

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: P597166

Luminaire Tested: **MSA-SA4D-835-U-SL4**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597166
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-SA4D-835-U-SL4
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 21126 lumens
Efficiency: N/A
Efficacy: 81.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G4

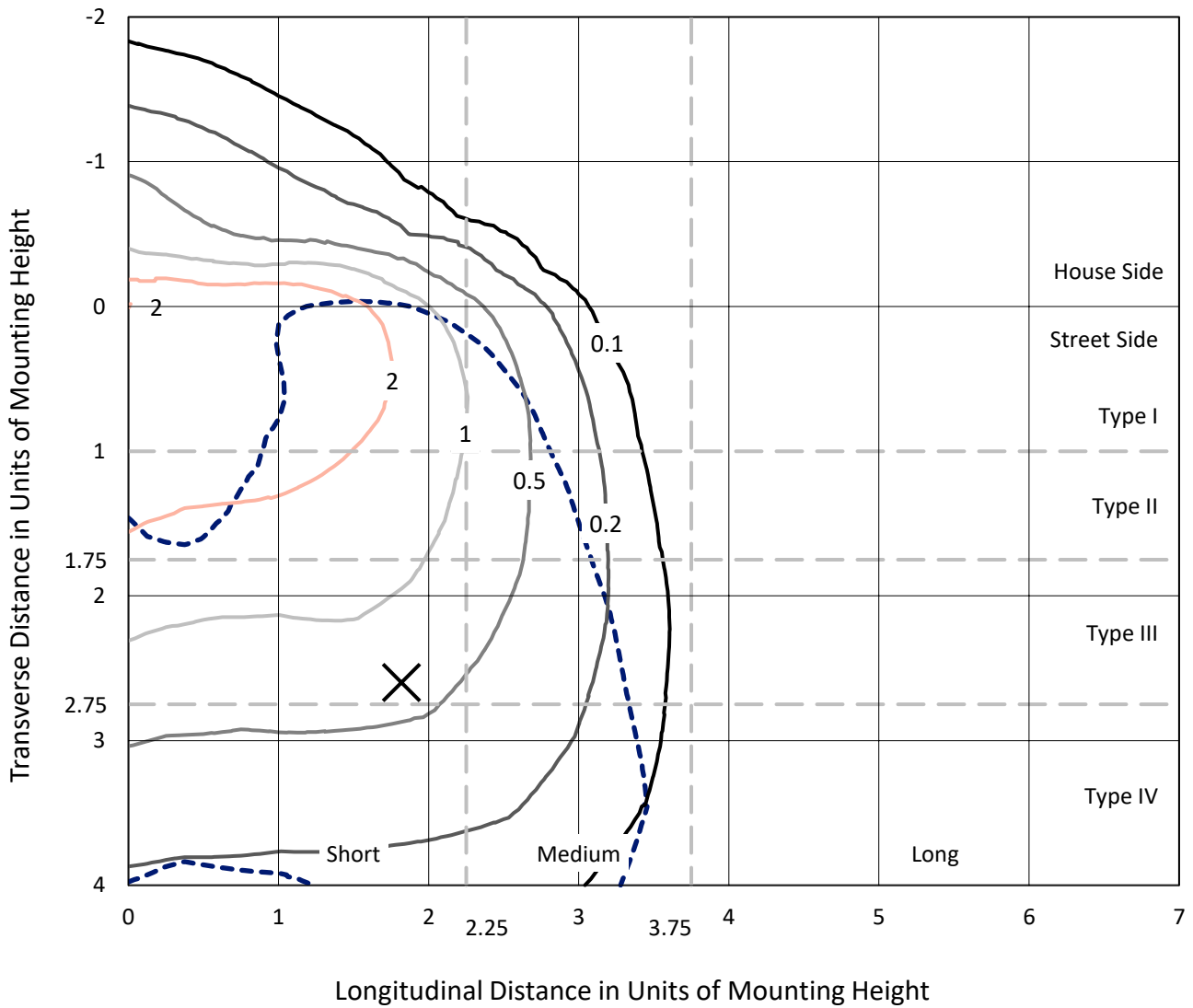
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P597166
 CATALOG NUMBER: MSA-SA4D-835-U-SL4

