

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: P368706

Luminaire Tested: **MSA-SA4D-830-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368706
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-10)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4D-830-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 20875 lumens
Efficiency: N/A
Efficacy: 80.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

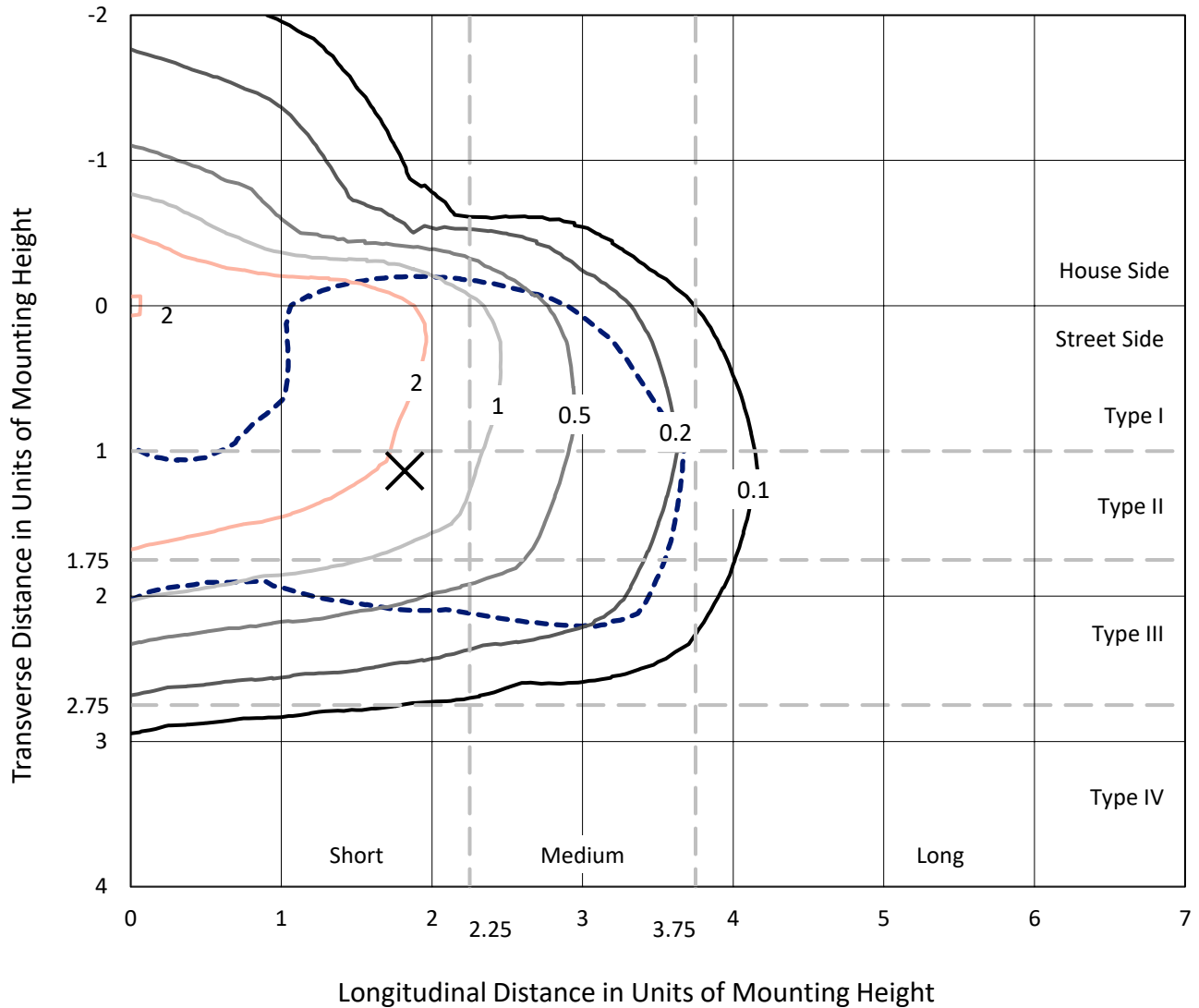
Input Watts (W): 259
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P368706
 CATALOG NUMBER: MSA-SA4D-830-U-T3

