

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: P597034

Luminaire Tested: **MSA-SA3B-835-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597034
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-SA3B-835-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: 11805 lumens
Efficiency: N/A
Efficacy: 93.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

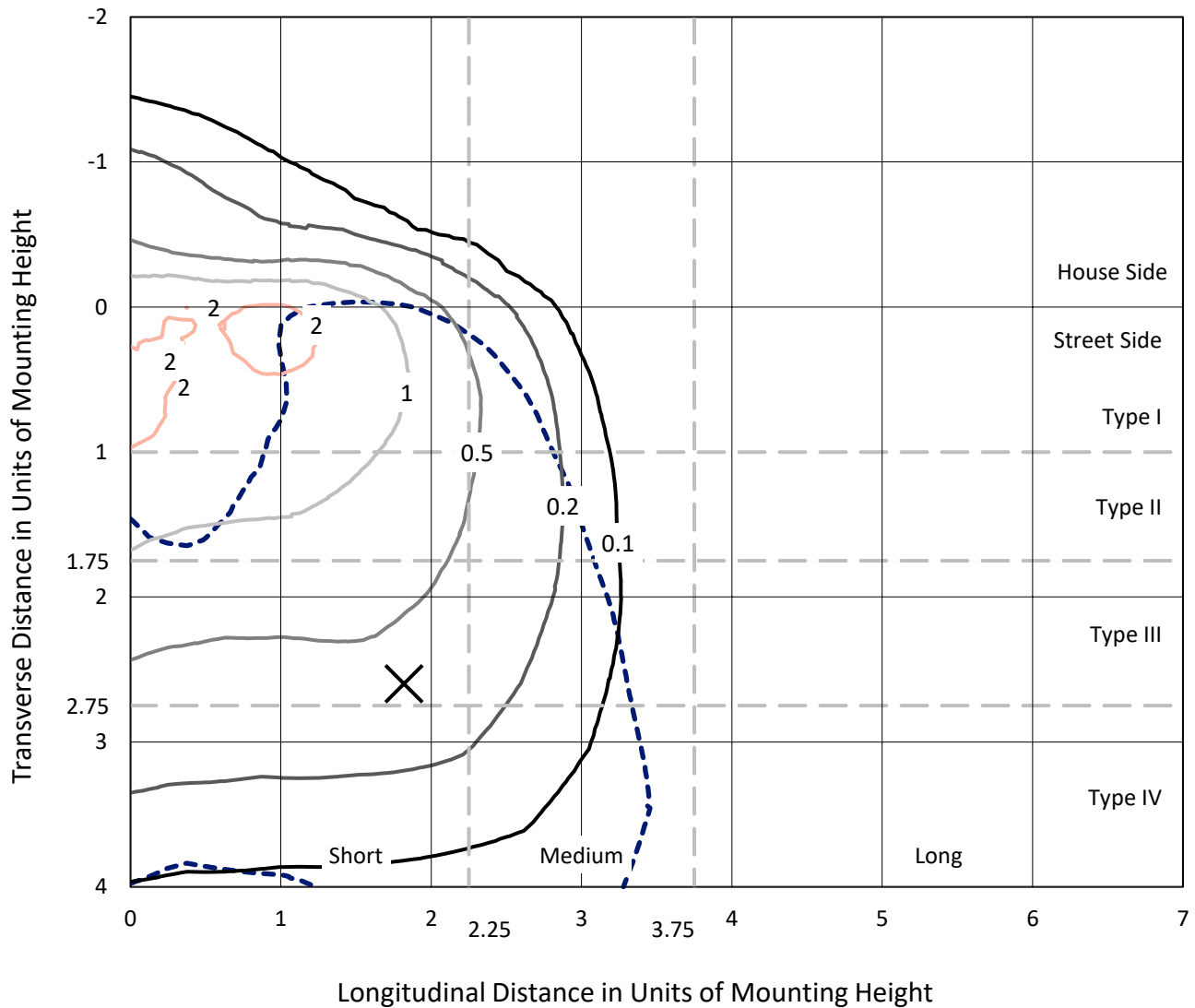
Input Watts (W): 126
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

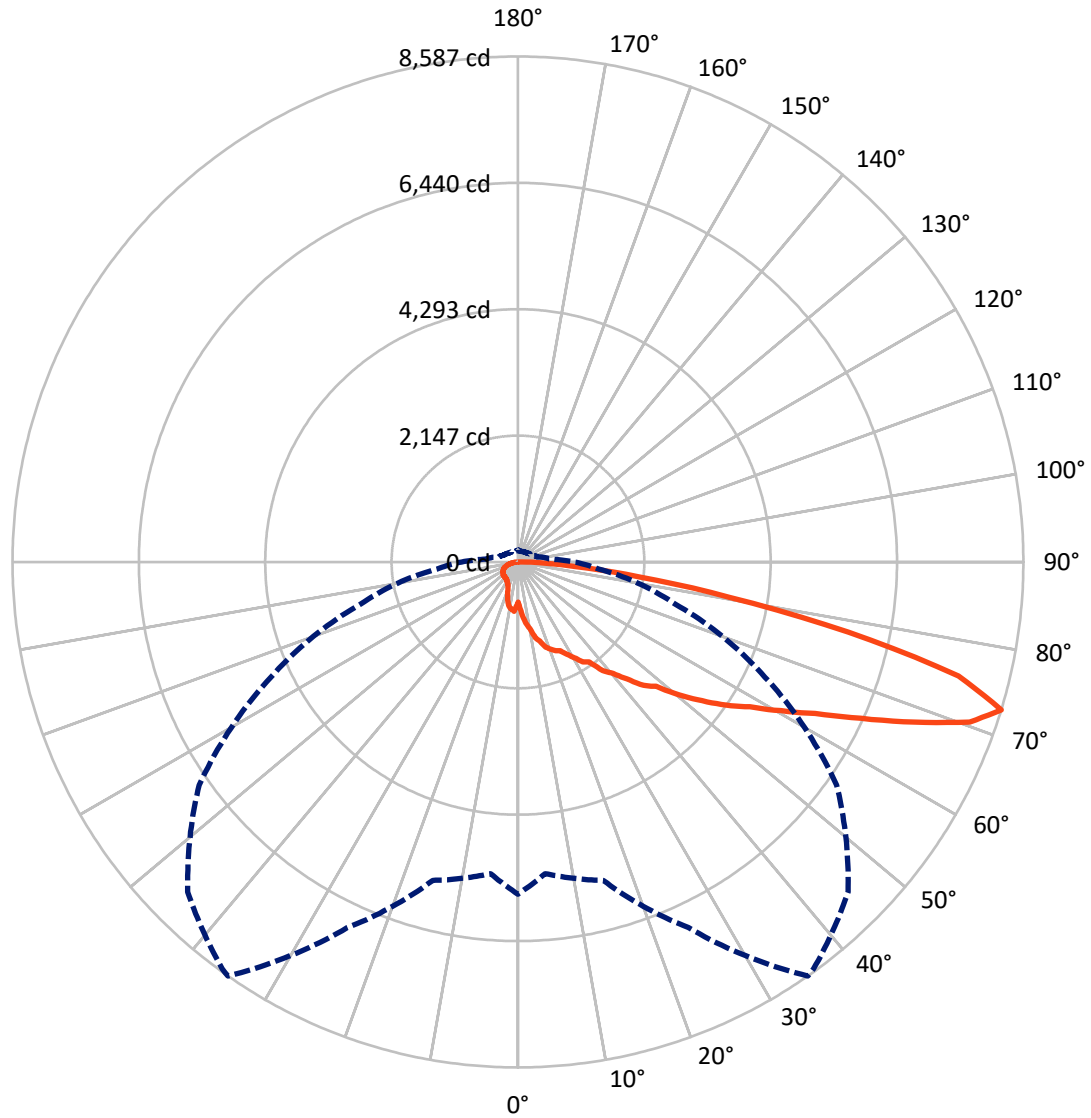
✕ Max cd
 - - - 1/2 Max cd



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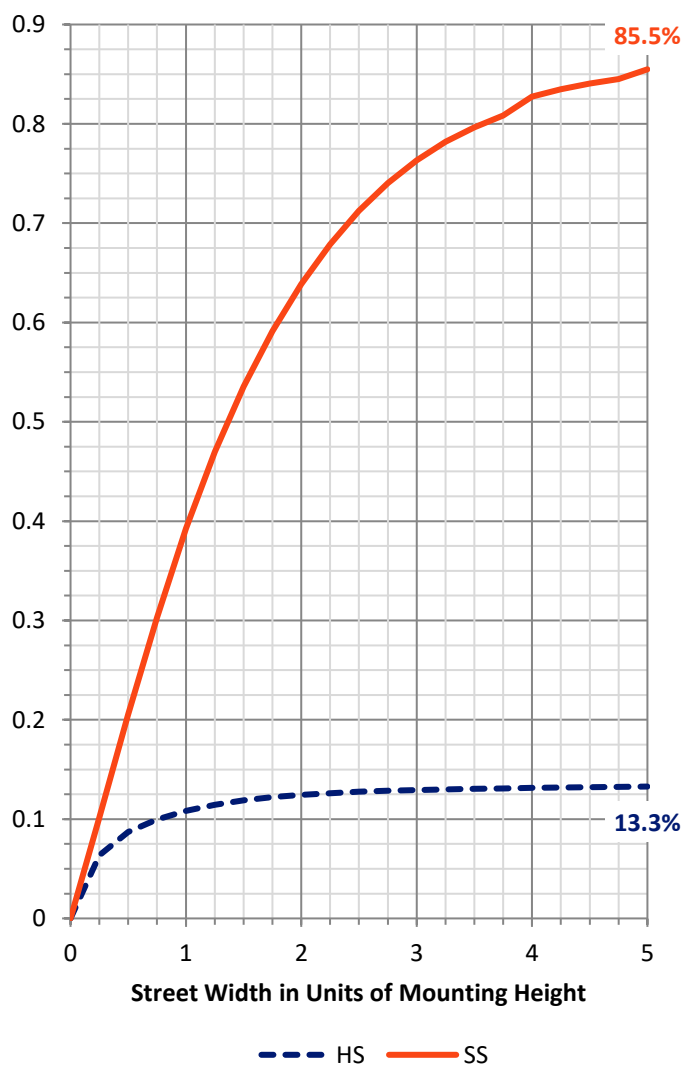
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1584.2	0.0	1584.2
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	10220.8	0.0	10220.8
	% Fixture	86.6	0.0	86.6
Total	Lumens	11805.0	0.0	11805.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.7	0.8
10°-20°	319.4	2.7
20°-30°	554.9	4.7
30°-40°	927.5	7.9
40°-50°	1609.8	13.6
50°-60°	2433.6	20.6
60°-70°	3152.7	26.7
70°-80°	2326.4	19.7
80°-90°	389.9	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°	11805.0	100.0
0°-180°	11805.0	100.0

Coefficient of Utilization



