

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: P368156

Luminaire Tested: **MSA-SA3D-760-U-T3**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368156
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-SA3D-760-U-T3
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19876 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B3 - U0 - G3

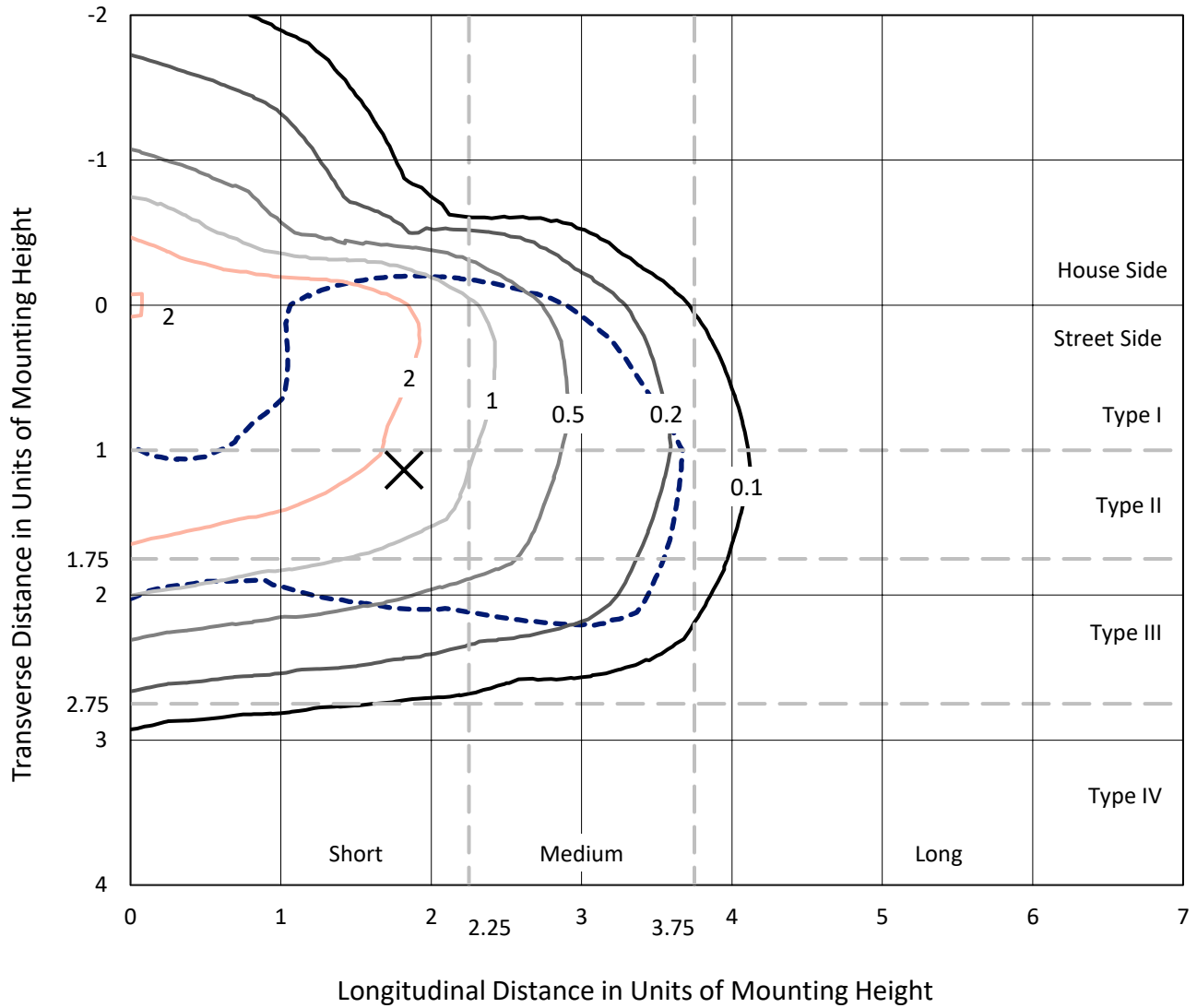
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

