

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: P596810

Luminaire Tested: **MSA-SA4D-827-U-SL2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596810
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-SA4D-827-U-SL2
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) 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: 19212 lumens
Efficiency: N/A
Efficacy: 74.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

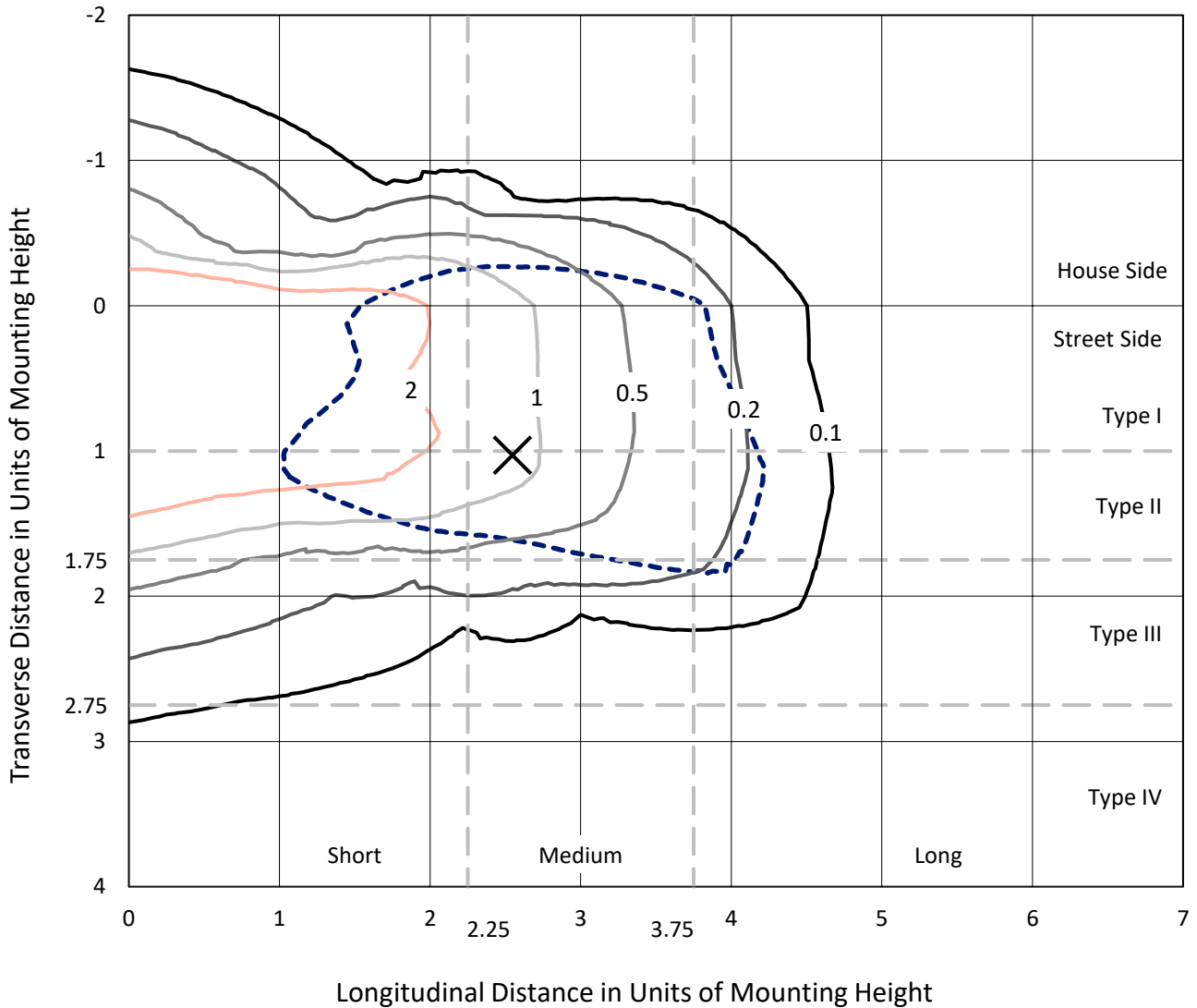
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P596810
 CATALOG NUMBER: MSA-SA4D-827-U-SL2