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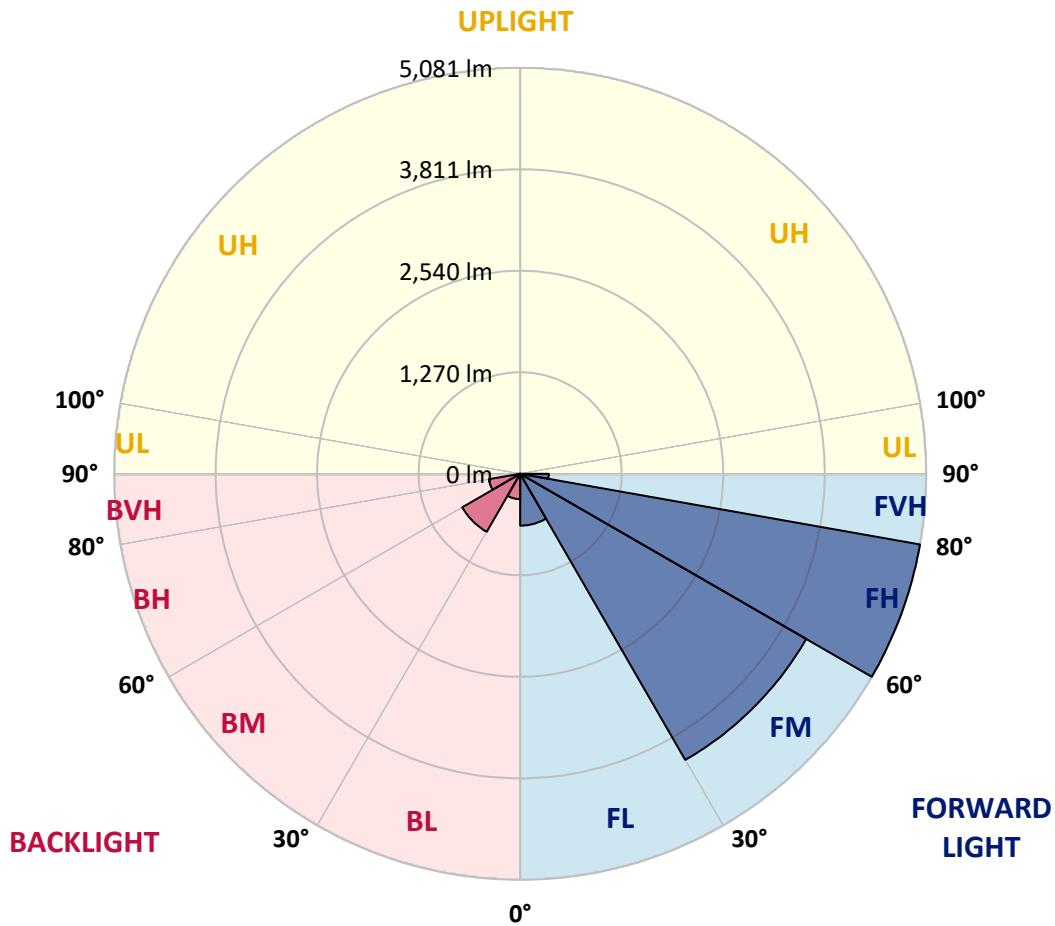
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	648.4	5.5			
FM (30°-60°)	4133.7	35.0			
FH (60°-80°)	5080.8	43.0			G3/7500
FVH (80°-90°)	358.0	3.0			G3/500
BL (0°-30°)	316.7	2.7	B1/500		
BM (30°-60°)	837.3	7.1	B1/1000		
BH (60°-80°)	398.3	3.4	B1/500		G1/500
BVH (80°-90°)	31.9	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°	682.2	682.2	682.2	682.2	682.2	682.2	682.2	682.2	682.2	682.2	682.2
2.5°	851.0	810.2	774.9	773.4	806.2	818.8	813.7	802.6	789.5	761.8	822.3
5°	1066.2	1007.7	996.6	983.5	953.8	961.9	913.5	950.3	961.9	988.6	1028.9
7.5°	1193.1	1158.9	1132.2	1121.1	1069.7	1063.6	1027.9	1080.3	1102.4	1098.9	1158.9
10°	1243.0	1211.8	1213.8	1177.5	1160.9	1167.9	1172.0	1173.0	1186.6	1197.7	1167.4
12.5°	1268.7	1280.8	1325.1	1300.4	1321.6	1330.2	1372.5	1329.2	1330.7	1273.7	1305.0
15°	1398.2	1428.4	1402.7	1401.7	1395.2	1409.3	1445.6	1416.3	1439.0	1420.9	1380.6
17.5°	1554.4	1563.5	1514.1	1493.9	1520.1	1515.6	1506.5	1511.1	1454.6	1559.4	1510.0
20°	1602.3	1638.0	1573.0	1493.9	1580.6	1592.2	1590.2	1570.5	1473.8	1624.9	1577.1
22.5°	1741.3	1692.9	1641.6	1591.2	1635.5	1642.1	1631.0	1584.1	1551.9	1609.3	1647.1
