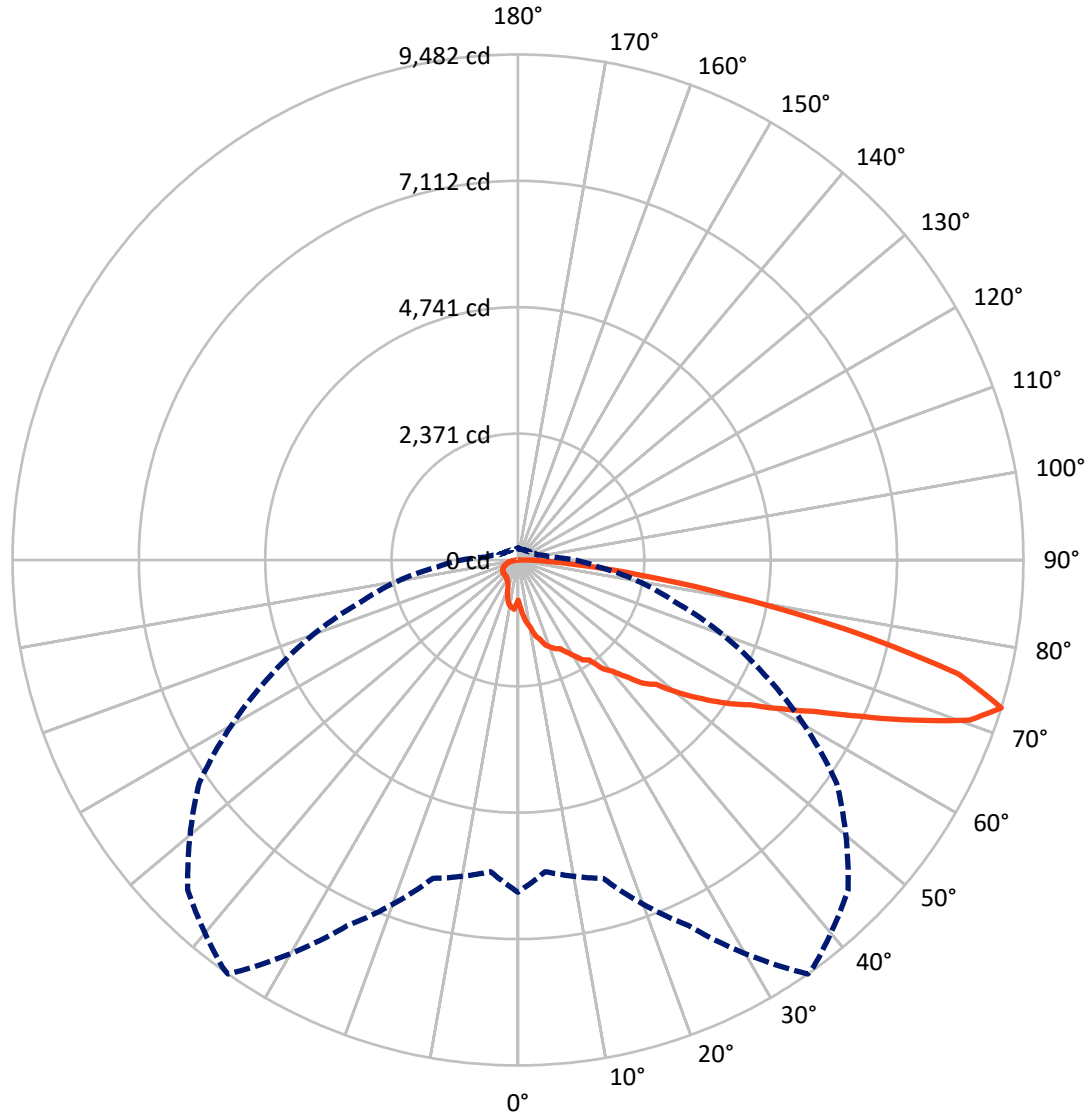
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.6 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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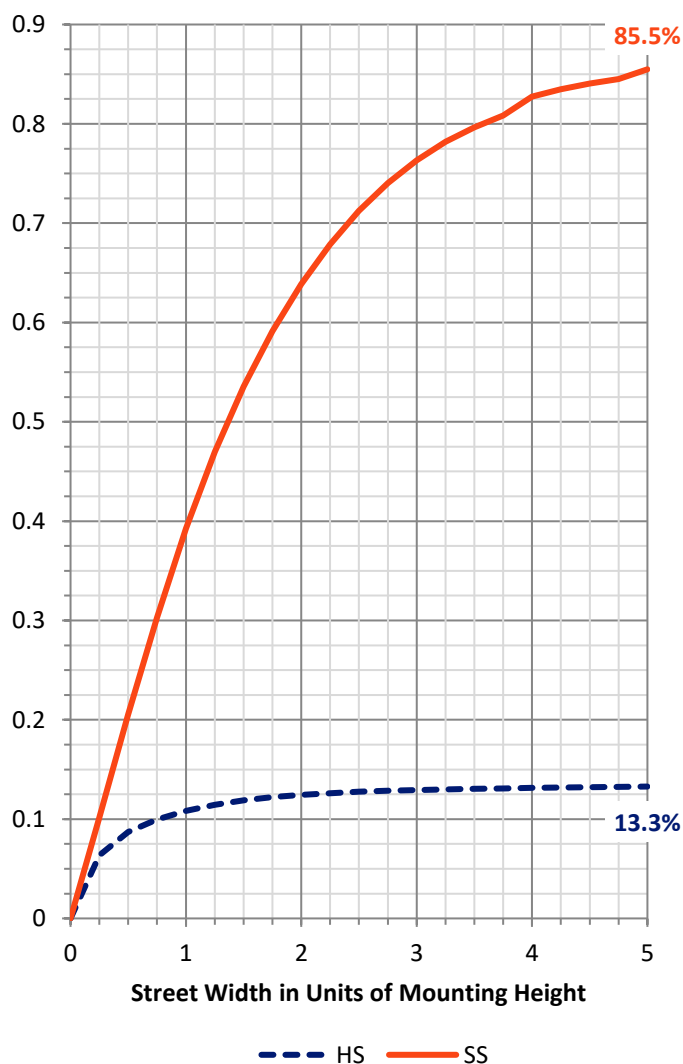
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1749.4	0.0	1749.4
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	11286.6	0.0	11286.6
	% Fixture	86.6	0.0	86.6
Total	Lumens	13036.0	0.0	13036.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.1	0.8
10°-20°	352.7	2.7
20°-30°	612.8	4.7
30°-40°	1024.2	7.9
40°-50°	1777.7	13.6
50°-60°	2687.4	20.6
60°-70°	3481.5	26.7
70°-80°	2569.0	19.7
80°-90°	430.6	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°	13036.0	100.0
0°-180°	13036.0	100.0

Coefficient of Utilization

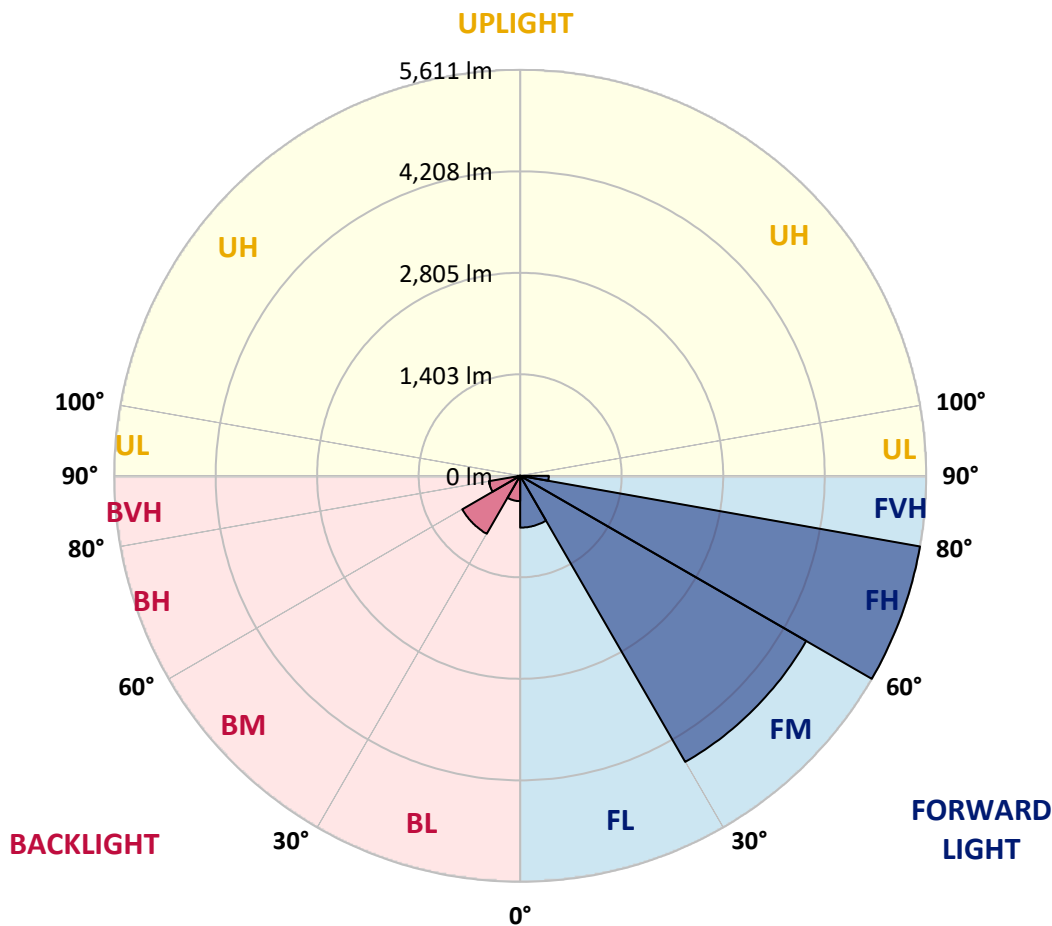


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	716.0	5.5			
FM (30°-60°)	4564.7	35.0			
FH (60°-80°)	5610.6	43.0			G3/7500
FVH (80°-90°)	395.3	3.0			G3/500
BL (0°-30°)	349.7	2.7	B1/500		
BM (30°-60°)	924.6	7.1	B1/1000		
BH (60°-80°)	439.9	3.4	B1/500		G1/500
BVH (80°-90°)	35.2	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°	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4
2.5°	939.7	894.7	855.7	854.1	890.2	904.1	898.6	886.3	871.9	841.3	908.0
5°	1177.3	1112.8	1100.5	1086.1	1053.3	1062.2	1008.7	1049.4	1062.2	1091.6	1136.2
