

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: P597120

Luminaire Tested: **MSA-SA4B-835-U-SL3**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597120
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-18)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4B-835-U-SL3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15716 lumens
Efficiency: N/A
Efficacy: 91.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G3

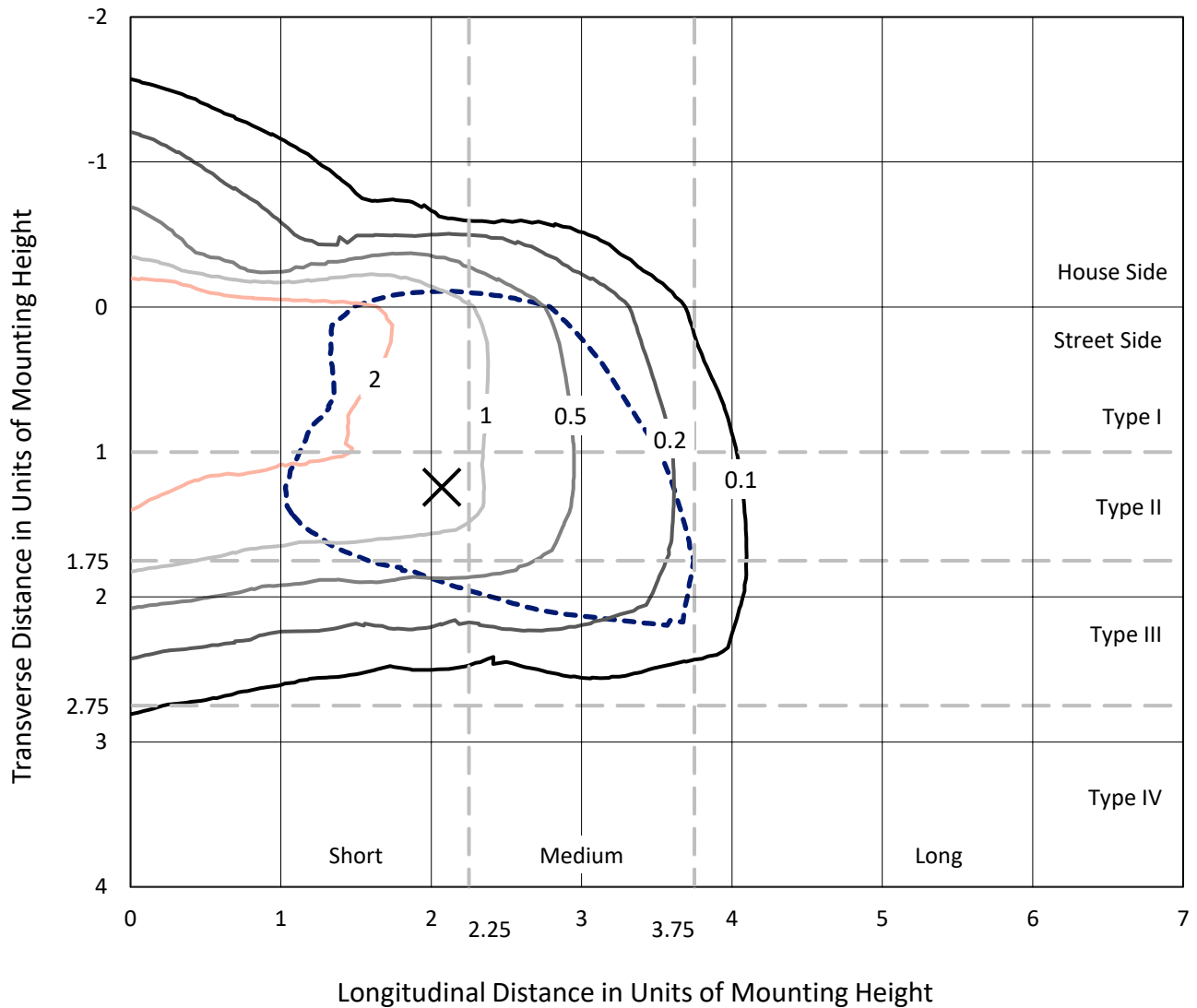
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P597120
 CATALOG NUMBER: MSA-SA4B-835-U-SL3