25°	1804.3	1792.7	1727.2	1721.2	1672.3	1649.1	1668.3	1654.7	1622.9	1725.2	1683.4
27.5°	1948.4	1934.8	1784.1	1846.1	1775.1	1769.0	1667.8	1713.1	1744.8	1737.3	1799.8
30°	2111.6	2127.3	1907.1	1969.1	1886.9	1875.8	1774.1	1831.5	1853.2	1860.2	1938.3
32.5°	2293.0	2335.9	2117.2	2066.3	2022.5	2030.0	1943.9	1839.1	1923.2	2088.0	2121.7
35°	2489.5	2507.2	2277.9	2201.3	2087.0	2078.9	2080.4	2093.5	2178.7	2366.6	2392.8
37.5°	2852.8	2771.2	2570.2	2376.2	2337.9	2262.8	2313.7	2354.0	2439.1	2727.4	2837.2
40°	3076.5	3016.1	2709.7	2597.4	2491.5	2498.6	2593.8	2593.3	2794.4	3091.6	3259.4
42.5°	3283.6	3217.6	2928.9	2816.0	2715.8	2740.5	2767.7	2815.5	3201.0	3680.1	3756.7
45°	3450.4	3305.8	3098.2	3073.0	2990.4	2957.6	3073.0	3149.6	3687.2	4156.3	4200.6
47.5°	3563.7	3444.8	3241.8	3219.6	3158.7	3238.8	3553.7	3603.0	4064.1	4634.4	4630.9
50°	3736.1	3573.3	3389.9	3378.3	3550.1	3593.0	3976.9	3971.9	4430.9	5031.5	4948.3
52.5°	3934.6	3729.5	3530.5	3654.9	3916.9	3938.1	4271.2	4406.7	4831.4	5414.4	5197.2
55°	4162.8	3933.6	3741.1	3907.4	4297.4	4234.9	4572.0	4903.0	5332.8	5818.0	5377.1
57.5°	4445.5	4167.4	4011.7	4264.6	4644.5	4699.9	5002.7	5419.4	5736.4	6068.9	5508.1
60°	4743.8	4417.3	4274.7	4515.5	5130.7	5194.2	5490.5	5848.7	6188.8	6305.2	5483.4