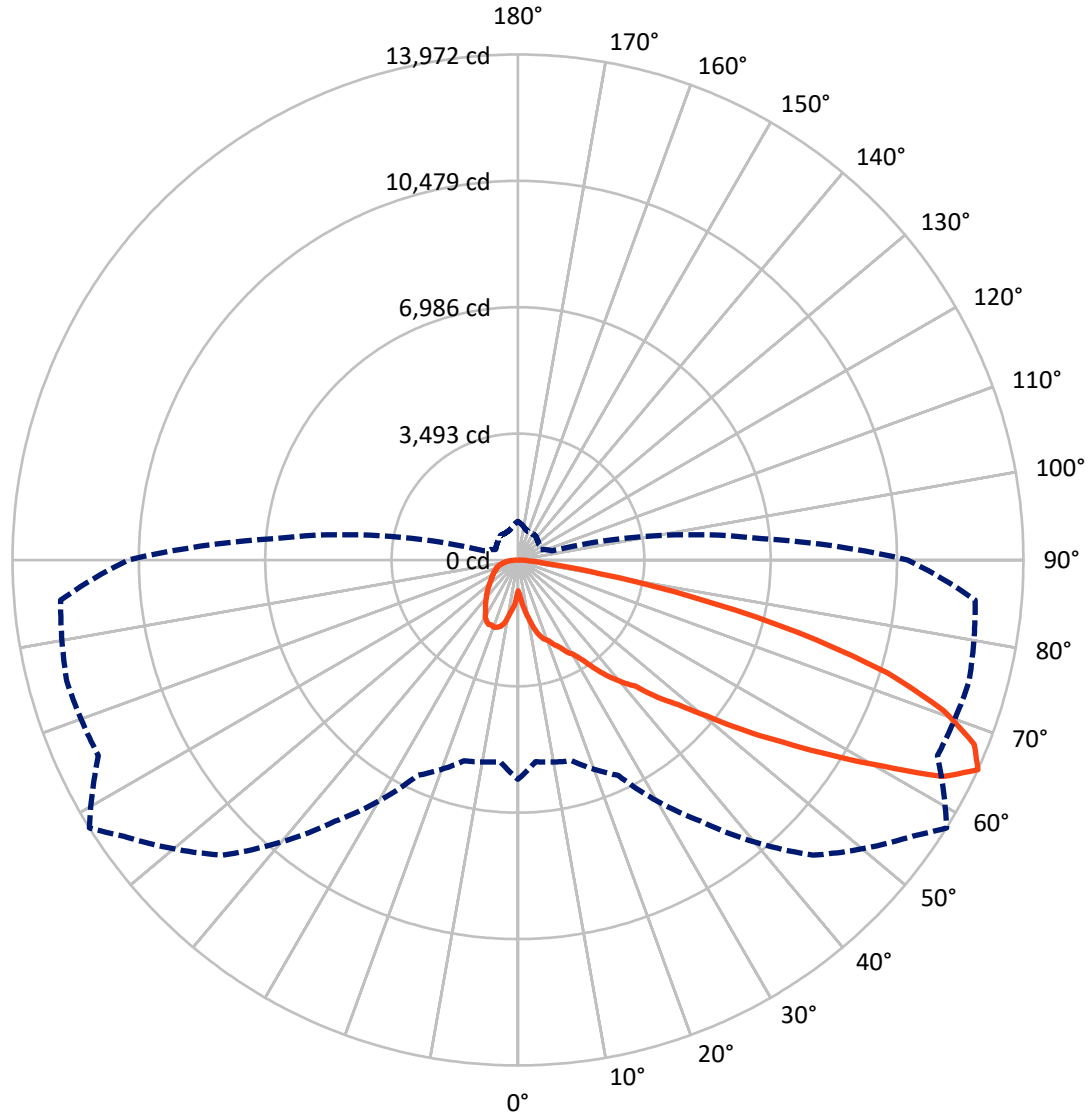
✕ Max cd
 - - - 1/2 Max cd



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

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Luminous Intensity Polar Plot