7.5°	1317.5	1279.7	1250.2	1238.0	1181.2	1174.5	1135.0	1192.9	1217.4	1213.5	1279.7
10°	1372.6	1338.1	1340.4	1300.3	1281.9	1289.7	1294.2	1295.3	1310.3	1322.5	1289.2
12.5°	1401.0	1414.4	1463.3	1436.1	1459.4	1468.9	1515.6	1467.8	1469.4	1406.6	1441.1
15°	1544.0	1577.4	1549.0	1547.9	1540.7	1556.2	1596.3	1564.0	1589.1	1569.0	1524.5
17.5°	1716.5	1726.5	1672.0	1649.7	1678.6	1673.6	1663.6	1668.6	1606.3	1722.0	1667.5
20°	1769.3	1808.8	1737.1	1649.7	1745.4	1758.2	1756.0	1734.3	1627.4	1794.4	1741.5
22.5°	1922.9	1869.5	1812.7	1757.1	1806.1	1813.3	1801.0	1749.3	1713.7	1777.1	1818.8
25°	1992.4	1979.6	1907.3	1900.6	1846.7	1821.1	1842.2	1827.2	1792.1	1905.1	1858.9
27.5°	2151.6	2136.5	1970.2	2038.6	1960.2	1953.5	1841.7	1891.7	1926.8	1918.4	1987.4
30°	2331.8	2349.1	2105.9	2174.4	2083.7	2071.5	1959.1	2022.5	2046.4	2054.2	2140.4
32.5°	2532.1	2579.4	2338.0	2281.8	2233.4	2241.7	2146.6	2030.8	2123.8	2305.7	2343.0
35°	2749.1	2768.6	2515.5	2430.9	2304.6	2295.7	2297.3	2311.8	2405.8	2613.4	2642.3
37.5°	3150.3	3060.2	2838.2	2623.9	2581.7	2498.8	2555.0	2599.5	2693.5	3011.8	3133.0
40°	3397.3	3330.6	2992.3	2868.2	2751.4	2759.2	2864.3	2863.8	3085.8	3414.0	3599.3
42.5°	3626.0	3553.1	3234.3	3109.7	2999.0	3026.2	3056.3	3109.1	3534.8	4063.9	4148.5
45°	3810.2	3650.5	3421.3	3393.4	3302.2	3266.0	3393.4	3478.0	4071.7	4589.7	4638.6