Iso-Footcandle Lines of Horizontal Illumination

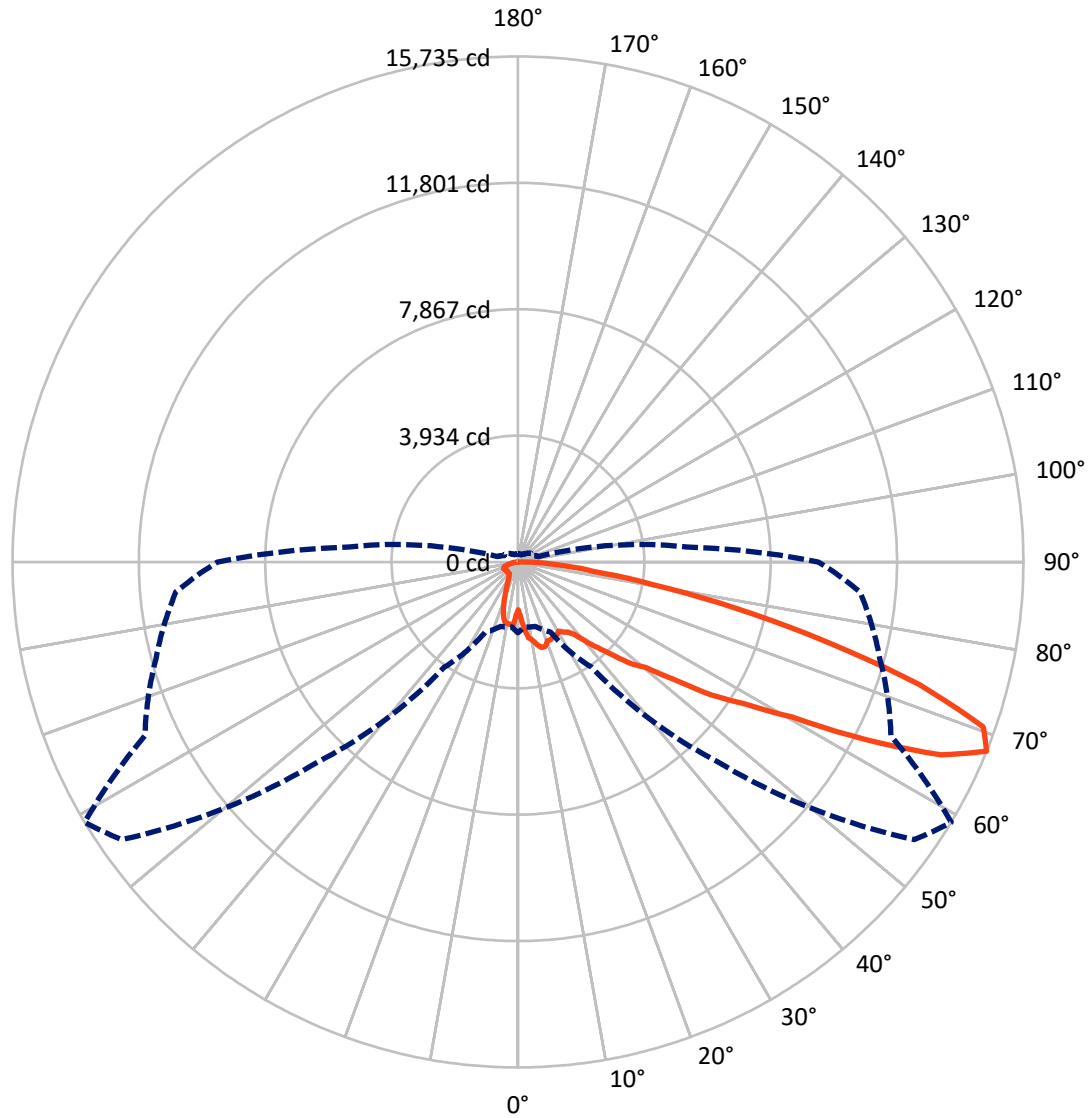
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.1 fc
 Type III - Short - N/A

