

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: P597072

Luminaire Tested: **MSA-SA3D-835-U-RW**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597072
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-7)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-835-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16852 lumens
Efficiency: N/A
Efficacy: 87.8 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B4 - U0 - G4

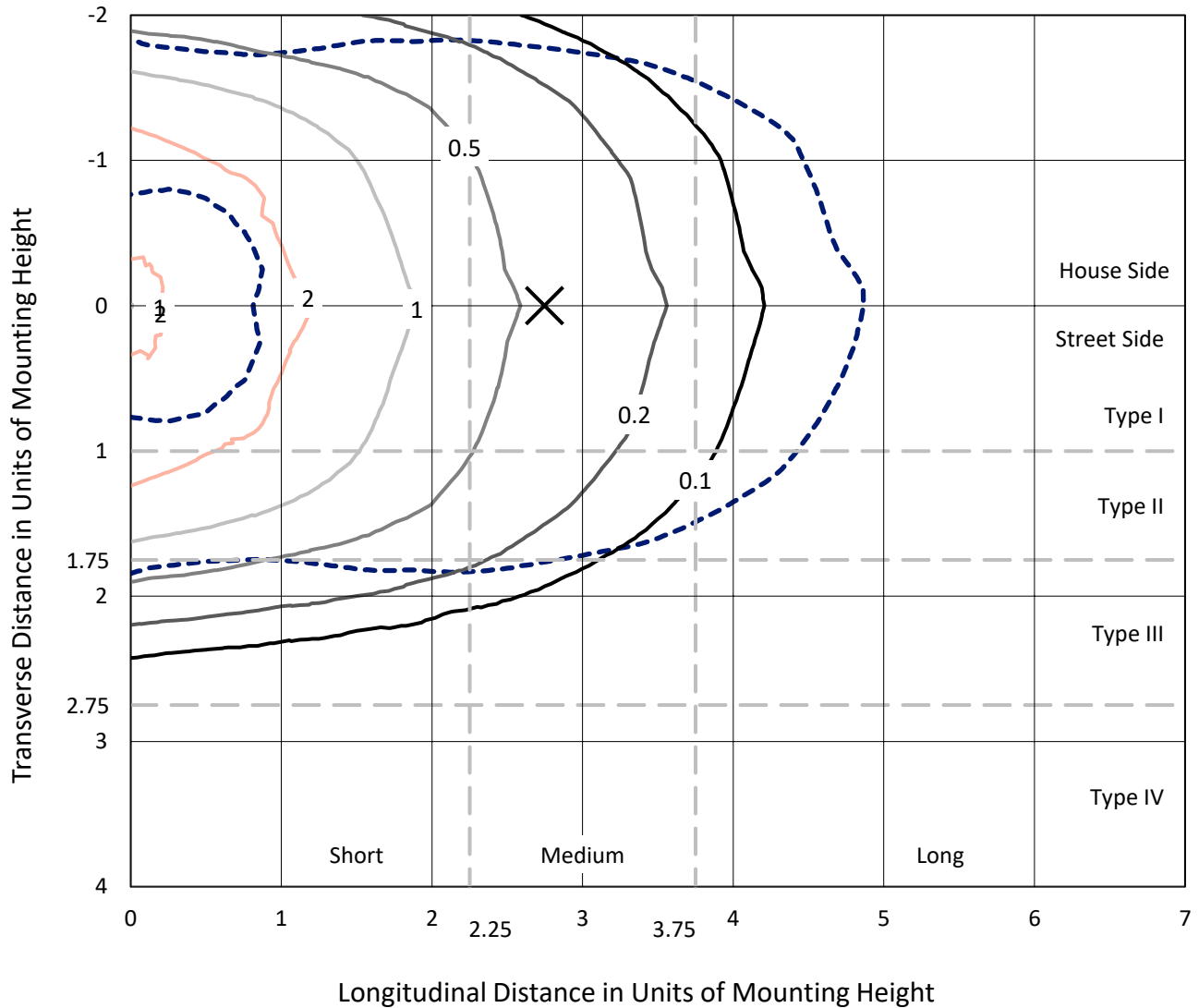
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

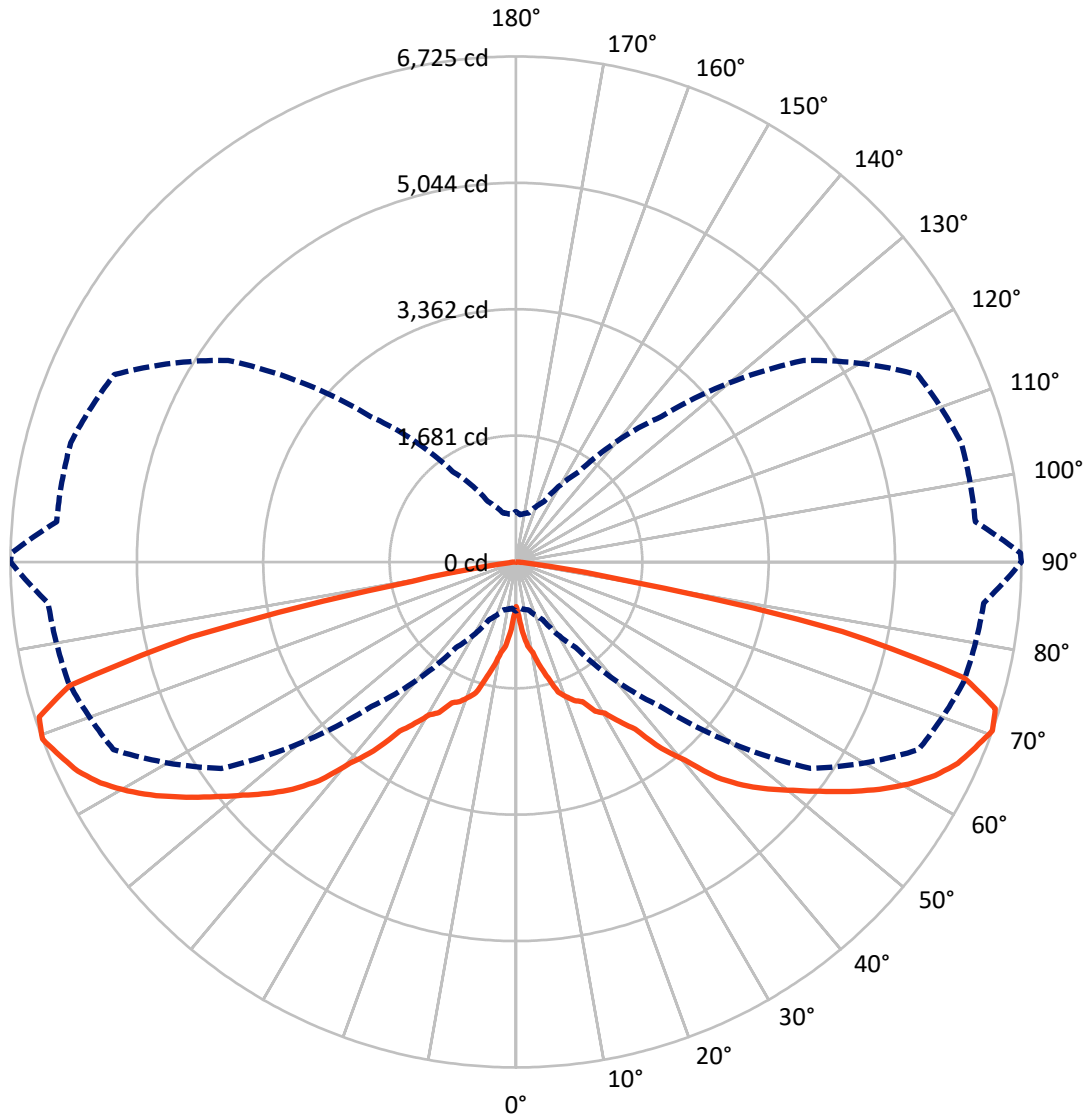
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.8 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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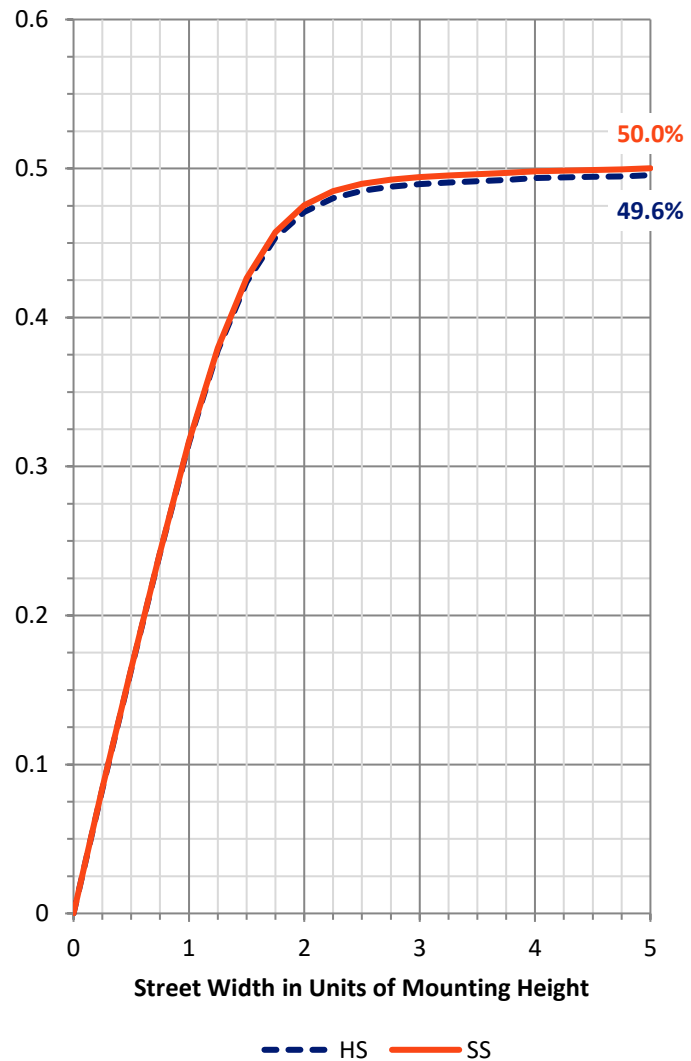
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	8394.8	0.0	8394.8
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	8457.2	0.0	8457.2
	% Fixture	50.2	0.0	50.2
Total	Lumens	16852.0	0.0	16852.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.2	0.5
10°-20°	408.9	2.4
20°-30°	884.2	5.2
30°-40°	1686.9	10.0
40°-50°	3064.5	18.2
50°-60°	4305.0	25.5
60°-70°	4110.4	24.4