Iso-Footcandle Lines of Horizontal Illumination

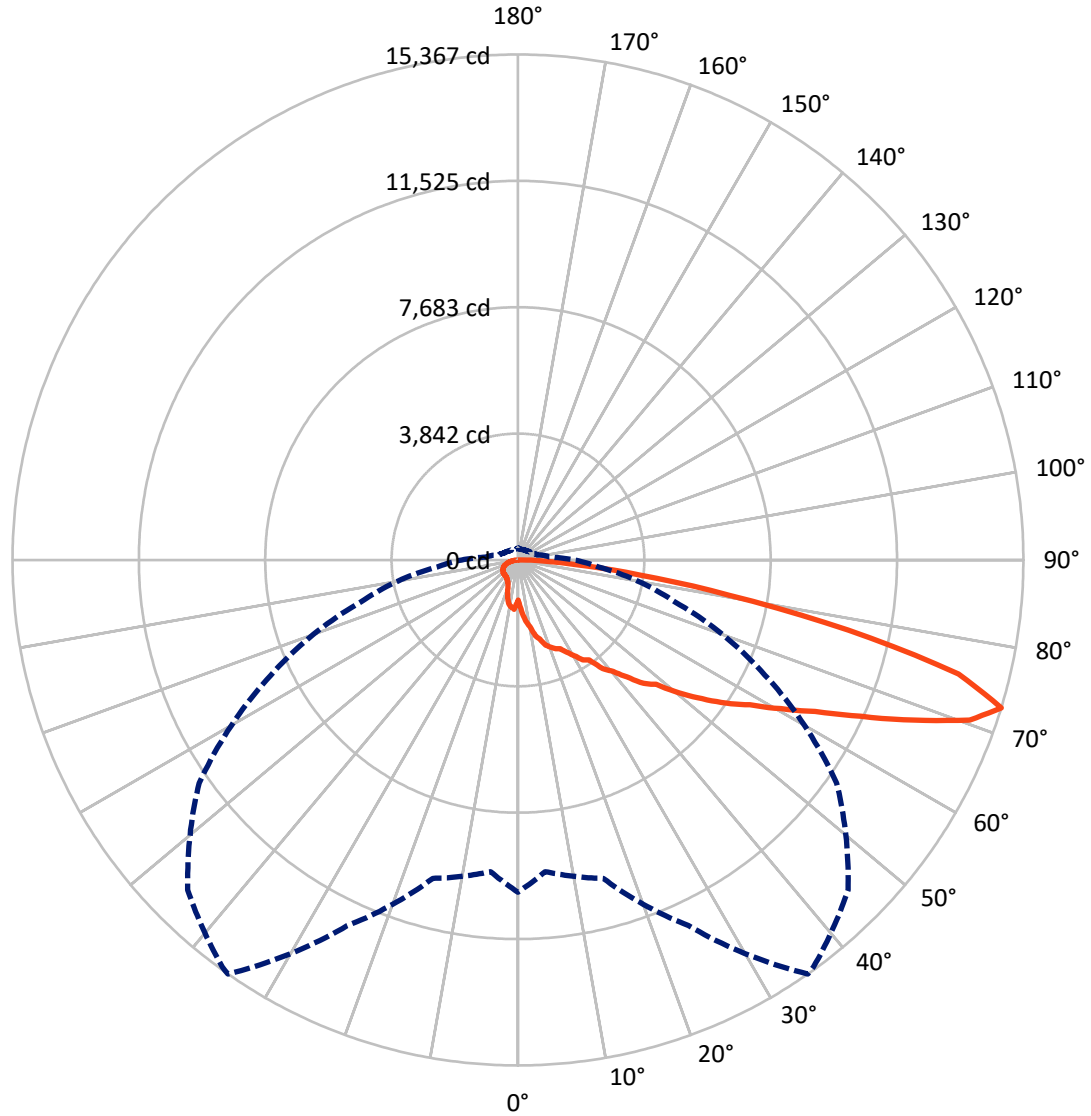
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.2 fc
 Type IV - Short - N/A