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

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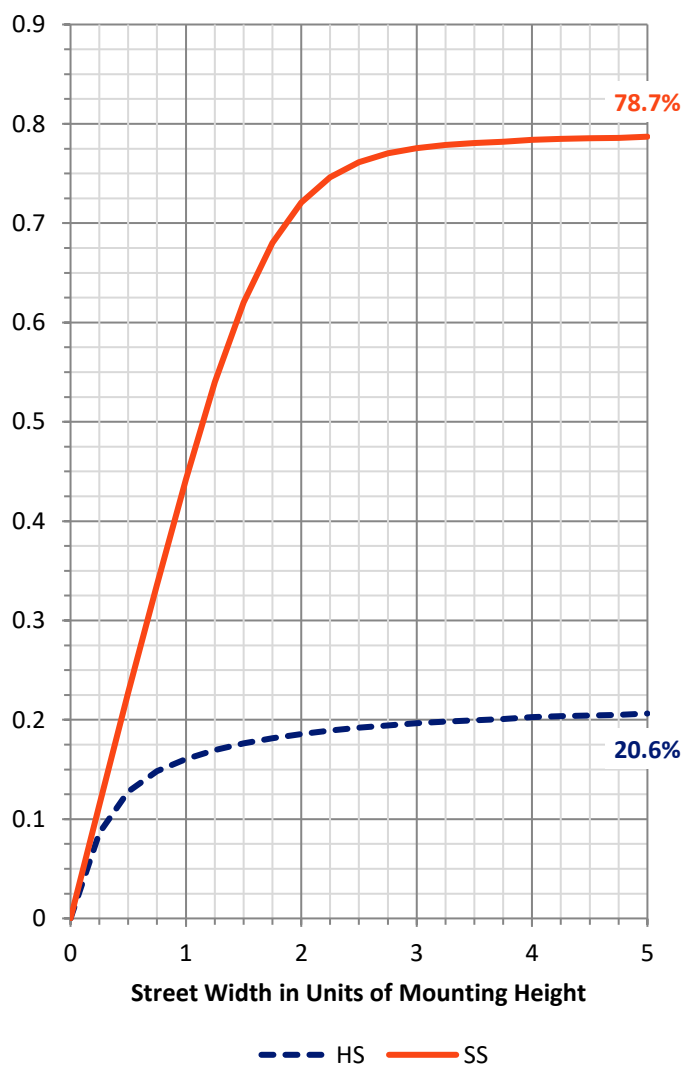
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	4186.5	0.0	4186.5
	% Fixture	21.1	0.0	21.1
Street Side	Lumens	15689.5	0.0	15689.5
	% Fixture	78.9	0.0	78.9
Total	Lumens	19876.0	0.0	19876.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	130.0	0.7
10°-20°	567.2	2.9
20°-30°	1088.4	5.5
30°-40°	1797.0	9.0
40°-50°	2986.8	15.0
50°-60°	4932.6	24.8
60°-70°	5533.5	27.8
70°-80°	2516.0	12.7
80°-90°	324.5	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°	19876.0	100.0
0°-180°	19876.0	100.0