Iso-Footcandle Lines of Horizontal Illumination

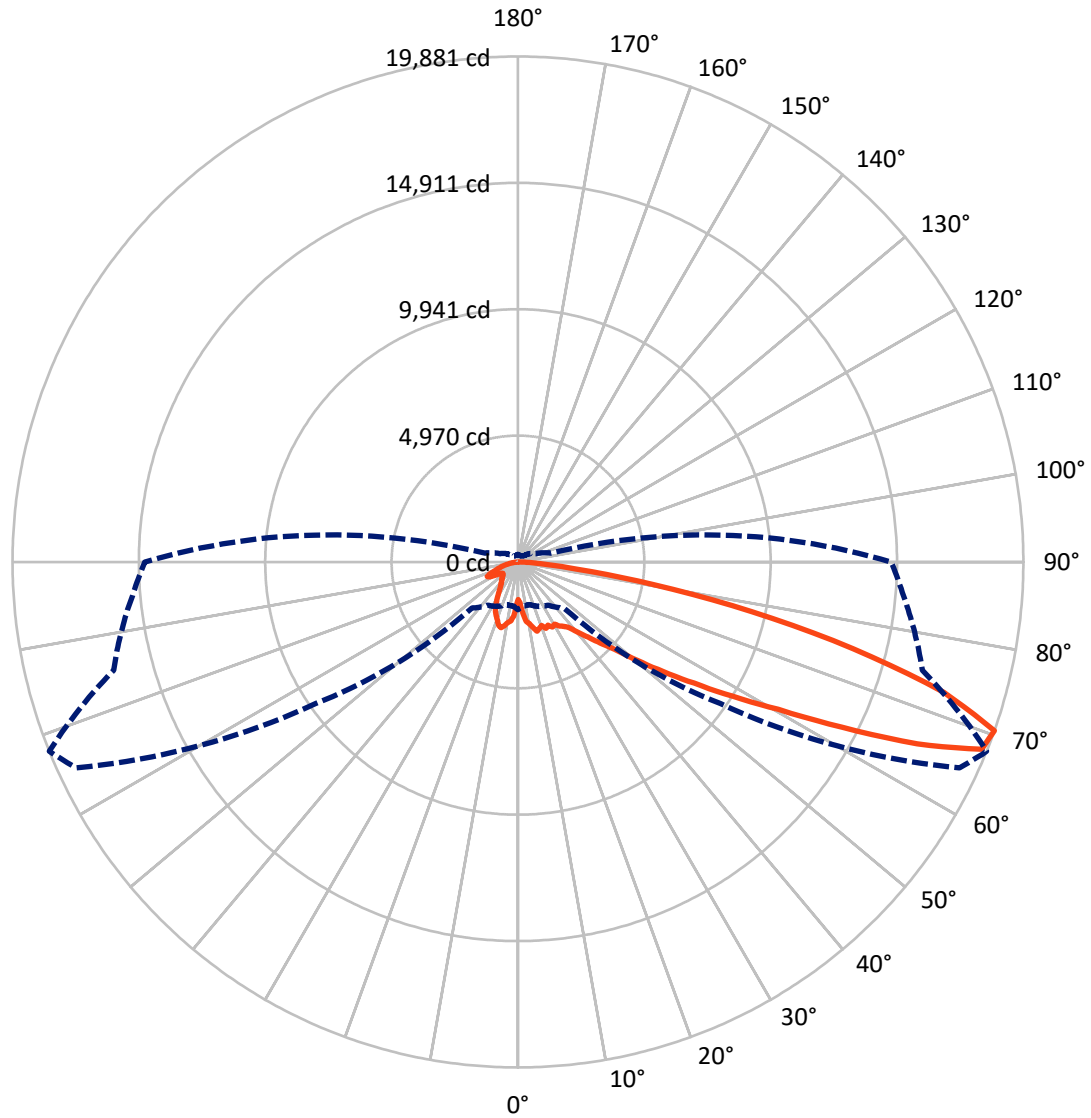
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.7 fc
 Type III - Medium - N/A