70°-80°	2109.5	12.5
80°-90°	193.4	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°	16852.0	100.0
0°-180°	16852.0	100.0



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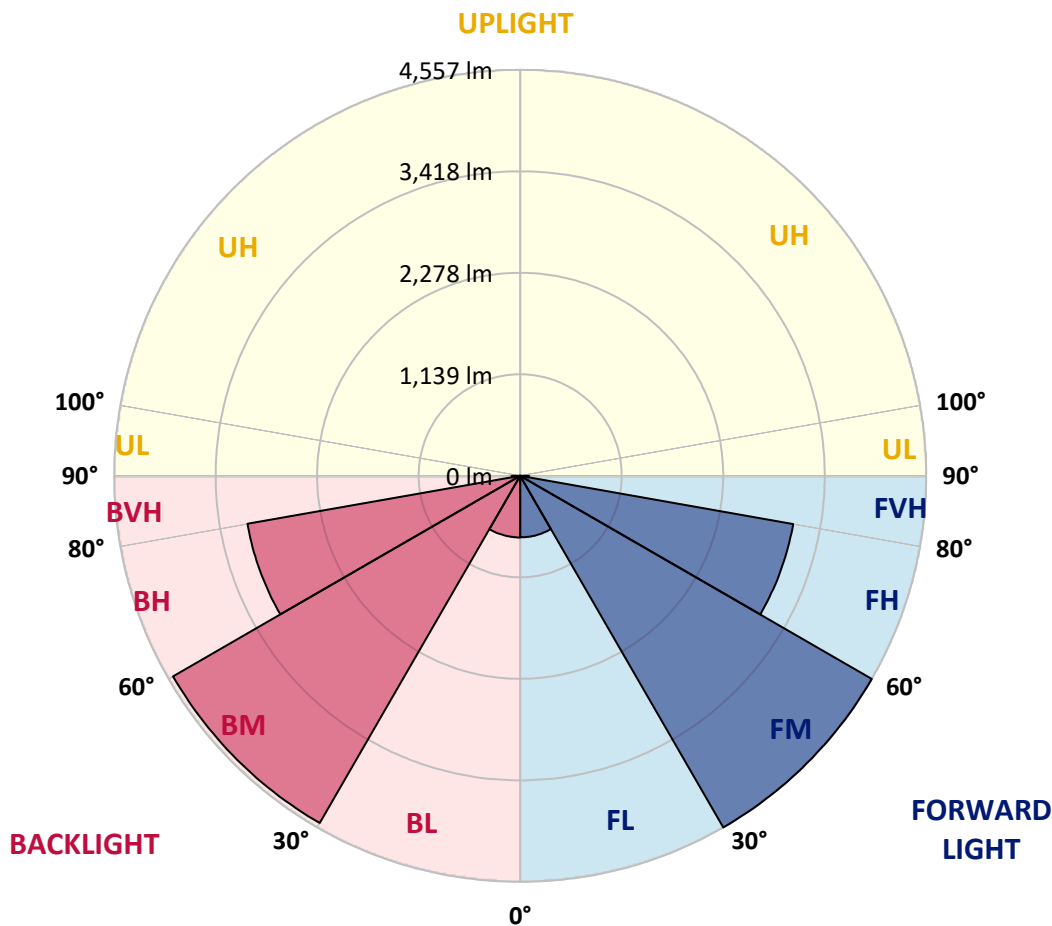
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	690.5	4.1			
FM (30°-60°)	4557.0	27.0			
FH (60°-80°)	3111.6	18.5			G2/5000
FVH (80°-90°)	98.1	0.6			G1/100
BL (0°-30°)	691.8	4.1	B2/1000		
BM (30°-60°)	4499.5	26.7	B3/5000		
BH (60°-80°)	3108.2	18.4	B4/5000		G4/5000
BVH (80°-90°)	95.3	0.6			G1/100
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°	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5
2.5°	716.5	689.8	656.4	676.2	684.4	698.7	696.6	689.8	660.4	709.6	715.1
5°	896.8	854.4	838.7	836.0	840.1	826.4	870.8	857.8	881.7	926.1	936.4
7.5°	1021.1	989.6	956.2	966.4	924.1	917.9	975.3	1026.5	1039.5	1120.8	1126.2
10°	1079.8	1049.1	1057.9	1051.8	1047.0	1086.6	1113.3	1150.8	1204.8	1212.3	1223.9
12.5°	1129.7	1142.0	1180.9	1179.5	1243.7	1314.1	1303.8	1342.8	1351.6	1445.9	1417.2
15°	1256.0	1281.3	1278.6	1302.5	1330.5	1445.9	1446.6	1512.8	1573.6	1610.5	1600.9
17.5°	1441.1	1450.0	1413.1	1414.5	1495.7	1542.9	1595.5	1583.8	1742.3	1814.7	1819.5