REPORT NUMBER: P597166
CATALOG NUMBER: MSA-SA4D-835-U-SL4

Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P597166

CATALOG NUMBER: MSA-SA4D-835-U-SL4

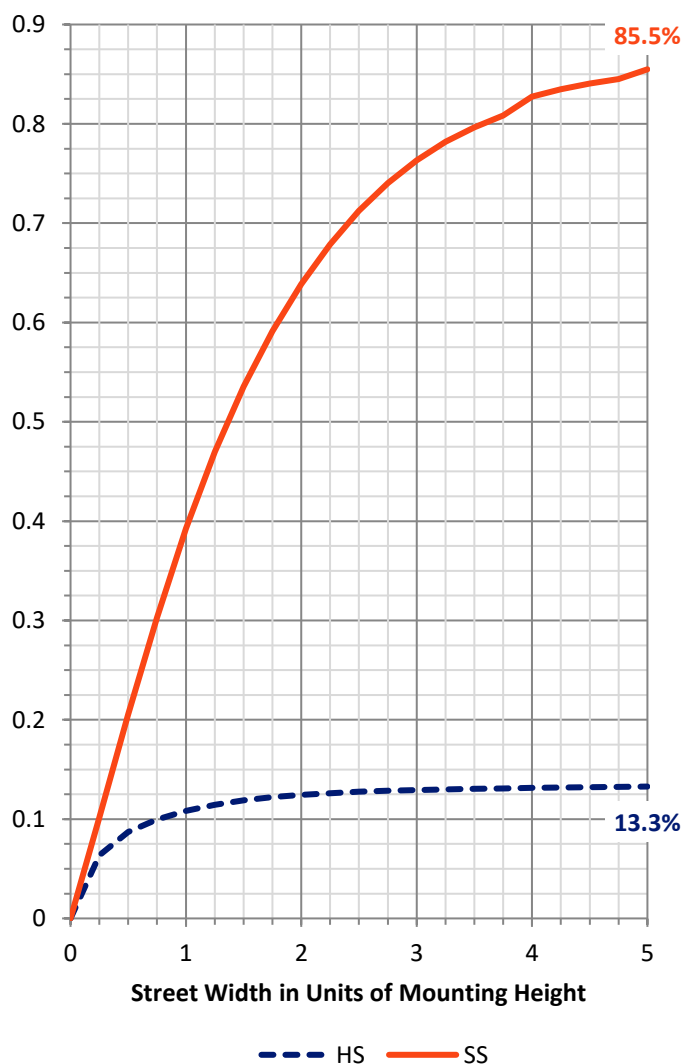
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2835.0	0.0	2835.0
	% Fixture	13.4	0.0	13.4
Street Side	Lumens	18291.0	0.0	18291.0
	% Fixture	86.6	0.0	86.6
Total	Lumens	21126.0	0.0	21126.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.3	0.8
10°-20°	571.6	2.7
20°-30°	993.1	4.7
30°-40°	1659.9	7.9
40°-50°	2880.9	13.6
50°-60°	4355.2	20.6
60°-70°	5642.1	26.7
70°-80°	4163.2	19.7
80°-90°	697.8	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°	21126.0	100.0
0°-180°	21126.0	100.0