62.5°	5028.4	4675.2	4546.3	4843.5	5669.9	5827.1	6045.7	6274.0	6565.2	6362.6	5184.6
65°	5345.4	4991.7	4910.5	5356.5	6400.9	6557.1	6842.8	6774.3	6694.2	6159.1	4690.4
67.5°	5680.9	5321.7	5336.8	5951.5	7263.0	7289.7	7728.6	7273.1	6542.5	5620.0	3860.5
70°	5861.3	5493.5	5649.2	6585.9	8140.2	8101.9	8191.6	7407.1	5924.3	4442.5	2660.8
72.5°	5642.6	5314.6	5599.8	6852.9	8586.7	8545.3	7931.6	6611.6	4631.9	2762.6	1379.5
75°	4777.5	4461.1	4897.4	6108.7	7730.1	7768.4	6750.1	4916.6	2651.8	1111.0	572.9
77.5°	3246.3	3083.1	3456.9	4553.3	5741.9	5874.4	5008.3	2875.0	1113.5	460.0	346.7
80°	1715.6	1638.0	1914.1	2623.1	3635.8	3734.6	2945.0	1431.9	570.4	297.8	247.4
82.5°	932.1	899.4	1047.5	1348.8	2065.8	2152.0	1527.2	951.3	384.4	186.4	151.2
85°	626.3	613.7	711.9	724.5	977.0	1005.2	800.1	732.6	230.8	91.2	99.8
87.5°	313.4	300.8	374.9	331.0	372.9	373.4	366.8	467.6	58.4	30.2	18.1
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°	682.2	682.2	682.2	682.2	682.2	682.2	682.2	682.2	682.2	682.2	682.2
2.5°	823.3	805.7	744.7	744.2	753.3	747.2	751.7	727.1	716.5	764.8	762.3
5°	1023.3	970.4	919.5	901.9	881.2	836.4	838.9	839.4	831.9	860.6	862.6
7.5°	1140.7	1077.2	1030.4	936.7	863.1	805.7	813.2	821.8	813.2	851.5	865.6