Coefficient of Utilization

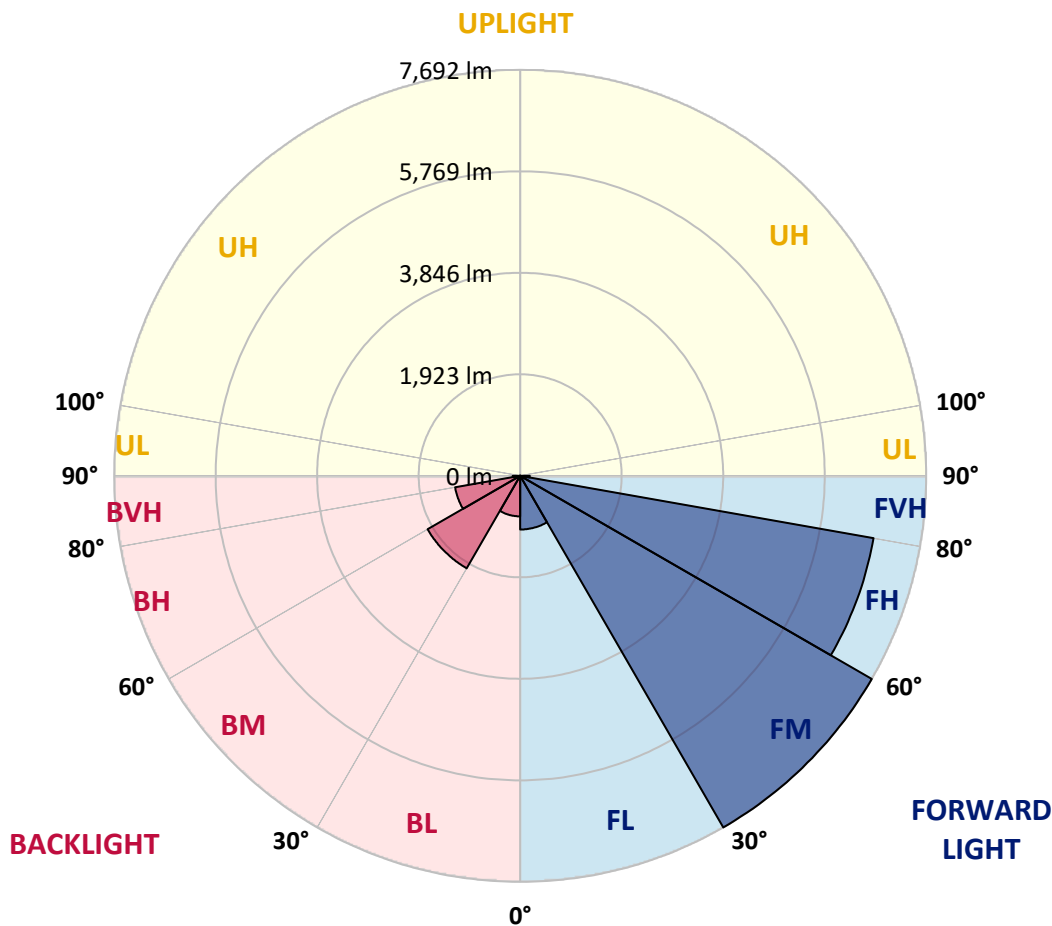


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1017.1	5.1			
FM (30°-60°)	7691.7	38.7			
FH (60°-80°)	6798.0	34.2			G3/7500
FVH (80°-90°)	182.7	0.9			G2/225
BL (0°-30°)	768.6	3.9	B2/1000		
BM (30°-60°)	2024.7	10.2	B2/2500		
BH (60°-80°)	1251.4	6.3	B3/2500		G3/2500
BVH (80°-90°)	141.8	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	853.4	853.4	853.4	853.4	853.4	853.4	853.4	853.4	853.4	853.4	853.4
2.5°	1018.9	988.3	937.0	949.4	979.2	995.8	985.8	972.6	955.2	951.9	1028.0
5°	1319.4	1260.6	1236.6	1226.7	1190.3	1168.7	1206.0	1201.0	1220.9	1257.3	1331.8
7.5°	1538.7	1497.4	1457.6	1453.5	1383.1	1358.3	1408.0	1434.4	1470.0	1470.9	1571.9
10°	1656.3	1620.7	1619.9	1582.6	1576.8	1624.0	1624.8	1644.7	1648.8	1691.0	1671.2
12.5°	1783.7	1781.3	1826.8	1826.0	1878.9	1956.7	1917.8	1917.8	1929.4	1878.1	1941.0
15°	2087.5	2114.0	2028.8	2042.8	2042.8	2119.0	2116.5	2131.4	2167.0	2153.7	2125.6
17.5°	2403.7	2420.3	2325.9	2238.2	2244.8	2228.2	2287.8	2293.6	2259.7	2413.6	2379.7
20°	2607.3	2671.9	2473.2	2363.2	2384.7	2403.7	2406.2	2370.6	2353.2	2590.0	2543.6
22.5°	2859.0	2804.3	2622.2	2500.6	2532.8	2507.2	2502.2	2529.5	2553.5	2642.9	2718.2
25°	3027.0	3022.9	2804.3	2671.1	2635.5	2628.0	2678.5	2667.8	2724.9	2887.1	2839.9
27.5°	3271.2	3347.3	2959.9	2993.1	2836.6	2671.9	2834.1	2883.0	2985.6	2959.1	3064.2
30°	3744.6	3687.5	3282.8	3273.7	3096.5	2958.3	3070.9	3029.5	3214.1	3208.3	3286.1
32.5°	4131.2	4170.9	3661.9	3566.7	3435.1	3268.7	3194.2	3309.2	3408.6	3571.6	3615.5
35°	4540.1	4531.0	4050.1	3858.0	3640.3	3571.6	3663.5	3711.5	3922.6	4072.4	3968.1
37.5°	5175.8	5103.8	4553.3	4189.9	4026.9	4002.1	4159.3	4089.8	4318.2	4353.8	4412.6
40°	5766.8	5549.9	5013.5	4597.2	4338.1	4430.8	4435.8	4444.9	4567.4	4664.2	4954.8
42.5°	6328.8	6176.5	5481.2	5168.3	4786.7	4696.5	4752.8	4771.8	5081.4	5279.2	5681.5
45°	7096.9	6688.8	6153.3	5832.2	5405.0	5290.0	5250.3	5414.2	5713.0	6163.2	6508.4
47.5°	7746.7	7378.3	6867.6	6444.7	5967.1	6295.7	6070.5	5978.7	6380.1	6938.0	7487.6
50°	8285.5	7879.9	7379.2	7135.0	7058.8	7351.9	6767.5	6778.2	7145.8	7932.9	8562.8