Coefficient of Utilization



REPORT NUMBER: P597166

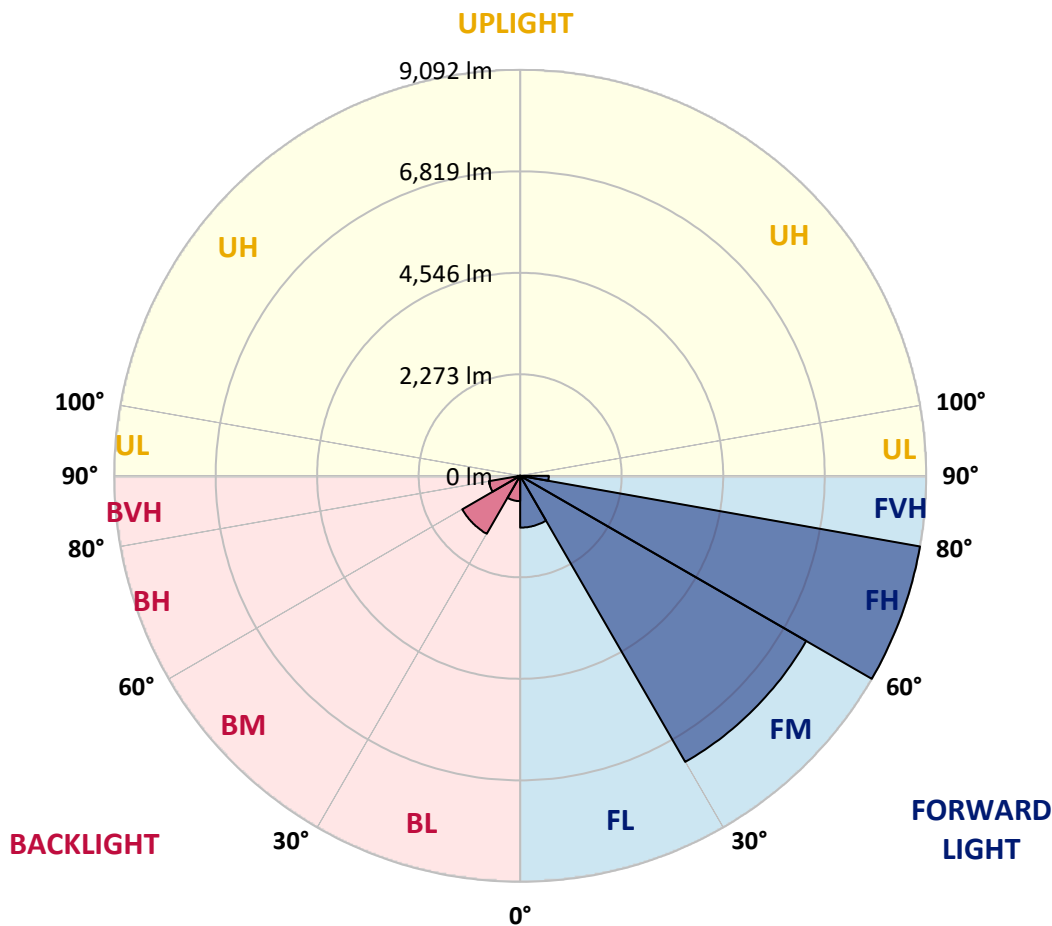
CATALOG NUMBER: MSA-SA4D-835-U-SL4

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1160.3	5.5			
FM (30°-60°)	7397.6	35.0			
FH (60°-80°)	9092.5	43.0			G4/12000
FVH (80°-90°)	640.6	3.0			G4/750
BL (0°-30°)	566.7	2.7	B2/1000		
BM (30°-60°)	1498.4	7.1	B2/2500		
BH (60°-80°)	712.9	3.4	B2/1000		G2/1000
BVH (80°-90°)	57.1	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-G4