20°	1551.7	1574.3	1531.9	1475.9	1620.0	1684.9	1714.3	1646.7	1816.1	1913.7	1913.7
22.5°	1745.0	1687.0	1622.8	1585.2	1712.2	1781.2	1777.8	1758.7	1848.8	2021.6	2005.3
25°	1851.6	1818.8	1786.7	1796.3	1860.5	1896.0	1943.1	1898.7	1983.4	2111.8	2057.8
27.5°	2053.7	1993.0	1835.2	1960.9	1960.9	1934.2	2033.9	2055.1	1999.8	2208.8	2249.1
30°	2282.5	2261.4	2038.0	2171.2	2130.2	2055.1	2246.3	2232.7	2139.8	2352.9	2334.5
32.5°	2499.1	2568.7	2357.0	2283.9	2345.4	2374.1	2273.7	2314.6	2332.4	2538.0	2529.1
35°	2831.0	2889.7	2609.0	2590.6	2488.1	2461.5	2538.0	2551.6	2553.0	2769.5	2729.9
37.5°	3405.4	3320.7	3043.4	2912.9	2924.6	2892.5	2907.5	2799.6	2814.6	3128.8	3148.6
40°	3825.4	3729.8	3421.1	3327.5	3098.0	3235.3	3113.7	3102.8	3072.8	3479.8	3468.9
42.5°	4289.2	4158.0	3816.5	3691.5	3447.7	3391.7	3335.7	3462.1	3453.9	3830.9	3914.2
45°	4639.5	4374.5	4196.3	4118.4	3972.3	3835.0	3781.7	3838.4	3812.4	4092.5	4237.9
47.5°	4860.8	4630.7	4425.8	4261.8	4121.8	4458.5	4188.8	4112.9	4060.4	4373.9	4513.9
50°	5037.0	4771.3	4529.6	4474.9	4585.6	4883.4	4457.9	4290.5	4354.7	4585.6	4776.1
52.5°	5084.8	4803.4	4586.3	4551.4	4850.6	4904.5	4835.6	4554.2	4537.1	4839.6	5069.8