REPORT NUMBER: P597120
CATALOG NUMBER: MSA-SA4B-835-U-SL3

Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P597120

CATALOG NUMBER: MSA-SA4B-835-U-SL3

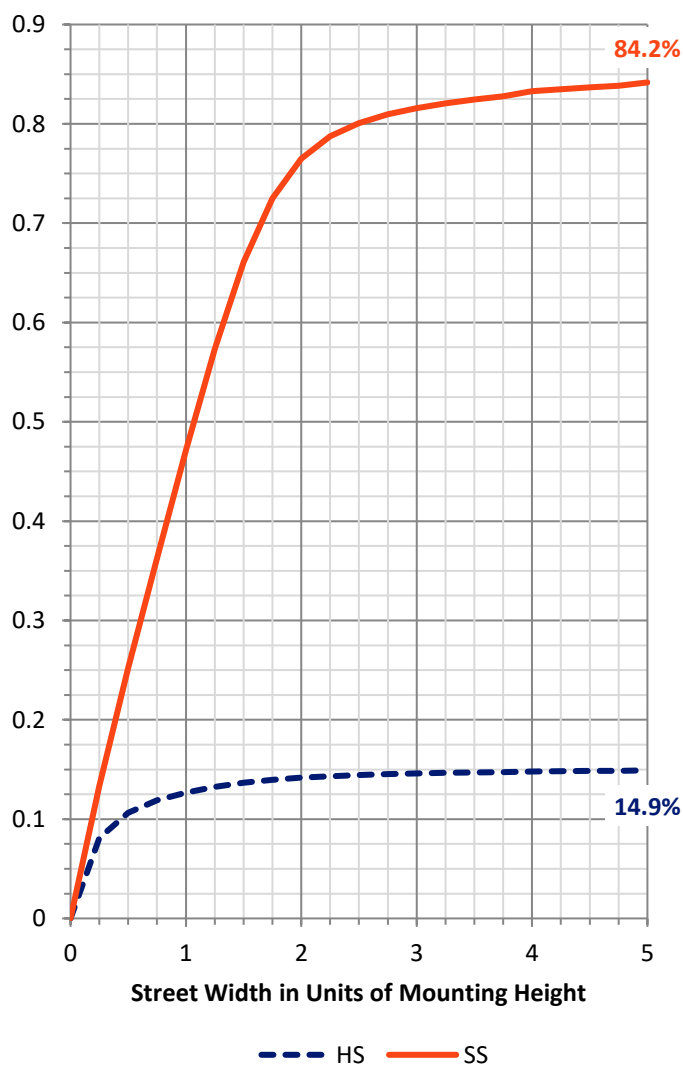
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2365.6	0.0	2365.6
	% Fixture	15.1	0.0	15.1
Street Side	Lumens	13350.4	0.0	13350.4
	% Fixture	84.9	0.0	84.9
Total	Lumens	15716.0	0.0	15716.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	194.2	1.2
10°-20°	574.8	3.7
20°-30°	820.8	5.2
30°-40°	1209.5	7.7
40°-50°	2043.5	13.0
50°-60°	3556.1	22.6
60°-70°	4531.6	28.8
70°-80°	2399.5	15.3
80°-90°	386.0	2.5
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°	15716.0	100.0
0°-180°	15716.0	100.0