10°	1157.9	1107.5	1051.5	947.2	898.4	846.5	794.1	747.7	742.2	724.5	730.1
12.5°	1259.6	1217.8	1100.9	986.5	929.6	850.0	754.3	701.4	657.0	664.6	650.5
15°	1343.3	1313.5	1173.5	1023.8	887.8	789.0	687.3	614.7	574.9	570.4	556.3
17.5°	1456.6	1414.3	1180.0	998.1	833.9	715.5	600.6	518.5	501.3	494.3	487.2
20°	1511.1	1435.0	1156.3	917.5	770.9	627.8	514.9	444.4	439.4	452.0	449.4
22.5°	1558.4	1452.1	1135.2	868.6	672.6	539.1	456.5	410.1	404.6	420.7	423.7
25°	1586.1	1501.0	1112.0	818.8	611.7	473.1	412.7	386.5	387.5	408.6	406.1
27.5°	1711.1	1518.1	1053.6	759.8	541.6	424.2	391.5	377.9	372.3	401.6	404.1
30°	1789.7	1630.0	1040.5	697.3	489.7	388.5	372.3	366.8	365.8	401.1	403.6
32.5°	1935.8	1667.2	1046.5	629.3	442.9	377.4	358.2	357.7	367.8	401.6	405.6
35°	2138.3	1824.4	1017.3	590.5	417.2	360.3	347.2	351.2	368.3	405.1	410.6
37.5°	2533.4	1972.6	1026.3	554.2	408.6	354.7	344.1	346.7	374.4	414.2	429.3
40°	2846.3	2241.1	1012.2	536.1	397.0	353.7	337.6	347.7	373.9	419.2	432.8
42.5°	3299.7	2455.3	1013.8	518.0	396.5	349.7	336.6	348.7	372.9	414.7	433.3
45°	3688.7	2647.2	1035.4	507.4	391.5	356.2	335.1	350.2	366.3	398.5	419.2
47.5°	4007.6	2861.4	1057.6	497.3	389.5	362.3	333.6	339.6	355.2	380.4	399.1