47.5°	3935.4	3804.1	3579.8	3555.4	3488.0	3576.5	3924.2	3978.8	4487.9	5117.7	5113.8
50°	4125.7	3945.9	3743.4	3730.6	3920.3	3967.6	4391.6	4386.0	4892.9	5556.1	5464.3
52.5°	4344.9	4118.4	3898.6	4036.1	4325.4	4348.8	4716.5	4866.2	5335.3	5979.0	5739.2
55°	4596.9	4343.8	4131.2	4314.8	4745.5	4676.5	5048.7	5414.3	5888.9	6424.7	5937.8
57.5°	4909.1	4601.9	4430.0	4709.3	5128.8	5190.0	5524.4	5984.6	6334.5	6701.8	6082.5
60°	5238.4	4877.9	4720.4	4986.4	5665.7	5735.9	6063.0	6458.6	6834.2	6962.7	6055.2
62.5°	5552.8	5162.8	5020.3	5348.6	6261.1	6434.7	6676.2	6928.2	7249.8	7026.1	5725.3
65°	5902.8	5512.2	5422.6	5915.0	7068.4	7240.9	7556.4	7480.7	7392.2	6801.3	5179.5
67.5°	6273.3	5876.6	5893.3	6572.1	8020.4	8049.9	8534.5	8031.5	7224.8	6206.0	4263.1
70°	6472.5	6066.4	6238.3	7272.6	8989.1	8946.8	9045.8	8179.5	6542.1	4905.7	2938.3
72.5°	6231.0	5868.8	6183.8	7567.5	9482.0	9436.4	8758.7	7301.0	5114.9	3050.7	1523.4
75°	5275.7	4926.3	5408.1	6745.7	8536.2	8578.5	7454.0	5429.3	2928.3	1226.8	632.6
77.5°	3584.8	3404.6	3817.4	5028.1	6340.7	6487.0	5530.5	3174.8	1229.6	508.0	382.8
80°	1894.5	1808.8	2113.7	2896.6	4014.9	4124.0	3252.1	1581.3	629.8	328.8	273.2
82.5°	1029.3	993.2	1156.7	1489.5	2281.2	2376.4	1686.4	1050.5	424.5	205.9	166.9
85°	691.6	677.7	786.2	800.1	1078.8	1110.0	883.6	809.0	254.8	100.7	110.2
87.5°	346.1	332.2	414.0	365.6	411.7	412.3	405.1	516.3	64.5	33.4	20.0