Coefficient of Utilization



REPORT NUMBER: P597120

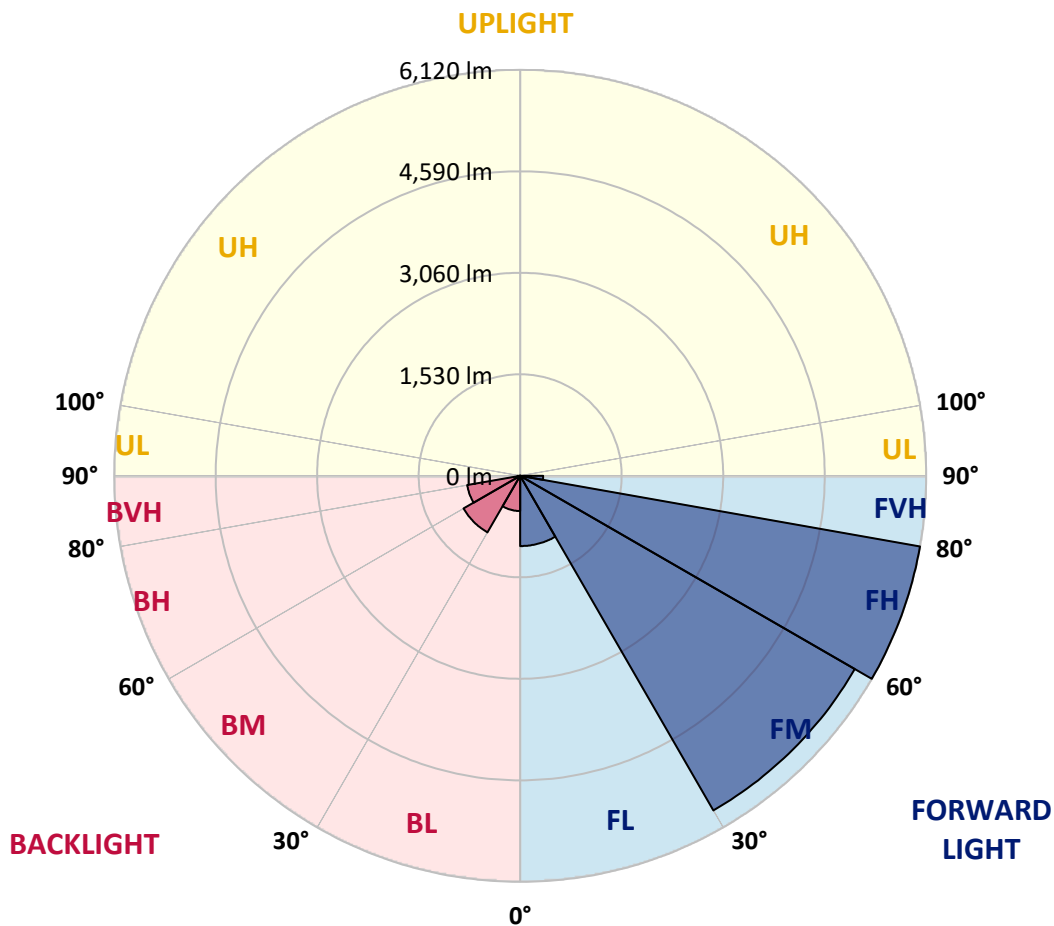
CATALOG NUMBER: MSA-SA4B-835-U-SL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1059.3	6.7			
FM (30°-60°)	5824.1	37.1			
FH (60°-80°)	6120.3	38.9			G3/7500
FVH (80°-90°)	346.7	2.2			G3/500
BL (0°-30°)	530.5	3.4	B2/1000		
BM (30°-60°)	985.0	6.3	B1/1000		
BH (60°-80°)	810.8	5.2	B2/1000		G2/1000
BVH (80°-90°)	39.3	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 Short