55°	4938.7	4668.9	4565.8	4756.3	5086.9	5041.8	5147.0	4967.4	4846.5	5099.2	5388.8
57.5°	4562.4	4294.6	4270.0	4544.6	4961.2	5345.1	5397.0	5254.9	5096.5	5364.2	5705.7
60°	3944.3	3699.7	3761.9	4065.1	4693.5	5239.9	5515.8	5386.0	5336.9	5603.2	5999.4
62.5°	2981.9	2791.4	2957.3	3380.1	4204.5	5104.0	5679.7	5659.2	5588.2	5857.3	6258.9
65°	1901.4	1801.0	1970.4	2400.0	3445.7	4856.7	5758.3	5785.6	5851.2	6053.3	6459.7
67.5°	1105.1	1051.8	1154.9	1506.7	2454.0	3988.0	5612.1	6004.1	6038.3	6154.4	6591.5
70°	653.6	618.8	661.1	846.2	1389.2	2716.9	4787.1	5908.5	6166.7	6247.3	6724.7
72.5°	498.6	465.8	447.4	500.6	725.3	1403.5	3236.7	5008.3	6063.6	6185.8	6668.7
75°	431.0	399.5	377.7	382.5	431.6	666.6	1754.6	3582.3	5166.8	5632.6	6159.9
77.5°	370.2	342.2	326.5	325.1	331.2	366.1	733.5	1942.4	3236.0	4048.7	4440.8
80°	296.4	274.6	271.1	271.1	262.3	259.5	364.7	739.0	1231.4	1460.2	1400.1
82.5°	216.5	194.7	216.5	213.8	200.1	189.2	232.2	319.6	379.7	299.8	237.0
85°	146.2	126.4	142.7	145.5	132.5	98.4	139.3	159.8	163.9	102.4	84.7
87.5°	51.2	49.9	80.6	70.3	57.4	33.5	51.2	55.3	58.1	36.2	24.6
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°	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5	591.5
