

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: P368560

Luminaire Tested: **MSA-SA4C-830-U-RW**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368560
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-830-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 19636 lumens
Efficiency: N/A
Efficacy: 87.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G4

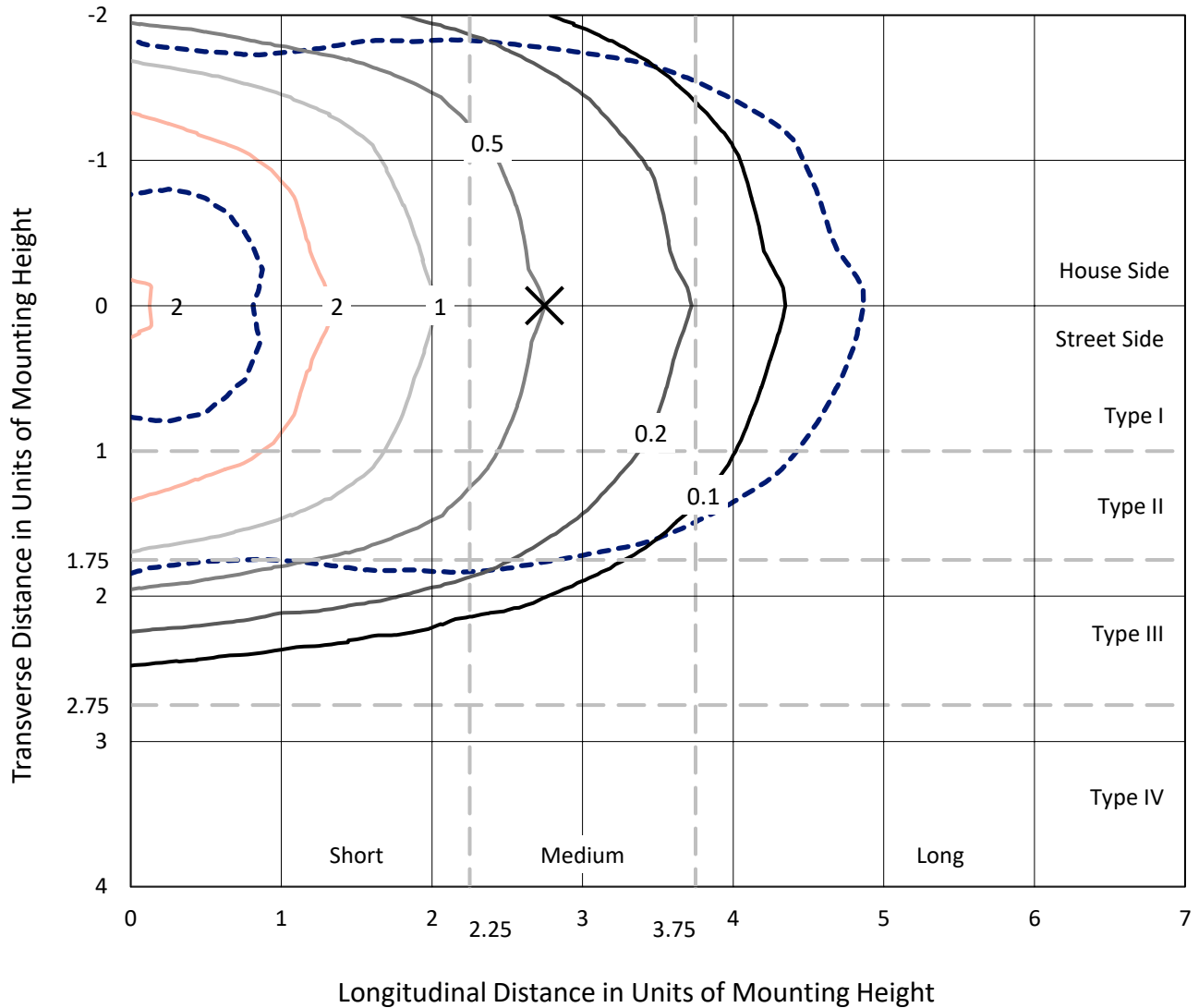
Input Watts (W): 225
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

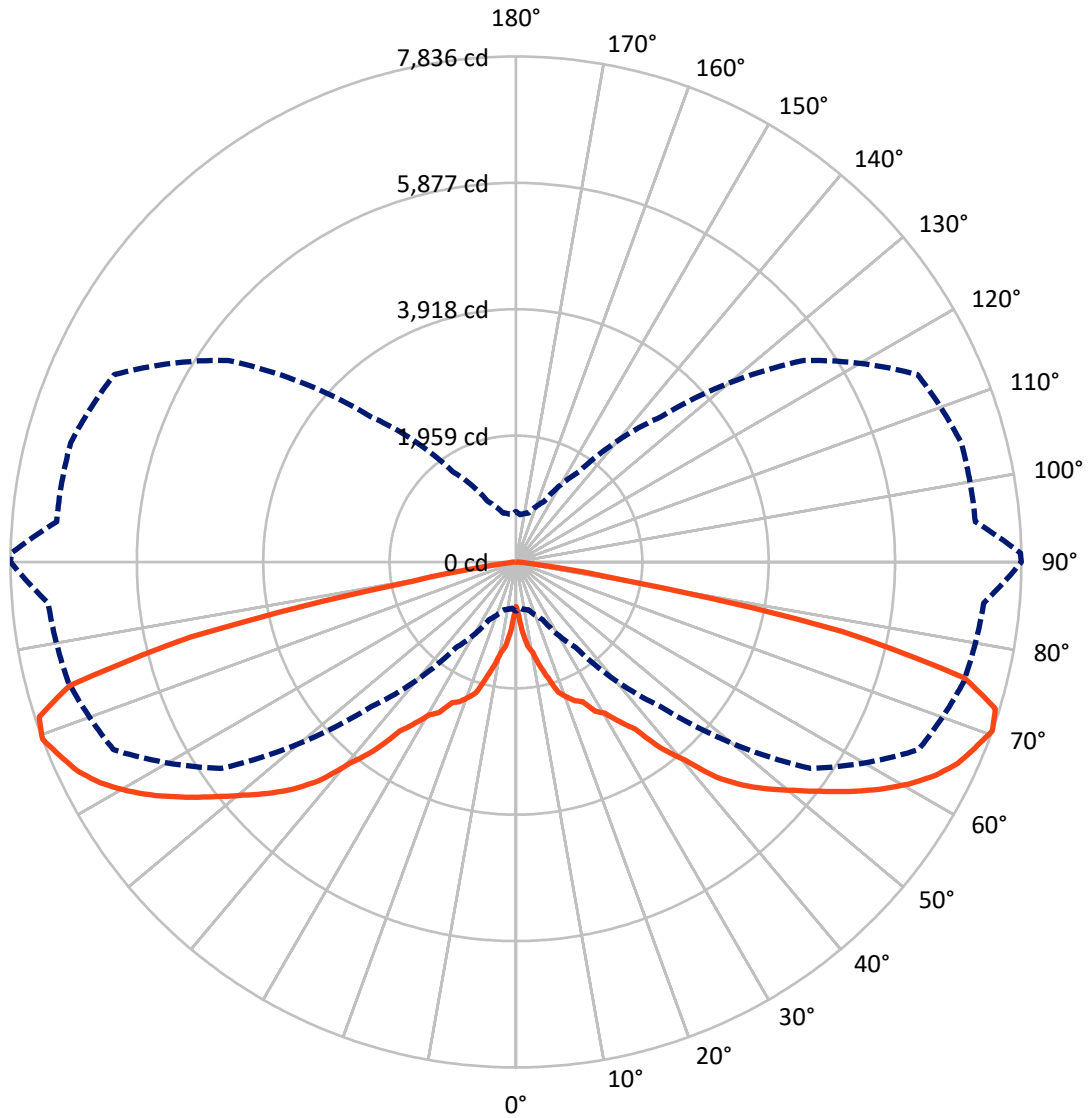
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 90-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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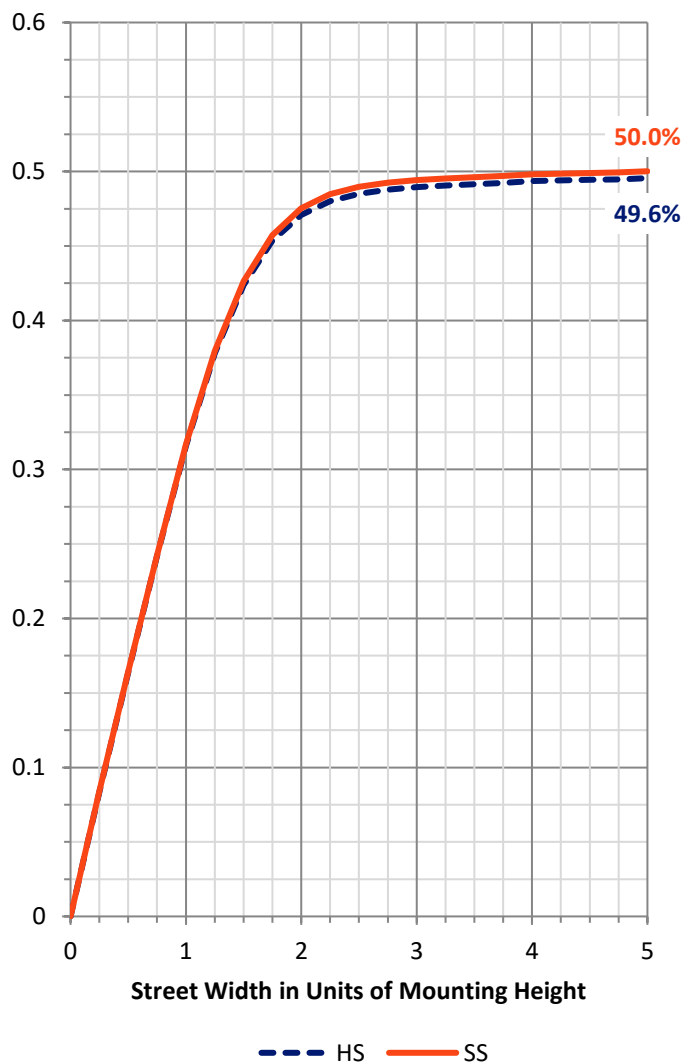
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	9781.6	0.0	9781.6
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	9854.4	0.0	9854.4
	% Fixture	50.2	0.0	50.2
Total	Lumens	19636.0	0.0	19636.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	103.9	0.5
10°-20°	476.5	2.4
20°-30°	1030.2	5.2
30°-40°	1965.6	10.0
40°-50°	3570.8	18.2
50°-60°	5016.2	25.5
60°-70°	4789.4	24.4
70°-80°	2458.0	12.5
80°-90°	225.4	1.1
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°	19636.0	100.0
0°-180°	19636.0	100.0

Coefficient of Utilization