52.5°	8702.7	8269.8	7826.1	7702.0	8127.4	8296.3	7874.2	7810.4	8078.6	9009.0	9765.5
55°	9092.6	8633.2	8290.5	8543.8	9260.6	9279.6	9249.8	8896.4	9219.2	10162.0	11010.4
57.5°	9192.7	8697.7	8470.1	8833.5	9802.8	10556.8	10853.1	10159.5	10488.1	11210.7	12076.5
60°	8677.0	8253.2	8162.2	8655.5	10095.8	11198.3	11972.2	11557.5	11434.2	12052.5	12823.1
62.5°	7620.9	7129.2	7202.9	7888.2	9787.0	11452.4	12856.2	13179.9	12433.3	12722.1	13149.2
65°	6065.6	5596.3	5745.2	6569.7	8817.8	11536.8	13308.2	13972.0	12794.2	12911.7	12687.4
67.5°	4277.7	3851.4	4039.3	5105.4	7335.3	10455.8	13386.0	13602.8	12410.1	12371.2	11425.9
70°	2423.6	2156.2	2359.8	3248.8	5177.4	8329.4	12775.9	12490.4	11721.4	11170.2	9560.2
72.5°	1111.6	1019.8	1117.4	1653.8	2980.6	5542.4	10430.2	10689.2	10099.9	9410.4	7273.2
75°	591.0	558.7	600.1	826.1	1394.7	3015.4	7410.6	7993.3	7679.6	7137.5	4744.5
77.5°	439.5	414.7	434.6	535.5	745.0	1179.5	4210.6	4945.7	5064.9	4565.7	2634.6
80°	336.9	317.0	336.9	404.8	515.7	560.4	1800.3	2305.2	2625.5	2121.5	1047.1
82.5°	250.0	236.7	267.4	303.8	362.5	350.1	639.0	795.4	1025.6	701.1	408.1
85°	198.7	182.1	193.7	206.1	231.8	192.0	292.2	327.0	346.0	289.7	150.6
87.5°	77.8	72.0	140.7	110.9	94.4	57.9	87.7	99.3	101.8	97.7	43.9
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°	853.4	853.4	853.4	853.4	853.4	853.4	853.4	853.4	853.4	853.4	853.4
2.5°	1036.3	1028.0	979.2	994.9	1020.6	1025.6	1036.3	1006.5	991.6	1046.2	1048.7
5°	1338.4	1293.7	1270.6	1273.0	1256.5	1230.8	1269.7	1295.4	1305.3	1345.9	1360.8
7.5°	1572.7	1518.9	1480.0	1435.3	1372.4	1331.8	1399.7	1449.3	1475.8	1560.3	1593.4
10°	1677.0	1633.9	1625.7	1569.4	1567.7	1566.9	1563.6	1546.2	1603.3	1595.0	1618.2
12.5°	1892.2	1883.1	1804.4	1782.1	1784.6	1782.1	1712.6	1709.3	1710.1	1786.2	1758.9
15°	2092.5	2094.1	2022.1	1941.0	1868.2	1845.8	1818.5	1806.1	1824.3	1867.3	1840.9
17.5°	2340.0	2348.3	2142.2	2013.9	1917.8	1915.4	1850.0	1773.0	1883.9	1910.4	1881.4
20°	2499.7	2465.0	2211.7	1996.5	1969.2	1894.7	1813.5	1707.6	1803.6	1868.2	1886.4
22.5°	2651.2	2590.8	2276.2	2027.1	1896.3	1807.8	1729.1	1660.4	1691.0	1763.1	1751.5