REPORT NUMBER: P597120
 CATALOG NUMBER: MSA-SA4B-835-U-SL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1487.1	1487.1	1487.1	1487.1	1487.1	1487.1	1487.1	1487.1	1487.1	1487.1	1487.1
2.5°	1856.8	1770.2	1678.3	1704.3	1756.9	1780.8	1754.9	1729.6	1696.9	1658.3	1790.2
5°	2251.7	2123.2	2104.5	2103.9	2085.2	2010.6	2106.5	2099.9	2138.5	2178.4	2281.0
7.5°	2364.3	2316.3	2264.4	2289.0	2195.1	2191.1	2340.3	2382.9	2457.5	2432.8	2570.7
10°	2306.3	2252.4	2279.7	2269.7	2278.3	2376.9	2468.1	2470.8	2550.7	2629.3	2540.7
12.5°	2204.4	2208.4	2317.0	2313.0	2452.8	2636.0	2663.3	2642.0	2772.5	2719.2	2795.1
15°	2277.0	2325.6	2298.3	2321.6	2376.9	2610.0	2685.9	2763.2	2887.1	2935.0	2859.1
17.5°	2392.9	2418.9	2296.3	2283.7	2397.6	2508.1	2696.6	2762.5	2781.8	3123.5	3016.3
20°	2343.6	2396.2	2276.3	2122.5	2311.6	2458.2	2644.0	2624.0	2717.9	3138.1	3048.9
22.5°	2483.5	2396.2	2243.7	2134.5	2201.1	2335.6	2493.5	2624.7	2735.9	3052.2	3096.2
25°	2510.1	2468.8	2326.3	2217.7	2195.1	2243.0	2468.1	2554.1	2741.9	3169.4	3070.9
27.5°	2672.6	2610.7	2320.3	2323.6	2211.1	2126.5	2388.2	2568.7	2809.8	3096.8	3132.8
30°	2874.4	2827.1	2462.8	2476.1	2320.3	2164.5	2442.8	2497.4	2849.1	3210.1	3210.7
32.5°	3025.6	3108.8	2743.2	2562.1	2506.8	2390.2	2358.9	2604.7	2803.1	3415.2	3343.9
35°	3298.0	3362.6	2959.0	2813.8	2626.7	2495.5	2586.7	2675.3	2994.3	3684.9	3541.7
37.5°	3802.1	3727.5	3359.9	3131.5	3061.5	2872.4	2923.0	2861.1	3202.1	3987.9	3929.3
40°	4093.8	4029.2	3642.3	3515.7	3238.7	3262.7	3199.4	3244.7	3479.8	4310.3	4291.6
42.5°	4381.5	4294.9	3967.9	3880.0	3603.7	3486.4	3497.8	3644.3	3908.0	4831.1	4769.1
45°	4665.9	4444.1	4300.9	4324.3	4191.1	3950.6	3967.3	4105.1	4375.5	5426.5	5283.9
47.5°	4883.7	4700.5	4588.6	4560.0	4494.1	4815.7	4671.9	4727.8	4847.0	5956.6	5902.6
50°	5295.9	5082.1	4936.3	4895.0	5118.8	5566.3	5273.3	5152.7	5406.5	6641.9	6613.9
52.5°	5955.9	5689.5	5446.4	5443.8	5767.4	6057.8	6264.3	6056.5	6149.7	7343.8	7423.8
55°	6532.0	6223.6	6005.2	6125.7	6586.6	6764.4	7465.7	7303.2	7224.6	8052.4	8280.9
57.5°	6747.1	6386.8	6244.3	6422.1	7101.4	8015.1	8756.4	8328.8	8252.2	8854.3	9333.1
60°	6274.9	5894.0	5902.6	6237.6	7414.4	8933.5	10167.6	9804.7	9355.8	9852.6	10320.1
62.5°	4929.6	4585.3	4809.8	5319.2	7152.0	9826.0	12059.0	12212.2	10616.5	10680.4	10867.6
65°	3350.6	3112.2	3314.6	3813.4	5800.7	10312.8	13860.5	14474.6	11764.7	11222.5	11104.0
67.5°	2205.1	2036.6	2075.9	2407.5	3993.3	8791.7	15065.3	15734.6	12814.2	11667.4	10687.1
70°	1707.6	1571.7	1554.4	1728.2	2368.2	6107.8	14351.3	15369.0	13453.6	11250.5	9315.2
72.5°	1340.0	1236.7	1246.1	1413.2	1834.1	3388.5	11105.3	13069.3	12490.6	9702.8	7156.7
75°	1044.9	960.4	1007.6	1198.8	1696.3	2105.8	7662.2	9919.2	9656.8	7184.7	4081.8
77.5°	758.6	703.9	771.2	1021.0	1594.4	1806.8	4769.8	6920.3	6186.3	3688.9	1400.6
80°	497.5	466.9	522.1	832.5	1445.9	1738.9	2947.7	4240.3	3056.9	1036.3	530.1
82.5°	293.0	279.7	325.7	563.4	1162.1	1629.7	1966.0	2356.3	1250.7	438.2	281.7
85°	153.8	143.9	193.1	323.7	801.2	1487.8	1547.8	1410.6	604.0	190.5	134.5