Type IV Short





REPORT NUMBER: P597166
 CATALOG NUMBER: MSA-SA4D-835-U-SL4

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	1220.9	1220.9	1220.9	1220.9	1220.9	1220.9	1220.9	1220.9	1220.9	1220.9	1220.9
2.5°	1522.9	1449.9	1386.8	1384.1	1442.7	1465.2	1456.2	1436.4	1412.9	1363.3	1471.5
5°	1908.0	1803.4	1783.5	1760.1	1706.9	1721.3	1634.8	1700.6	1721.3	1769.1	1841.2
7.5°	2135.2	2073.9	2026.1	2006.2	1914.3	1903.5	1839.4	1933.2	1972.9	1966.6	2073.9
10°	2224.5	2168.6	2172.2	2107.2	2077.5	2090.1	2097.3	2099.1	2123.5	2143.3	2089.2
12.5°	2270.4	2292.1	2371.4	2327.2	2365.1	2380.4	2456.2	2378.6	2381.3	2279.5	2335.4
15°	2502.2	2556.3	2510.3	2508.5	2496.8	2522.0	2586.9	2534.6	2575.2	2542.8	2470.6
17.5°	2781.7	2797.9	2709.6	2673.5	2720.4	2712.3	2696.0	2704.2	2603.2	2790.7	2702.3
20°	2867.4	2931.4	2815.1	2673.5	2828.6	2849.3	2845.7	2810.6	2637.4	2907.9	2822.3
22.5°	3116.2	3029.7	2937.7	2847.5	2926.9	2938.6	2918.8	2834.9	2777.2	2880.0	2947.6
25°	3228.9	3208.2	3091.0	3080.2	2992.7	2951.2	2985.5	2961.1	2904.3	3087.4	3012.5
27.5°	3486.8	3462.5	3192.9	3303.8	3176.6	3165.8	2984.6	3065.7	3122.5	3109.0	3220.8
30°	3779.0	3806.9	3412.9	3523.8	3376.8	3357.0	3174.8	3277.6	3316.4	3329.0	3468.8
32.5°	4103.6	4180.2	3788.9	3697.8	3619.4	3632.9	3478.7	3291.1	3441.7	3736.6	3797.0
35°	4455.2	4486.8	4076.5	3939.5	3734.8	3720.3	3723.1	3746.5	3898.9	4235.2	4282.1
37.5°	5105.3	4959.3	4599.5	4252.3	4183.8	4049.5	4140.5	4212.7	4365.1	4880.8	5077.4
40°	5505.7	5397.5	4849.3	4648.2	4458.8	4471.5	4641.9	4641.0	5000.7	5532.7	5833.0
42.5°	5876.3	5758.2	5241.5	5039.5	4860.1	4904.3	4953.0	5038.6	5728.4	6585.9	6723.0
45°	6174.7	5916.0	5544.5	5499.4	5351.5	5292.9	5499.4	5636.4	6598.5	7438.0	7517.3
47.5°	6377.6	6164.8	5801.4	5761.8	5652.7	5796.0	6359.6	6447.9	7273.0	8293.7	8287.4
50°	6686.0	6394.7	6066.5	6045.8	6353.3	6429.9	7117.0	7108.0	7929.4	9004.2	8855.4
52.5°	7041.3	6674.3	6318.1	6540.8	7009.7	7047.6	7643.6	7886.1	8646.3	9689.5	9300.9
55°	7449.7	7039.5	6695.0	6992.6	7690.5	7578.7	8181.9	8774.3	9543.4	10411.7	9622.8
57.5°	7955.6	7457.8	7179.2	7631.9	8311.7	8410.9	8952.8	9698.5	10265.7	10860.8	9857.2
60°	8489.4	7905.1	7649.9	8080.9	9181.9	9295.5	9825.7	10466.8	11075.4	11283.7	9813.0
62.5°	8998.8	8366.7	8135.9	8667.9	10146.7	10428.0	10819.3	11227.8	11748.9	11386.5	9278.3
65°	9566.0	8933.0	8787.8	9585.8	11455.0	11734.5	12245.8	12123.1	11979.8	11022.2	8393.8
67.5°	10166.5	9523.6	9550.6	10650.7	12997.8	13045.6	13830.9	13015.8	11708.4	10057.4	6908.7
70°	10489.3	9831.1	10109.7	11785.9	14567.6	14499.1	14659.6	13255.7	10602.0	7950.2	4761.8
72.5°	10098.0	9511.0	10021.3	12263.8	15366.5	15292.6	14194.3	11831.9	8289.2	4943.9	2468.8
75°	8549.8	7983.5	8764.4	10932.0	13833.6	13902.2	12079.9	8798.6	4745.6	1988.2	1025.2
77.5°	5809.6	5517.4	6186.5	8148.5	10275.6	10512.7	8962.7	5145.0	1992.7	823.2	620.4
80°	3070.2	2931.4	3425.5	4694.2	6506.6	6683.3	5270.3	2562.6	1020.7	532.9	442.7
82.5°	1668.1	1609.5	1874.6	2413.8	3696.9	3851.1	2733.0	1702.4	688.0	333.6	270.5
85°	1120.8	1098.3	1274.1	1296.6	1748.4	1798.9	1431.9	1311.0	413.0	163.2	178.5
87.5°	560.8	538.3	670.9	592.4	667.2	668.1	656.4	836.8	104.6	54.1	32.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P597166
 CATALOG NUMBER: MSA-SA4D-835-U-SL4