Iso-Footcandle Lines of Horizontal Illumination

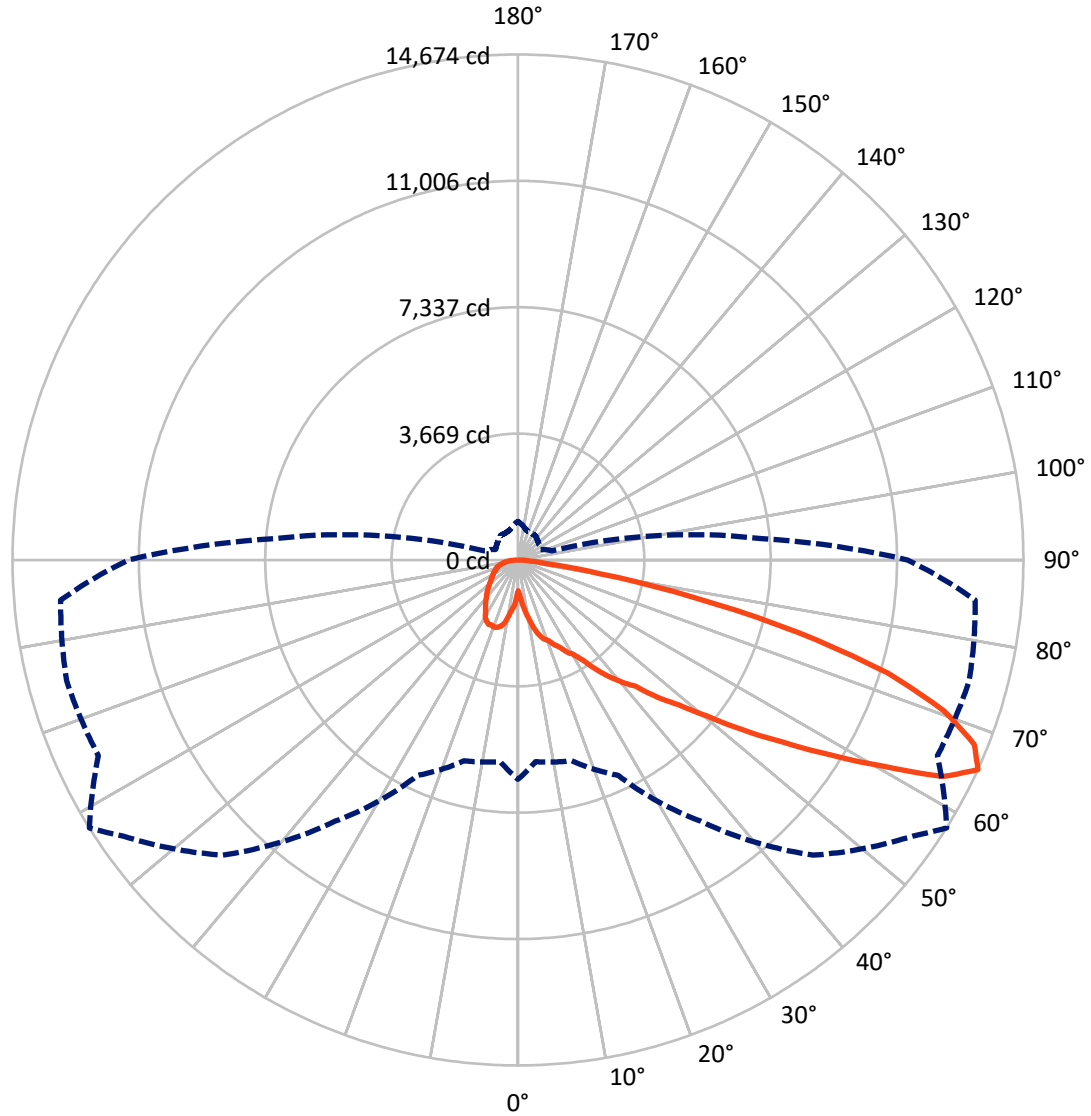
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 4.3 fc
 Type III - Short - N/A