REPORT NUMBER: P596810
CATALOG NUMBER: MSA-SA4D-827-U-SL2

Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

REPORT NUMBER: P596810
 CATALOG NUMBER: MSA-SA4D-827-U-SL2

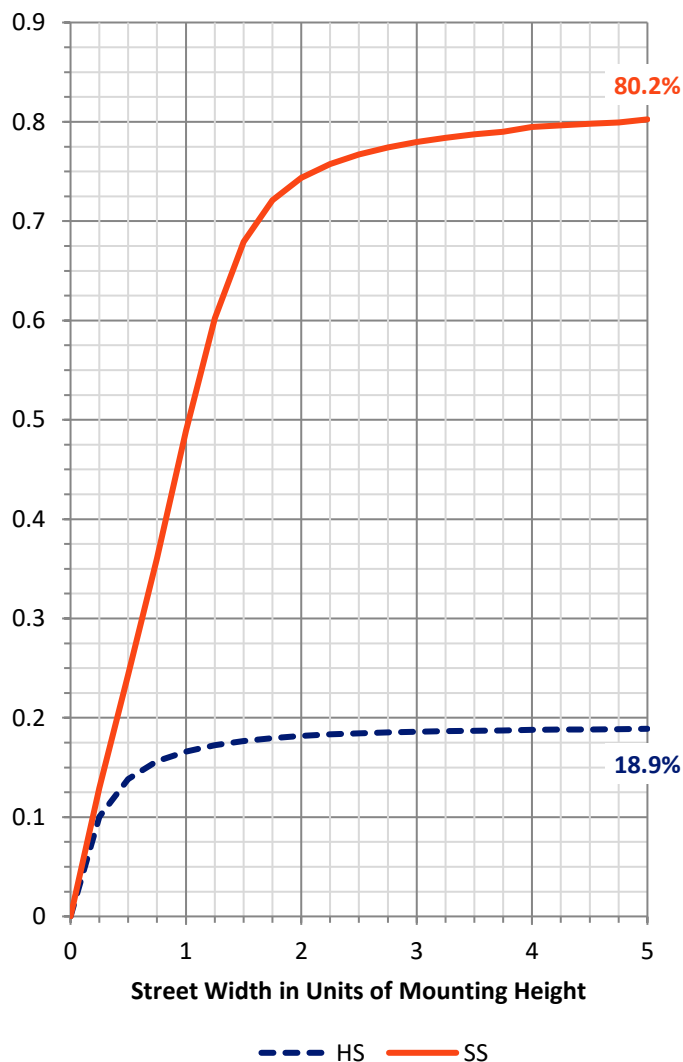
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3668.0	0.0	3668.0
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	15544.0	0.0	15544.0
	% Fixture	80.9	0.0	80.9
Total	Lumens	19212.0	0.0	19212.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	196.7	1.0
10°-20°	641.2	3.3
20°-30°	975.4	5.1
30°-40°	1489.9	7.8
40°-50°	2561.8	13.3
50°-60°	4240.3	22.1
60°-70°	5227.7	27.2
70°-80°	3358.1	17.5
80°-90°	520.9	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°	19212.0	100.0
0°-180°	19212.0	100.0