50°	4267.6	3012.0	1085.8	495.3	389.5	359.2	329.5	329.0	342.1	362.3	379.9
52.5°	4470.2	3118.3	1104.9	497.8	389.5	347.7	324.5	320.5	328.5	343.1	360.8
55°	4616.8	3151.1	1089.3	504.4	389.0	337.1	315.4	311.9	315.9	326.0	342.6
57.5°	4675.7	3064.9	996.1	492.8	389.0	329.5	304.3	300.3	304.3	311.9	328.5
60°	4528.1	2787.8	861.6	463.0	381.4	319.4	291.7	289.2	295.3	301.8	317.9
62.5°	4157.8	2419.5	718.0	427.8	365.8	310.9	279.6	280.1	289.7	298.8	314.9
65°	3582.4	1974.1	598.6	392.0	346.1	297.3	267.0	270.6	284.2	296.3	312.4
67.5°	2819.1	1462.7	503.9	357.2	318.4	275.1	252.9	253.9	263.5	275.1	290.7
70°	1884.4	930.6	414.2	316.4	282.2	246.4	231.3	227.7	225.2	235.3	248.9
72.5°	955.8	549.7	340.1	270.6	242.9	215.1	203.6	194.5	187.4	193.5	204.1
75°	500.8	384.4	274.6	224.7	200.5	182.9	174.3	162.2	157.2	160.7	168.3
77.5°	354.2	300.8	222.2	177.9	163.2	145.1	146.6	134.0	130.0	132.0	140.1
80°	272.1	238.3	170.8	134.5	126.0	108.3	113.4	105.8	100.8	99.8	105.8
82.5°	185.4	179.4	121.4	94.2	88.2	75.6	82.6	79.6	73.1	69.0	72.1
85°	125.0	118.9	74.1	54.4	51.9	39.3	50.4	48.4	42.8	36.8	37.3
87.5°	21.7	39.8	21.2	13.6	12.6	4.5	11.6	11.1	10.1	5.0	4.0
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)