REPORT NUMBER: P368706
CATALOG NUMBER: MSA-SA4D-830-U-T3

Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

REPORT NUMBER: P368706
 CATALOG NUMBER: MSA-SA4D-830-U-T3

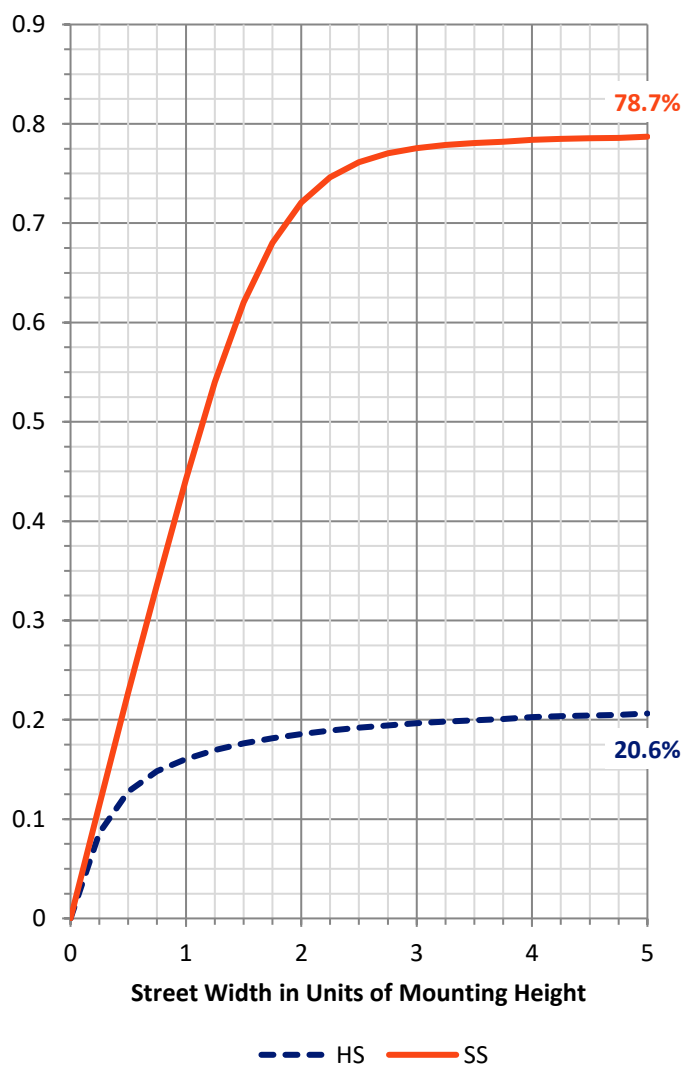
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4396.9	0.0	4396.9
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	16478.1	0.0	16478.1
	% Fixture	78.9	0.0	78.9
Total	Lumens	20875.0	0.0	20875.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	136.5	0.7
10°-20°	595.7	2.9
20°-30°	1143.2	5.5
30°-40°	1887.3	9.0
40°-50°	3136.9	15.0
50°-60°	5180.6	24.8
60°-70°	5811.6	27.8
70°-80°	2642.4	12.7
80°-90°	340.8	1.6
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°	20875.0	100.0
0°-180°	20875.0	100.0