Coefficient of Utilization



REPORT NUMBER: P596810

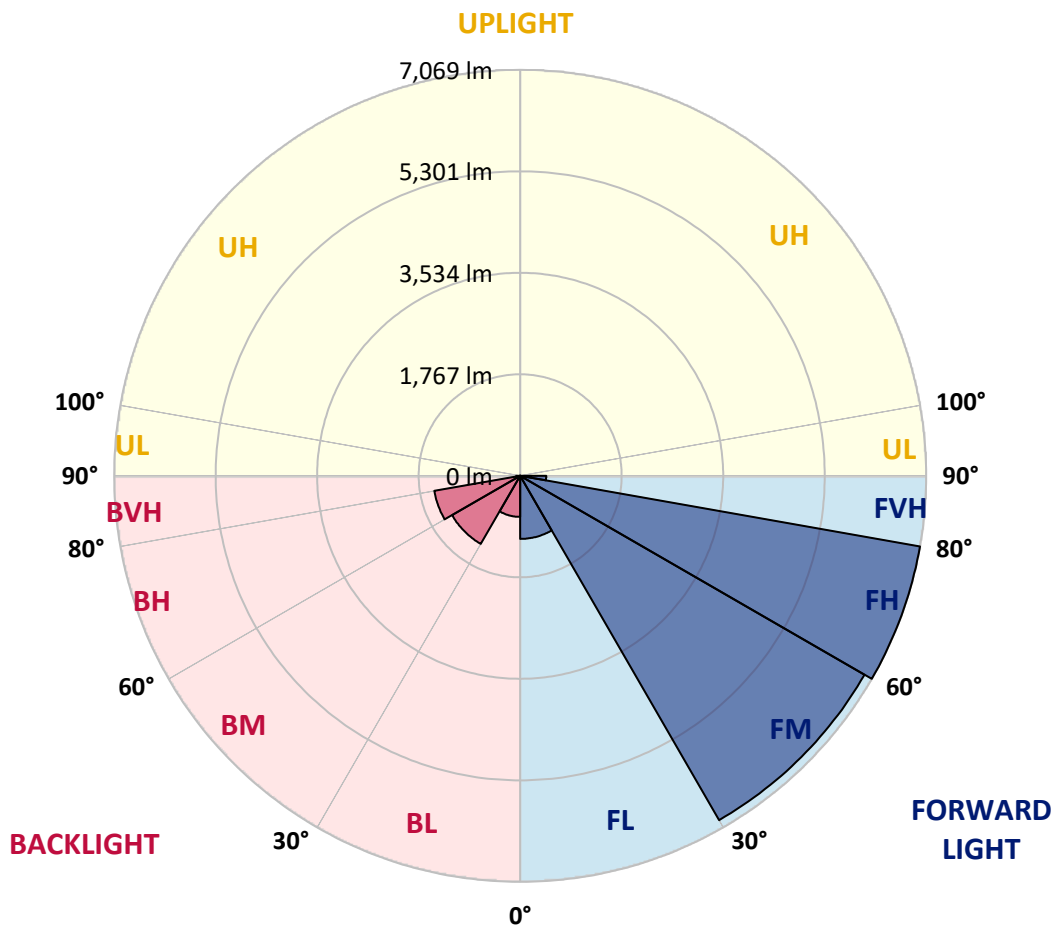
CATALOG NUMBER: MSA-SA4D-827-U-SL2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1098.6	5.7			
FM (30°-60°)	6922.8	36.0			
FH (60°-80°)	7068.5	36.8			G3/7500
FVH (80°-90°)	454.0	2.4			G3/500
BL (0°-30°)	714.7	3.7	B2/1000		
BM (30°-60°)	1369.1	7.1	B2/2500		
BH (60°-80°)	1517.3	7.9	B3/2500		G3/2500
BVH (80°-90°)	66.9	0.3			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G3