25°	2753.8	2737.3	2365.6	2100.8	1893.8	1696.8	1590.9	1547.0	1562.7	1674.5	1663.7
27.5°	2998.8	2820.1	2349.9	2119.8	1814.4	1545.4	1492.4	1445.2	1429.5	1550.3	1583.4
30°	3162.7	3089.1	2455.0	2090.0	1714.2	1421.2	1343.4	1333.5	1338.4	1475.8	1484.9
32.5°	3440.9	3249.6	2627.2	1975.8	1568.5	1329.3	1239.9	1244.1	1266.4	1366.6	1387.3
35°	3730.6	3616.3	2650.4	1893.8	1450.2	1231.7	1195.2	1166.3	1178.7	1266.4	1270.6
37.5°	4268.6	3873.8	2792.7	1767.2	1363.3	1194.4	1124.9	1099.2	1105.8	1155.5	1191.1
40°	4742.0	4391.1	2726.5	1644.7	1255.7	1144.7	1057.8	1038.8	1018.9	1067.8	1090.1
42.5°	5501.1	4760.2	2704.2	1509.8	1205.2	1077.7	1018.1	967.6	948.6	990.0	1030.5
45°	6260.1	5151.8	2582.5	1373.2	1134.0	1072.7	960.2	912.2	917.1	954.4	995.8
47.5°	7106.0	5677.4	2376.4	1240.8	1056.2	1048.7	902.2	881.5	896.4	937.8	979.2
50°	8105.9	6235.3	2205.9	1121.6	1000.7	976.7	894.8	869.9	884.0	932.8	973.4
52.5°	9199.3	6846.9	2081.7	1011.5	937.8	919.6	904.7	880.7	897.3	939.5	981.7
55°	10286.1	7405.7	1997.3	936.2	884.0	895.6	925.4	908.0	916.3	947.7	990.0
57.5°	11092.3	7700.3	1827.6	855.9	840.1	881.5	927.9	898.9	903.9	947.7	993.3
60°	11560.8	7756.6	1548.7	790.5	805.4	853.4	902.2	865.0	861.7	933.7	990.8
62.5°	11509.5	7429.7	1228.3	730.9	765.6	811.2	863.3	827.7	836.8	935.3	995.8
65°	10774.5	6761.7	976.7	680.4	717.6	764.8	831.0	817.0	860.8	1001.5	1066.9
67.5°	9483.2	5785.8	784.7	633.2	672.9	733.4	853.4	890.6	909.7	1069.4	1136.5
70°	7685.4	4495.4	653.9	591.8	637.3	748.3	917.9	910.5	894.8	1037.1	1090.1
72.5°	5552.4	3081.6	575.3	551.3	593.5	703.6	919.6	879.9	860.0	946.9	985.0
75°	3474.0	1838.4	502.4	499.9	526.4	630.7	878.2	842.6	788.8	831.9	881.5
77.5°	1984.1	941.1	423.0	445.3	461.0	547.1	786.3	754.1	706.0	724.3	773.1
80°	757.4	455.2	356.7	395.7	391.5	463.5	666.3	658.9	604.2	610.0	639.8
82.5°	356.7	254.9	296.3	340.2	317.8	369.2	541.3	538.8	490.8	444.5	468.5
85°	132.4	135.7	216.9	259.1	221.0	238.4	391.5	380.8	334.4	282.3	312.1
87.5°	29.8	48.8	106.8	134.9	77.0	73.7	158.1	137.4	132.4	78.6	82.8
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)