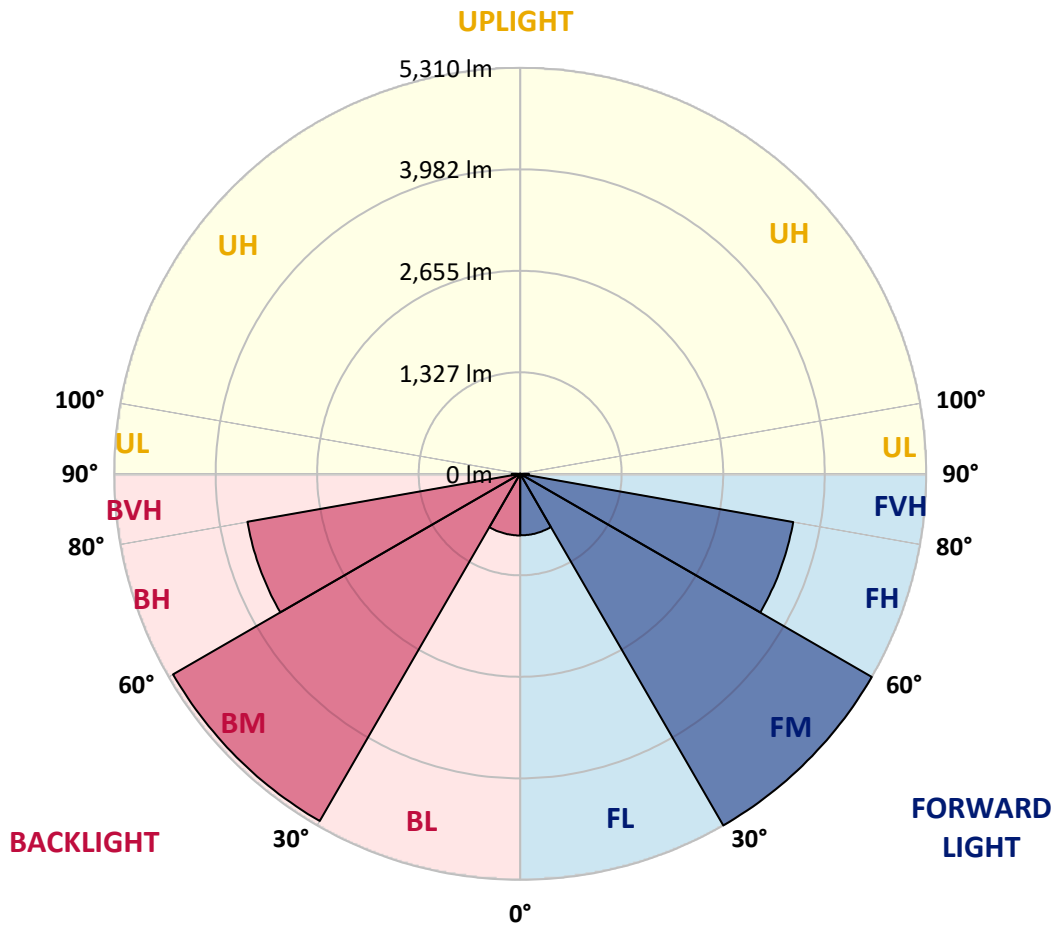
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	804.5	4.1			
FM (30°-60°)	5309.8	27.0			
FH (60°-80°)	3625.7	18.5			G2/5000
FVH (80°-90°)	114.4	0.6			G2/225
BL (0°-30°)	806.1	4.1	B2/1000		
BM (30°-60°)	5242.8	26.7	B4/8500		
BH (60°-80°)	3621.7	18.4	B4/5000		G4/5000
BVH (80°-90°)	111.0	0.6			G2/225
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G4

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	689.2	689.2	689.2	689.2	689.2	689.2	689.2	689.2	689.2	689.2	689.2
2.5°	834.8	803.8	764.8	787.9	797.4	814.1	811.7	803.8	769.6	826.9	833.2
5°	1044.9	995.6	977.3	974.1	978.9	962.9	1014.7	999.5	1027.4	1079.1	1091.1
7.5°	1189.7	1153.1	1114.1	1126.1	1076.7	1069.6	1136.4	1196.1	1211.2	1305.9	1312.3
10°	1258.2	1222.4	1232.7	1225.6	1220.0	1266.1	1297.2	1341.0	1403.8	1412.6	1426.1
12.5°	1316.3	1330.6	1376.0	1374.4	1449.2	1531.2	1519.2	1564.6	1574.9	1684.7	1651.3
15°	1463.5	1493.0	1489.8	1517.6	1550.3	1684.7	1685.5	1762.7	1833.6	1876.5	1865.4
17.5°	1679.2	1689.5	1646.5	1648.1	1742.8	1797.8	1859.0	1845.5	2030.1	2114.5	2120.1
20°	1808.1	1834.4	1785.0	1719.8	1887.7	1963.3	1997.5	1918.7	2116.1	2229.9	2229.9
22.5°	2033.3	1965.7	1890.9	1847.1	1995.1	2075.5	2071.5	2049.2	2154.3	2355.6	2336.5