Coefficient of Utilization

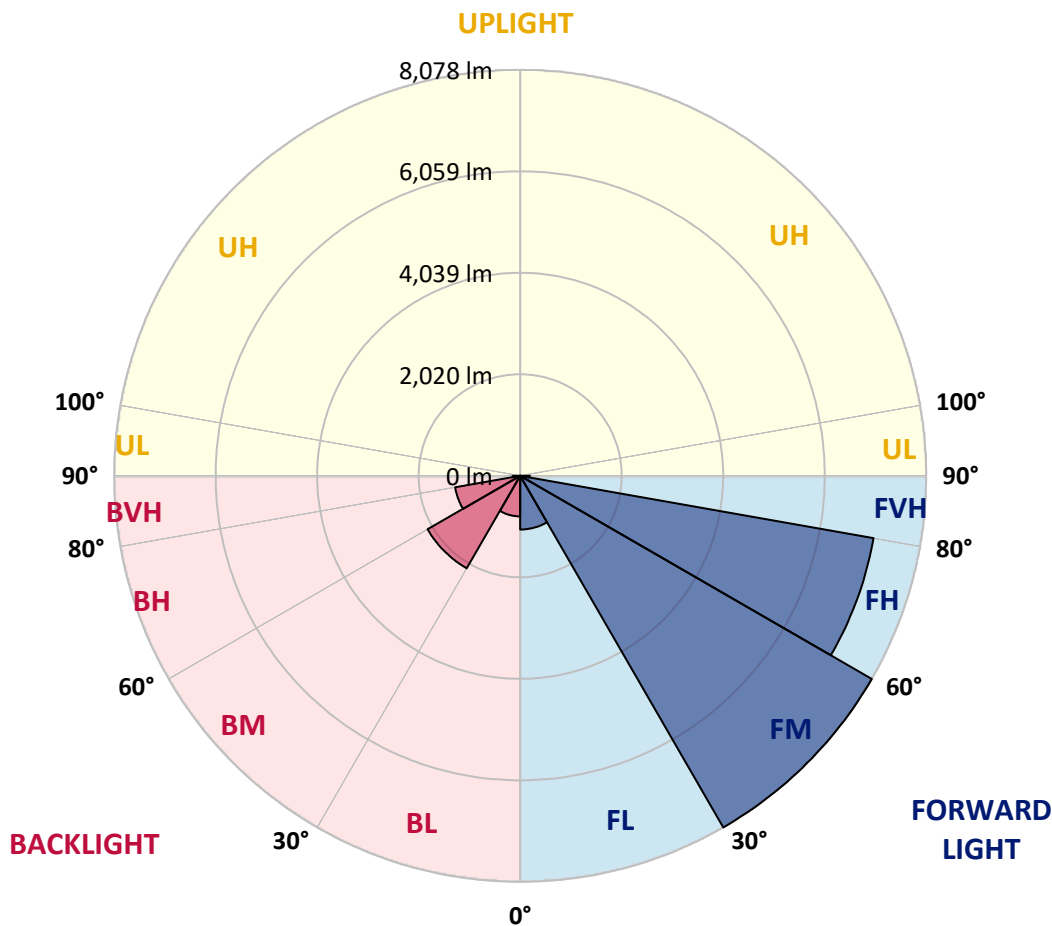


REPORT NUMBER: P368706
 CATALOG NUMBER: MSA-SA4D-830-U-T3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1068.2	5.1			
FM (30°-60°)	8078.3	38.7			
FH (60°-80°)	7139.7	34.2			G3/7500
FVH (80°-90°)	191.9	0.9			G2/225
BL (0°-30°)	807.2	3.9	B2/1000		
BM (30°-60°)	2126.5	10.2	B2/2500		
BH (60°-80°)	1314.3	6.3	B3/2500		G3/2500
BVH (80°-90°)	148.9	0.7			G2/225
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 Short