87.5°	51.3	49.9	81.9	125.2	303.0	789.9	825.8	670.0	249.1	55.3	29.3
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: P597120
 CATALOG NUMBER: MSA-SA4B-835-U-SL3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1487.1	1487.1	1487.1	1487.1	1487.1	1487.1	1487.1	1487.1	1487.1	1487.1	1487.1
2.5°	1808.2	1781.5	1628.3	1649.6	1669.6	1659.6	1653.6	1584.4	1577.7	1676.3	1668.3
5°	2278.3	2167.8	2037.3	2031.3	1945.3	1857.4	1874.8	1846.8	1854.8	1895.4	1899.4
7.5°	2526.8	2388.9	2264.4	2061.9	1890.1	1750.9	1772.9	1766.2	1748.2	1840.1	1864.8
10°	2522.1	2399.5	2259.0	2013.9	1898.1	1784.8	1649.0	1520.4	1482.5	1437.2	1441.2
12.5°	2688.6	2580.0	2273.7	2023.9	1866.8	1671.6	1417.2	1276.7	1142.2	1139.5	1105.5
15°	2740.5	2660.6	2305.0	1966.7	1647.7	1367.9	1104.9	952.4	855.1	835.8	807.2
17.5°	2871.7	2746.5	2209.7	1781.5	1393.2	1069.6	830.5	723.9	715.9	729.3	714.6
20°	2880.4	2677.3	2037.9	1507.8	1119.5	810.5	677.3	624.0	652.7	685.3	684.0
22.5°	2873.1	2590.0	1889.4	1274.7	841.1	651.3	593.4	581.4	608.0	656.7	662.7
25°	2798.5	2561.4	1703.6	1046.9	682.6	558.1	542.1	549.4	582.7	640.0	640.0
27.5°	2876.4	2444.8	1470.5	851.8	574.1	496.8	508.1	526.8	551.4	616.7	628.7
30°	2851.1	2483.5	1282.7	686.0	506.1	454.2	479.5	498.2	526.1	594.1	600.1
32.5°	2919.0	2380.2	1124.9	576.7	461.5	437.6	443.5	468.9	505.5	558.8	569.4
35°	3022.9	2418.2	943.7	518.8	439.6	418.2	429.6	449.5	486.2	538.1	546.8
37.5°	3354.6	2416.2	818.5	486.8	435.6	414.2	419.6	433.6	476.2	523.5	543.4
40°	3567.7	2554.7	704.6	479.5	430.9	412.2	407.6	422.9	456.9	512.8	526.8
42.5°	3967.9	2639.3	655.3	476.8	430.2	400.9	396.3	414.2	447.5	499.5	520.8
45°	4390.8	2759.8	616.0	475.5	428.2	398.9	384.9	407.6	435.6	485.5	510.1
47.5°	4888.3	3014.9	594.1	470.9	424.2	401.6	380.9	392.3	423.6	473.5	498.2
50°	5539.7	3352.6	598.7	464.2	430.2	402.3	375.0	380.3	408.9	457.5	482.8
52.5°	6331.5	3875.4	628.7	466.9	434.2	398.9	372.3	369.6	394.3	436.9	462.2
55°	7285.9	4617.3	718.6	479.5	434.2	398.3	368.3	356.3	375.0	409.6	434.2
57.5°	8437.4	5476.4	894.4	485.5	430.9	394.3	359.6	338.3	349.6	378.3	401.6
60°	9426.4	6169.7	1075.6	489.5	437.6	384.9	342.3	315.7	323.0	345.0	365.6
62.5°	9930.5	6364.2	1130.2	486.2	455.5	378.9	321.7	291.7	292.4	311.0	329.7
65°	10025.1	6105.1	911.1	482.8	478.8	378.3	307.0	271.1	266.4	279.7	295.7
67.5°	9351.1	5299.3	657.3	475.5	481.5	374.3	297.0	254.4	242.4	251.7	265.1
70°	7939.9	4267.6	552.1	460.9	449.5	354.3	279.7	237.1	221.1	227.8	237.8
72.5°	5919.3	3157.4	481.5	429.6	391.6	303.0	253.1	217.8	201.1	205.8	213.1
75°	3288.6	1684.3	402.9	373.6	319.7	245.1	215.8	193.1	178.5	180.5	188.5
77.5°	1092.2	621.4	295.7	296.4	241.8	189.1	177.8	165.2	153.8	154.5	161.2
80°	494.8	343.6	211.8	213.1	168.5	137.2	136.5	132.5	125.2	123.2	127.9
82.5°	287.0	208.5	145.2	138.5	108.6	89.2	99.2	97.2	95.2	87.9	89.2
85°	141.2	111.9	75.9	71.9	59.9	44.6	53.3	55.3	53.3	45.3	44.6
87.5°	34.6	36.6	18.6	17.3	10.0	4.7	8.0	8.0	10.0	6.7	3.3
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)