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°	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4	753.4
2.5°	909.1	889.7	822.3	821.8	831.8	825.1	830.1	802.9	791.2	844.6	841.8
5°	1130.0	1071.6	1015.4	995.9	973.1	923.6	926.4	927.0	918.6	950.3	952.5
7.5°	1259.7	1189.6	1137.8	1034.3	953.1	889.7	898.0	907.5	898.0	940.3	955.9
10°	1278.6	1223.0	1161.2	1046.0	992.0	934.7	876.9	825.7	819.6	800.1	806.2
12.5°	1391.0	1344.8	1215.7	1089.4	1026.5	938.6	832.9	774.5	725.5	733.9	718.3
15°	1483.3	1450.5	1295.8	1130.6	980.4	871.3	758.9	678.8	634.8	629.8	614.3
17.5°	1608.5	1561.8	1303.1	1102.2	920.8	790.1	663.2	572.5	553.6	545.8	538.0
20°	1668.6	1584.6	1276.9	1013.2	851.3	693.3	568.6	490.7	485.2	499.1	496.3
22.5°	1720.9	1603.5	1253.6	959.2	742.8	595.3	504.1	452.9	446.8	464.6	467.9
25°	1751.5	1657.5	1228.0	904.1	675.5	522.5	455.7	426.8	427.9	451.2	448.5
27.5°	1889.5	1676.4	1163.4	839.0	598.1	468.5	432.3	417.3	411.2	443.4	446.2
30°	1976.3	1799.9	1149.0	770.0	540.8	429.0	411.2	405.1	403.9	442.9	445.7
32.5°	2137.7	1841.1	1155.6	694.9	489.1	416.7	395.6	395.0	406.2	443.4	447.9
35°	2361.3	2014.7	1123.4	652.1	460.7	397.8	383.4	387.8	406.7	447.3	453.5
37.5°	2797.5	2178.3	1133.4	612.0	451.2	391.7	380.0	382.8	413.4	457.4	474.0
40°	3143.1	2474.8	1117.8	592.0	438.4	390.6	372.8	383.9	412.8	462.9	477.9
42.5°	3643.8	2711.3	1119.5	572.0	437.9	386.1	371.7	385.0	411.7	457.9	478.5