25°	2157.5	2119.3	2081.9	2093.0	2167.8	2209.2	2264.1	2212.4	2311.1	2460.7	2397.8
27.5°	2393.0	2322.2	2138.4	2284.8	2284.8	2253.8	2369.9	2394.6	2330.2	2573.7	2620.6
30°	2659.6	2635.0	2374.7	2529.9	2482.2	2394.6	2617.4	2601.5	2493.3	2741.6	2720.1
32.5°	2911.9	2993.1	2746.4	2661.2	2732.8	2766.3	2649.3	2697.0	2717.7	2957.3	2946.9
35°	3298.7	3367.1	3040.0	3018.5	2899.2	2868.1	2957.3	2973.2	2974.8	3227.0	3180.9
37.5°	3968.0	3869.3	3546.2	3394.2	3407.7	3370.3	3387.8	3262.1	3279.6	3645.6	3668.7
40°	4457.4	4346.0	3986.3	3877.2	3609.8	3769.8	3628.1	3615.4	3580.4	4054.7	4042.0
42.5°	4997.7	4844.9	4447.0	4301.4	4017.3	3952.0	3886.8	4034.0	4024.5	4463.7	4560.8
45°	5406.0	5097.2	4889.5	4798.8	4628.5	4468.5	4406.4	4472.5	4442.3	4768.5	4938.1
47.5°	5663.8	5395.7	5156.9	4965.9	4802.8	5195.1	4880.8	4792.4	4731.1	5096.4	5259.6
50°	5869.2	5559.6	5277.9	5214.2	5343.1	5690.1	5194.3	4999.3	5074.1	5343.1	5565.2
52.5°	5924.9	5597.0	5343.9	5303.3	5651.9	5714.8	5634.4	5306.5	5286.6	5639.2	5907.4
55°	5754.6	5440.2	5320.0	5542.1	5927.3	5874.7	5997.3	5788.0	5647.1	5941.6	6279.0
57.5°	5316.1	5004.1	4975.5	5295.4	5780.8	6228.1	6288.6	6123.0	5938.4	6250.4	6648.3
60°	4595.9	4311.0	4383.4	4736.7	5468.9	6105.5	6427.0	6275.8	6218.5	6528.9	6990.5
62.5°	3474.5	3252.5	3445.9	3938.5	4899.1	5947.2	6618.0	6594.2	6511.4	6824.9	7292.9