2.5°	717.1	708.9	668.0	674.1	689.8	697.3	704.8	674.1	659.1	706.9	702.1
5°	939.1	909.1	875.6	870.8	872.9	843.5	860.6	853.1	856.5	887.2	893.3
7.5°	1124.9	1088.7	1044.3	1009.5	949.4	901.5	941.8	962.3	968.5	1023.1	1043.6
10°	1225.3	1194.5	1181.6	1116.0	1096.2	1090.0	1080.5	1047.7	1083.9	1070.9	1081.2
12.5°	1422.0	1415.8	1348.2	1305.2	1309.3	1320.9	1260.8	1228.0	1180.9	1254.6	1228.0
15°	1589.3	1615.9	1548.3	1469.8	1430.9	1450.7	1404.9	1357.1	1314.8	1337.3	1308.6
17.5°	1803.1	1802.4	1670.6	1586.6	1583.2	1581.8	1514.2	1409.0	1459.5	1443.8	1445.2
20°	1916.5	1898.0	1734.1	1637.1	1719.8	1690.4	1629.6	1494.4	1553.1	1572.2	1584.5
22.5°	2011.4	2001.2	1802.4	1731.4	1784.6	1785.3	1724.5	1653.5	1646.0	1705.4	1673.3
25°	2077.6	2118.6	1931.5	1914.4	1937.6	1914.4	1855.0	1808.6	1778.5	1867.3	1778.5
27.5°	2234.7	2176.7	1951.3	2048.3	2062.6	1945.8	2020.3	1965.6	1882.3	1992.3	2028.5
30°	2346.7	2380.9	2090.6	2236.8	2219.7	2111.8	2142.5	2140.5	2040.8	2255.2	2230.0
32.5°	2539.3	2498.4	2318.1	2306.4	2347.4	2342.6	2290.7	2316.0	2340.6	2496.3	2533.9
35°	2736.7	2780.4	2463.5	2542.1	2530.5	2456.7	2592.6	2576.9	2650.0	2969.6	2863.8