REPORT NUMBER: P368706

CATALOG NUMBER: MSA-SA4D-830-U-T3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	896.3	896.3	896.3	896.3	896.3	896.3	896.3	896.3	896.3	896.3	896.3
2.5°	1070.1	1038.0	984.1	997.1	1028.4	1045.8	1035.4	1021.5	1003.2	999.7	1079.7
5°	1385.7	1324.0	1298.8	1288.3	1250.1	1227.5	1266.6	1261.4	1282.3	1320.5	1398.7
7.5°	1616.1	1572.6	1530.9	1526.5	1452.6	1426.6	1478.7	1506.5	1543.9	1544.8	1650.9
10°	1739.5	1702.1	1701.3	1662.2	1656.1	1705.6	1706.5	1727.4	1731.7	1776.0	1755.2
12.5°	1873.4	1870.8	1918.6	1917.7	1973.4	2055.1	2014.2	2014.2	2026.4	1972.5	2038.6
15°	2192.4	2220.3	2130.7	2145.5	2145.5	2225.5	2222.9	2238.5	2275.9	2262.0	2232.4
17.5°	2524.5	2541.9	2442.8	2350.7	2357.6	2340.2	2402.8	2408.9	2373.3	2535.0	2499.3
20°	2738.4	2806.2	2597.6	2481.9	2504.5	2524.5	2527.1	2489.8	2471.5	2720.1	2671.4
22.5°	3002.7	2945.3	2754.0	2626.2	2660.1	2633.2	2628.0	2656.7	2681.9	2775.8	2854.9
25°	3179.1	3174.8	2945.3	2805.3	2767.9	2760.1	2813.1	2801.8	2861.8	3032.2	2982.7
27.5°	3435.6	3515.6	3108.7	3143.5	2979.2	2806.2	2976.6	3027.9	3135.7	3107.8	3218.3
30°	3932.8	3872.9	3447.8	3438.2	3252.2	3107.0	3225.2	3181.7	3375.6	3369.5	3451.2
32.5°	4338.8	4380.5	3845.9	3745.9	3607.7	3433.0	3354.7	3475.6	3579.9	3751.2	3797.2
35°	4768.3	4758.7	4253.6	4051.9	3823.3	3751.2	3847.6	3898.1	4119.7	4277.1	4167.6
37.5°	5435.9	5360.3	4782.2	4400.5	4229.3	4203.2	4368.4	4295.4	4535.3	4572.7	4634.4
40°	6056.6	5828.8	5265.5	4828.2	4556.1	4653.5	4658.7	4668.3	4797.0	4898.7	5203.8
42.5°	6646.9	6486.9	5756.7	5428.1	5027.3	4932.6	4991.7	5011.7	5336.8	5544.6	5967.1
45°	7453.6	7025.0	6462.6	6125.3	5676.7	5555.9	5514.1	5686.3	6000.1	6473.0	6835.5
47.5°	8136.0	7749.2	7212.8	6768.6	6267.0	6612.1	6375.7	6279.2	6700.8	7286.7	7863.9
50°	8702.0	8276.0	7750.1	7493.6	7413.6	7721.4	7107.6	7118.9	7504.9	8331.6	8993.2
52.5°	9140.1	8685.5	8219.5	8089.1	8535.9	8713.3	8269.9	8203.0	8484.6	9461.8	10256.3
55°	9549.6	9067.1	8707.2	8973.2	9726.0	9746.0	9714.7	9343.5	9682.6	10672.7	11563.8
57.5°	9654.8	9134.9	8895.8	9277.5	10295.5	11087.4	11398.6	10670.1	11015.3	11774.2	12683.5
60°	9113.2	8668.1	8572.4	9090.6	10603.2	11761.1	12574.0	12138.4	12008.9	12658.3	13467.6
62.5°	8003.9	7487.5	7564.9	8284.7	10278.9	12028.0	13502.4	13842.3	13058.2	13361.6	13810.1
65°	6370.4	5877.5	6034.0	6899.9	9261.0	12116.7	13977.1	14674.3	13437.2	13560.6	13325.1
67.5°	4492.7	4045.0	4242.3	5362.0	7704.0	10981.4	14058.8	14286.5	13033.8	12993.0	12000.2
70°	2545.4	2264.6	2478.5	3412.1	5437.6	8748.0	13418.1	13118.2	12310.6	11731.6	10040.7
72.5°	1167.5	1071.0	1173.6	1736.9	3130.5	5821.0	10954.4	11226.5	10607.5	9883.4	7638.8
75°	620.7	586.8	630.3	867.6	1464.8	3167.0	7783.1	8395.1	8065.6	7496.2	4983.0
77.5°	461.6	435.5	456.4	562.5	782.4	1238.8	4422.3	5194.2	5319.4	4795.2	2767.1
80°	353.8	333.0	353.8	425.1	541.6	588.5	1890.8	2421.1	2757.5	2228.1	1099.7
82.5°	262.5	248.6	280.8	319.0	380.8	367.7	671.1	835.4	1077.1	736.3	428.6
85°	208.6	191.3	203.4	216.5	243.4	201.7	306.9	343.4	363.4	304.3	158.2
87.5°	81.7	75.6	147.8	116.5	99.1	60.9	92.1	104.3	106.9	102.6	46.1
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: P368706