65°	2215.6	2098.6	2295.9	2796.5	4014.9	5659.1	6709.5	6741.4	6817.8	7053.3	7526.9
67.5°	1287.6	1225.6	1345.7	1755.6	2859.4	4646.8	6539.2	6996.0	7035.8	7171.1	7680.4
70°	761.6	721.0	770.4	986.0	1618.7	3165.8	5577.9	6884.6	7185.4	7279.4	7835.6
72.5°	580.9	542.7	521.3	583.3	845.2	1635.4	3771.4	5835.7	7065.3	7207.7	7770.4
75°	502.2	465.6	440.1	445.7	503.0	776.7	2044.5	4174.1	6020.4	6563.1	7177.5
77.5°	431.3	398.7	380.4	378.8	386.0	426.6	854.7	2263.3	3770.6	4717.6	5174.4
80°	345.4	319.9	315.9	315.9	305.6	302.4	425.0	861.1	1434.9	1701.5	1631.4
82.5°	252.3	226.8	252.3	249.1	233.2	220.4	270.6	372.4	442.5	349.4	276.1
85°	170.3	147.2	166.3	169.5	154.4	114.6	162.3	186.2	191.0	119.4	98.7
87.5°	59.7	58.1	93.9	82.0	66.8	39.0	59.7	64.5	67.6	42.2	28.6
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):

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	689.2	689.2	689.2	689.2	689.2	689.2	689.2	689.2	689.2	689.2	689.2
2.5°	835.6	826.1	778.3	785.5	803.8	812.5	821.3	785.5	768.0	823.7	818.1
5°	1094.3	1059.2	1020.2	1014.7	1017.1	982.8	1002.7	994.0	998.0	1033.8	1040.9
7.5°	1310.7	1268.5	1216.8	1176.2	1106.2	1050.5	1097.4	1121.3	1128.5	1192.1	1216.0
10°	1427.7	1391.9	1376.8	1300.4	1277.3	1270.1	1259.0	1220.8	1263.0	1247.8	1259.8