Type III Medium





REPORT NUMBER: P596810

CATALOG NUMBER: MSA-SA4D-827-U-SL2

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1473.1	1473.1	1473.1	1473.1	1473.1	1473.1	1473.1	1473.1	1473.1	1473.1	1473.1
2.5°	1692.6	1624.2	1555.1	1588.8	1642.7	1690.2	1680.5	1686.1	1621.0	1612.2	1783.4
5°	1994.1	1876.7	1874.3	1875.9	1880.7	1826.0	1959.5	2028.7	2043.9	2114.7	2282.7
7.5°	2098.6	2051.2	2002.9	2027.1	1965.9	1971.6	2135.6	2315.7	2358.3	2409.8	2639.8
10°	2076.9	2031.9	2046.4	2050.4	2061.6	2152.5	2257.8	2430.7	2466.9	2630.9	2690.4
12.5°	2080.1	2072.1	2139.6	2142.0	2262.6	2425.9	2467.7	2626.9	2641.4	2762.0	3010.4
15°	2190.3	2245.8	2208.0	2228.1	2251.4	2446.8	2507.1	2735.4	2822.3	2977.5	3164.0
17.5°	2405.0	2421.0	2307.7	2277.9	2354.3	2413.8	2551.3	2650.2	2741.1	3174.5	3431.8
20°	2454.8	2498.2	2363.2	2209.6	2371.2	2454.0	2549.7	2594.7	2665.5	3203.4	3568.5
22.5°	2668.7	2578.6	2415.4	2281.9	2335.0	2415.4	2484.6	2654.2	2840.0	3120.6	3705.1
25°	2790.1	2737.9	2592.3	2449.2	2404.2	2406.6	2540.0	2692.0	2756.3	3242.0	3732.5
27.5°	3083.6	3000.0	2672.7	2645.4	2475.7	2343.9	2548.9	2785.3	2897.9	3147.1	3866.0
30°	3451.1	3387.5	2958.2	2922.0	2663.1	2433.1	2661.5	2854.4	2838.4	3209.0	3958.4
32.5°	3748.6	3854.7	3421.3	3135.9	2951.7	2731.4	2626.1	2842.4	3002.4	3353.0	4115.2
35°	4173.1	4272.8	3782.3	3589.4	3189.7	2869.7	2872.9	3008.0	3106.9	3521.0	4290.5
37.5°	4908.0	4820.4	4425.6	4120.8	3865.2	3387.5	3244.4	3197.0	3276.6	3726.9	4633.8
40°	5437.9	5363.9	4899.2	4725.5	4227.8	3950.4	3558.0	3513.0	3653.7	3939.1	4914.5
42.5°	6065.9	5934.0	5501.4	5358.3	4838.1	4337.9	3942.3	3968.1	4036.4	4339.6	5294.0
45°	6705.1	6385.1	6139.9	6128.6	5781.2	5090.6	4559.1	4538.2	4540.6	4928.9	5720.1
47.5°	7212.5	6924.6	6644.0	6510.5	6335.2	6392.3	5454.8	5209.6	5135.6	5522.3	6359.4
50°	7555.8	7224.5	6906.9	6875.6	7343.6	7651.5	6295.9	6033.7	6079.6	6371.4	7211.7
52.5°	7563.1	7169.9	6838.6	7058.1	8160.5	8601.1	7744.8	7012.3	7158.6	7357.2	8323.7
55°	7037.2	6629.5	6414.0	6914.2	8479.7	9727.6	9780.7	8580.2	8411.4	8484.5	9652.8
57.5°	5928.4	5516.7	5391.3	5990.3	7874.2	10813.9	12239.5	10453.7	9958.4	9652.8	11014.9
60°	4462.6	4106.4	4028.4	4410.3	6528.2	10494.7	14230.4	12785.5	11776.4	10957.8	12381.0
62.5°	3346.5	3090.8	2973.4	3028.1	4517.3	9456.6	15537.8	15731.6	14302.8	12382.6	13715.8
65°	2719.4	2512.7	2408.2	2337.4	2809.4	7312.2	15301.4	18211.3	17253.7	13879.0	14754.6
67.5°	2271.5	2088.2	2039.9	2109.1	2220.8	4242.3	13452.1	19598.3	19663.5	15355.3	15361.7
70°	1885.5	1749.7	1732.0	1928.2	2075.3	2560.2	9716.4	19162.5	19881.4	16462.5	15219.4
72.5°	1457.0	1383.8	1381.4	1689.3	2061.6	2182.2	5786.1	16554.1	17519.8	16108.7	13826.7
75°	1010.7	960.1	998.7	1388.6	2014.2	2213.6	3302.3	12894.0	13616.9	13707.7	11076.0
77.5°	695.5	652.9	694.7	1004.3	1798.7	2266.7	2310.1	9323.2	9403.6	9192.1	6344.1
80°	484.0	454.3	486.5	710.8	1399.9	2243.3	1966.7	5869.7	5385.6	4102.4	2031.1
82.5°	299.9	291.1	326.5	506.6	985.8	2040.7	1863.8	3028.9	2312.5	1132.1	725.3
85°	157.6	144.7	189.8	330.5	616.7	1601.7	1746.4	1382.2	892.5	402.0	291.1
87.5°	46.6	41.8	73.2	133.5	261.3	718.0	999.5	586.2	332.9	118.2	90.9
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: P596810
 CATALOG NUMBER: MSA-SA4D-827-U-SL2