CATALOG NUMBER: MSA-SA4D-830-U-T3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	896.3	896.3	896.3	896.3	896.3	896.3	896.3	896.3	896.3	896.3	896.3
2.5°	1088.4	1079.7	1028.4	1044.9	1071.9	1077.1	1088.4	1057.1	1041.5	1098.8	1101.4
5°	1405.7	1358.8	1334.4	1337.0	1319.6	1292.7	1333.5	1360.5	1370.9	1413.5	1429.2
7.5°	1651.7	1595.2	1554.4	1507.4	1441.3	1398.7	1470.0	1522.2	1550.0	1638.7	1673.5
10°	1761.3	1716.1	1707.4	1648.2	1646.5	1645.6	1642.2	1623.9	1683.9	1675.2	1699.5
12.5°	1987.3	1977.7	1895.1	1871.7	1874.3	1871.7	1798.6	1795.2	1796.0	1876.0	1847.3
15°	2197.7	2199.4	2123.8	2038.6	1962.1	1938.6	1909.9	1896.9	1916.0	1961.2	1933.4
17.5°	2457.6	2466.3	2249.8	2115.1	2014.2	2011.6	1942.9	1862.1	1978.6	2006.4	1976.0
20°	2625.4	2588.9	2322.8	2096.8	2068.1	1989.9	1904.7	1793.4	1894.3	1962.1	1981.2
22.5°	2784.5	2721.0	2390.7	2129.0	1991.6	1898.6	1816.0	1743.9	1776.0	1851.7	1839.5
25°	2892.3	2874.9	2484.5	2206.4	1989.0	1782.1	1670.8	1624.8	1641.3	1758.7	1747.3
27.5°	3149.6	2961.8	2468.0	2226.3	1905.6	1623.0	1567.4	1517.8	1501.3	1628.3	1663.0
30°	3321.7	3244.3	2578.4	2195.1	1800.4	1492.6	1410.9	1400.5	1405.7	1550.0	1559.6
32.5°	3613.8	3413.0	2759.2	2075.1	1647.4	1396.1	1302.3	1306.6	1330.1	1435.3	1457.0
35°	3918.1	3798.1	2783.6	1989.0	1523.1	1293.6	1255.3	1224.9	1237.9	1330.1	1334.4
37.5°	4483.1	4068.5	2933.1	1856.0	1431.8	1254.4	1181.4	1154.5	1161.4	1213.6	1251.0
40°	4980.4	4611.8	2863.6	1727.4	1318.8	1202.3	1111.0	1091.0	1070.1	1121.4	1144.9
42.5°	5777.6	4999.5	2840.1	1585.7	1265.7	1131.9	1069.3	1016.2	996.3	1039.7	1082.3
45°	6574.7	5410.7	2712.3	1442.2	1191.0	1126.6	1008.4	958.0	963.2	1002.3	1045.8
47.5°	7463.2	5962.7	2495.8	1303.1	1109.3	1101.4	947.6	925.8	941.5	984.9	1028.4
50°	8513.3	6548.6	2316.8	1177.9	1051.0	1025.8	939.7	913.7	928.4	979.7	1022.3
52.5°	9661.7	7191.1	2186.4	1062.3	984.9	965.8	950.2	925.0	942.4	986.7	1031.0
55°	10803.1	7777.9	2097.7	983.2	928.4	940.6	971.9	953.7	962.3	995.4	1039.7
57.5°	11649.9	8087.4	1919.5	898.9	882.4	925.8	974.5	944.1	949.3	995.4	1043.2
60°	12141.9	8146.5	1626.5	830.2	845.9	896.3	947.6	908.4	905.0	980.6	1040.6
62.5°	12088.0	7803.1	1290.1	767.6	804.1	851.9	906.7	869.3	878.9	982.3	1045.8
65°	11316.0	7101.5	1025.8	714.6	753.7	803.3	872.8	858.0	904.1	1051.9	1120.6
67.5°	9959.9	6076.6	824.1	665.0	706.8	770.2	896.3	935.4	955.4	1123.2	1193.6
70°	8071.7	4721.3	686.8	621.6	669.4	785.9	964.1	956.3	939.7	1089.3	1144.9
72.5°	5831.5	3236.5	604.2	579.0	623.3	738.9	965.8	924.1	903.2	994.5	1034.5
75°	3648.6	1930.8	527.7	525.1	552.9	662.4	922.4	885.0	828.5	873.7	925.8
77.5°	2083.8	988.4	444.2	467.7	484.2	574.6	825.9	792.0	741.5	760.7	812.0
80°	795.4	478.1	374.7	415.5	411.2	486.8	699.8	692.0	634.6	640.7	672.0
82.5°	374.7	267.8	311.2	357.3	333.8	387.7	568.5	565.9	515.5	466.8	492.0
85°	139.1	142.6	227.8	272.1	232.1	250.4	411.2	399.9	351.2	296.4	327.7
87.5°	31.3	51.3	112.1	141.7	80.8	77.4	166.0	144.3	139.1	82.6	86.9
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)