12.5°	1656.9	1649.7	1570.9	1520.8	1525.6	1539.1	1469.1	1430.9	1376.0	1461.9	1430.9
15°	1851.9	1882.9	1804.1	1712.6	1667.2	1690.3	1637.0	1581.3	1532.0	1558.2	1524.8
17.5°	2101.0	2100.2	1946.6	1848.7	1844.7	1843.1	1764.3	1641.8	1700.7	1682.4	1684.0
20°	2233.1	2211.6	2020.6	1907.6	2003.9	1969.7	1898.8	1741.3	1809.7	1832.0	1846.3
22.5°	2343.7	2331.7	2100.2	2017.4	2079.5	2080.3	2009.4	1926.7	1917.9	1987.2	1949.8
25°	2420.9	2468.6	2250.6	2230.7	2257.7	2230.7	2161.4	2107.3	2072.3	2175.8	2072.3
27.5°	2603.9	2536.3	2273.7	2386.7	2403.4	2267.3	2354.0	2290.4	2193.3	2321.4	2363.6
30°	2734.4	2774.2	2436.0	2606.3	2586.4	2460.7	2496.5	2494.1	2377.9	2627.8	2598.3
32.5°	2958.9	2911.1	2701.0	2687.5	2735.2	2729.7	2669.2	2698.6	2727.3	2908.7	2952.5
35°	3188.8	3239.8	2870.5	2962.0	2948.5	2862.6	3020.9	3002.6	3087.8	3460.2	3336.9
37.5°	3707.7	3465.0	3250.9	3239.0	3329.7	3343.2	3292.3	3372.7	3556.5	3843.0	3975.1
40°	4047.5	3936.9	3573.2	3587.6	3461.8	3678.3	3535.0	3793.7	3933.7	4416.8	4369.8
42.5°	4561.6	4291.9	3942.5	3990.2	3964.8	3860.5	4049.1	4182.0	4382.6	4751.0	4989.0
45°	4944.4	4574.4	4408.8	4379.4	4376.2	4557.7	4533.8	4746.3	4817.9	5094.8	5292.2
47.5°	5234.9	4920.5	4675.4	4708.9	4611.8	5129.8	4853.7	4919.8	5064.6	5325.6	5555.6