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1473.1	1473.1	1473.1	1473.1	1473.1	1473.1	1473.1	1473.1	1473.1	1473.1	1473.1
2.5°	1795.5	1786.6	1667.6	1682.9	1708.6	1715.1	1714.3	1670.9	1625.0	1752.9	1748.8
5°	2286.8	2207.2	2147.7	2134.8	2061.6	1988.5	2014.2	2005.3	1994.1	2052.0	2059.2
7.5°	2640.6	2530.4	2461.3	2283.6	2114.7	1968.4	2015.0	2029.5	2000.5	2105.0	2136.4
10°	2733.8	2647.0	2572.2	2343.9	2250.6	2165.4	2039.1	1895.2	1875.9	1815.6	1822.8
12.5°	2974.2	2962.2	2707.3	2506.3	2384.9	2215.2	1942.6	1768.1	1618.6	1625.8	1582.4
15°	3164.0	3170.4	2864.1	2582.7	2257.0	1998.1	1677.3	1460.2	1306.6	1276.1	1244.7
17.5°	3418.9	3406.0	2877.0	2491.0	2078.5	1699.0	1305.8	1090.3	1064.6	1082.3	1054.9
20°	3529.9	3416.5	2794.9	2263.5	1799.5	1290.5	986.6	872.4	922.3	993.0	994.6
22.5°	3629.6	3435.8	2752.3	2080.1	1428.0	938.3	792.0	771.1	829.8	925.5	933.5
25°	3625.5	3525.0	2675.9	1895.2	1107.2	732.5	688.3	703.6	773.5	873.2	878.8
27.5°	3808.1	3456.7	2477.3	1652.4	833.8	627.2	638.4	666.6	699.5	794.4	812.9
30°	3806.5	3583.7	2377.6	1357.3	669.8	574.9	603.9	628.0	655.3	742.2	752.6
32.5°	3896.5	3500.9	2317.3	1055.7	600.6	562.0	569.3	593.4	632.8	691.5	698.7
35°	4005.1	3595.0	2124.3	838.6	574.9	550.8	556.4	570.1	606.3	660.1	667.4
37.5°	4353.2	3612.7	2048.0	706.8	573.3	546.0	545.2	552.4	593.4	642.5	664.2
40°	4489.1	3774.3	1825.2	660.1	567.7	546.0	534.7	538.7	572.5	635.2	652.1
42.5°	4814.8	3828.2	1660.4	644.1	567.7	536.3	518.6	525.1	564.5	619.9	646.5
45°	5150.1	3904.6	1464.2	640.8	566.9	535.5	501.7	516.2	548.4	595.0	624.0
47.5°	5627.7	4179.5	1268.0	631.2	560.4	539.5	497.7	496.9	525.1	565.3	592.6
50°	6406.8	4608.9	1116.0	619.1	561.2	536.3	489.7	478.4	496.9	532.3	558.8
52.5°	7491.5	5340.6	1056.5	612.7	554.8	523.4	476.0	458.3	468.8	496.9	522.6
55°	8750.7	6328.8	1115.2	612.7	541.9	503.3	456.7	435.8	441.4	460.7	485.7
57.5°	10222.1	7556.6	1399.1	603.9	525.9	479.2	433.4	409.3	410.9	427.8	450.3
60°	11758.7	8928.4	2035.1	596.6	514.6	452.7	406.1	381.1	378.7	394.8	414.9
62.5°	13297.7	10194.0	2704.1	613.5	511.4	430.2	377.1	352.2	351.4	365.9	382.7
65°	14521.5	11059.1	2870.5	681.8	532.3	404.4	347.4	324.0	322.4	334.5	353.0
67.5°	15122.1	11184.6	2180.6	767.1	576.5	380.3	318.4	296.7	295.1	308.0	324.0
70°	14677.5	10327.4	1346.0	775.9	574.1	352.2	288.7	270.2	267.0	280.6	292.7
72.5°	13032.3	9033.7	1022.8	686.7	496.9	312.0	258.9	242.8	238.0	250.1	261.3
75°	10460.1	7172.3	819.3	554.0	391.6	262.9	229.2	213.9	208.3	219.5	229.2
77.5°	6093.2	4034.8	599.0	432.6	295.9	214.7	195.4	181.7	175.3	187.3	194.6
80°	1981.2	1344.4	376.3	310.4	216.3	168.1	158.4	148.8	142.3	150.4	152.8
82.5°	711.6	500.1	208.3	190.6	143.9	120.6	119.8	114.2	106.1	109.4	109.4
85°	315.2	228.4	123.8	102.1	86.0	64.3	75.6	71.6	63.5	61.9	59.5
87.5°	88.4	75.6	45.0	34.6	28.1	10.5	24.1	21.7	17.7	16.1	11.3
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)