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1220.9	1220.9	1220.9	1220.9	1220.9	1220.9	1220.9	1220.9	1220.9	1220.9	1220.9
2.5°	1473.4	1441.8	1332.7	1331.8	1348.0	1337.2	1345.3	1301.1	1282.2	1368.8	1364.2
5°	1831.3	1736.6	1645.6	1614.0	1577.0	1496.8	1501.3	1502.2	1488.7	1540.1	1543.7
7.5°	2041.4	1927.8	1843.9	1676.2	1544.6	1441.8	1455.3	1470.6	1455.3	1523.8	1549.1
10°	2072.1	1981.9	1881.8	1695.2	1607.7	1514.8	1421.1	1338.1	1328.2	1296.6	1306.5
12.5°	2254.2	2179.4	1970.2	1765.5	1663.6	1521.1	1349.8	1255.1	1175.8	1189.3	1164.1
15°	2403.9	2350.7	2100.0	1832.2	1588.8	1412.0	1229.9	1100.1	1028.8	1020.7	995.5
17.5°	2606.8	2531.0	2111.7	1786.2	1492.3	1280.4	1074.8	927.8	897.2	884.6	871.9
20°	2704.2	2568.0	2069.4	1642.0	1379.6	1123.5	921.5	795.3	786.3	808.8	804.3
22.5°	2788.9	2598.7	2031.5	1554.5	1203.7	964.8	816.9	734.0	724.1	752.9	758.3
25°	2838.5	2686.1	1990.0	1465.2	1094.6	846.7	738.5	691.6	693.4	731.3	726.8
27.5°	3062.1	2716.8	1885.4	1359.7	969.3	759.2	700.6	676.3	666.3	718.6	723.2
30°	3202.8	2916.9	1862.0	1247.9	876.4	695.2	666.3	656.4	654.6	717.7	722.2
32.5°	3464.3	2983.7	1872.8	1126.2	792.6	675.4	641.1	640.2	658.2	718.6	725.9
35°	3826.7	3265.0	1820.5	1056.8	746.6	644.7	621.3	628.5	659.1	725.0	734.9
37.5°	4533.7	3530.1	1836.7	991.9	731.3	634.8	615.9	620.4	670.0	741.2	768.2
40°	5093.6	4010.7	1811.5	959.4	710.5	633.0	604.1	622.2	669.0	750.2	774.5
42.5°	5905.1	4393.9	1814.2	926.9	709.6	625.8	602.3	624.0	667.2	742.1	775.4
45°	6601.2	4737.4	1853.0	908.0	700.6	637.5	599.6	626.7	655.5	713.2	750.2
47.5°	7172.0	5120.7	1892.6	890.0	697.0	648.3	596.9	607.7	635.7	680.8	714.1
50°	7637.3	5390.3	1943.1	886.4	697.0	642.9	589.7	588.8	612.2	648.3	679.9
52.5°	7999.7	5580.5	1977.4	890.9	697.0	622.2	580.7	573.5	587.9	614.0	645.6
55°	8262.1	5639.1	1949.4	902.6	696.1	603.2	564.5	558.1	565.4	583.4	613.1
57.5°	8367.6	5484.9	1782.6	881.8	696.1	589.7	544.6	537.4	544.6	558.1	587.9
60°	8103.4	4989.0	1541.9	828.6	682.6	571.7	522.1	517.6	528.4	540.1	569.0
62.5°	7440.7	4329.9	1284.9	765.5	654.6	556.3	500.4	501.3	518.5	534.7	563.6
65°	6411.0	3532.8	1071.2	701.5	619.5	532.0	477.9	484.2	508.6	530.2	559.0
67.5°	5044.9	2617.6	901.7	639.3	569.9	492.3	452.6	454.4	471.6	492.3	520.3
70°	3372.3	1665.4	741.2	566.3	504.9	440.9	413.9	407.6	403.1	421.1	445.4
72.5°	1710.5	983.7	608.6	484.2	434.6	385.0	364.3	348.1	335.4	346.2	365.2
75°	896.3	688.0	491.4	402.2	358.9	327.3	312.0	290.3	281.3	287.6	301.2
77.5°	633.9	538.3	397.6	318.3	292.1	259.7	262.4	239.8	232.6	236.2	250.7
80°	486.9	426.5	305.7	240.7	225.4	193.9	202.9	189.4	180.3	178.5	189.4
82.5°	331.8	321.0	217.3	168.6	157.8	135.3	147.9	142.5	130.7	123.5	128.9
85°	223.6	212.8	132.5	97.4	92.9	70.3	90.2	86.6	76.6	65.8	66.7
87.5°	38.8	71.2	37.9	24.3	22.5	8.1	20.7	19.8	18.0	9.0	7.2
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)