50°	5579.5	5229.3	4950.8	5033.6	5269.9	5468.9	5219.0	5106.0	5176.8	5484.8	5741.0
52.5°	5898.6	5530.1	5223.8	5293.0	5679.0	5588.2	5561.2	5275.5	5266.7	5514.2	5805.5
55°	6271.8	5856.4	5585.9	5805.5	5942.4	5830.2	5787.2	5439.4	5224.6	5362.2	5636.8
57.5°	6637.9	6179.5	5910.5	5955.9	6129.4	6018.0	5695.7	5160.1	4891.9	4919.0	5196.7
60°	6980.9	6476.4	6254.3	6210.6	6349.0	5912.1	5347.9	4648.4	4292.6	4227.4	4467.7
62.5°	7274.6	6724.7	6514.6	6395.2	6527.3	5916.1	4806.0	3827.1	3436.3	3215.1	3402.1
65°	7507.8	6930.8	6781.2	6719.1	6766.8	5556.4	3961.6	2810.0	2331.0	2085.8	2194.9
67.5°	7662.9	7046.2	6977.7	7058.9	6422.3	4627.7	2935.0	1798.6	1355.3	1221.6	1290.0
70°	7823.7	7148.0	7145.7	6869.5	5445.8	3190.4	1714.2	1037.0	788.7	736.9	779.9
72.5°	7769.6	7027.1	7062.9	6007.6	3773.8	1705.4	904.8	586.5	534.0	552.3	590.5
75°	7195.0	6388.8	6216.1	4318.9	2140.8	792.6	521.3	444.1	440.9	468.7	506.1
77.5°	5219.0	4449.4	3992.6	2447.9	917.6	428.9	383.6	370.9	370.9	393.1	426.6
80°	1720.6	1489.0	1551.8	947.0	433.7	296.0	299.2	304.8	303.2	308.8	336.6
82.5°	282.5	292.9	452.8	386.8	261.8	202.1	226.0	237.2	240.3	214.9	244.3
85°	100.3	113.0	192.6	179.1	151.2	101.9	148.8	166.3	163.9	143.2	158.4
87.5°	31.0	39.8	70.0	54.1	45.4	27.9	55.7	65.3	82.0	33.4	30.2
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)