45°	4073.4	2923.3	1143.4	560.3	432.3	393.4	370.0	386.7	404.5	440.1	462.9
47.5°	4425.5	3159.8	1167.9	549.2	430.1	400.0	368.3	375.0	392.3	420.1	440.7
50°	4712.6	3326.1	1199.0	546.9	430.1	396.7	363.9	363.3	377.8	400.0	419.5
52.5°	4936.3	3443.5	1220.2	549.7	430.1	383.9	358.3	353.9	362.8	378.9	398.4
55°	5098.2	3479.7	1202.9	556.9	429.5	372.2	348.3	344.4	348.9	360.0	378.3
57.5°	5163.3	3384.5	1100.0	544.2	429.5	363.9	336.1	331.6	336.1	344.4	362.8
60°	5000.3	3078.5	951.4	511.3	421.2	352.8	322.2	319.4	326.0	333.3	351.1
62.5°	4591.4	2671.8	792.9	472.4	403.9	343.3	308.8	309.4	319.9	329.9	347.7
65°	3956.0	2179.9	661.0	432.9	382.2	328.3	294.9	298.8	313.8	327.2	345.0
67.5°	3113.0	1615.2	556.4	394.5	351.6	303.8	279.3	280.4	291.0	303.8	321.0
70°	2080.9	1027.7	457.4	349.4	311.6	272.1	255.4	251.5	248.7	259.8	274.9
72.5°	1055.5	607.0	375.6	298.8	268.2	237.6	224.8	214.8	207.0	213.7	225.3
75°	553.1	424.5	303.2	248.2	221.4	202.0	192.5	179.2	173.6	177.5	185.8
77.5°	391.1	332.2	245.4	196.4	180.3	160.2	161.9	148.0	143.5	145.8	154.7
80°	300.5	263.2	188.6	148.6	139.1	119.6	125.2	116.8	111.3	110.2	116.8
82.5°	204.8	198.1	134.1	104.0	97.4	83.5	91.2	87.9	80.7	76.2	79.6
85°	138.0	131.3	81.8	60.1	57.3	43.4	55.6	53.4	47.3	40.6	41.2
87.5°	23.9	44.0	23.4	15.0	13.9	5.0	12.8	12.2	11.1	5.6	4.5
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)