37.5°	3182.0	2973.7	2790.0	2779.8	2857.6	2869.2	2825.5	2894.5	3052.3	3298.1	3411.5
40°	3473.7	3378.7	3066.6	3078.9	2971.0	3156.8	3033.8	3255.8	3376.0	3790.6	3750.3
42.5°	3914.9	3683.4	3383.5	3424.5	3402.6	3313.2	3475.0	3589.1	3761.2	4077.4	4281.6
45°	4243.4	3925.8	3783.7	3758.5	3755.7	3911.5	3891.0	4073.3	4134.8	4372.5	4541.9
47.5°	4492.7	4222.9	4012.6	4041.2	3957.9	4402.5	4165.5	4222.2	4346.5	4570.6	4767.9
50°	4788.4	4487.9	4248.9	4319.9	4522.7	4693.5	4479.0	4382.0	4442.8	4707.1	4927.1
52.5°	5062.3	4746.1	4483.1	4542.5	4873.8	4795.9	4772.7	4527.5	4520.0	4732.4	4982.4
55°	5382.6	5026.1	4793.9	4982.4	5099.9	5003.6	4966.7	4668.2	4483.8	4602.0	4837.6
57.5°	5696.8	5303.4	5072.5	5111.5	5260.4	5164.8	4888.1	4428.5	4198.3	4221.5	4459.9
60°	5991.2	5558.2	5367.6	5330.0	5448.9	5073.9	4589.7	3989.3	3684.0	3628.0	3834.3
62.5°	6243.2	5771.2	5590.9	5488.5	5601.9	5077.3	4124.6	3284.5	2949.1	2759.3	2919.8
65°	6443.3	5948.1	5819.7	5766.5	5807.4	4768.6	3399.9	2411.6	2000.5	1790.1	1883.7
67.5°	6576.5	6047.2	5988.4	6058.1	5511.7	3971.6	2518.9	1543.6	1163.1	1048.4	1107.1
70°	6714.4	6134.6	6132.5	5895.5	4673.7	2738.1	1471.2	889.9	676.8	632.4	669.3
72.5°	6668.0	6030.8	6061.5	5155.9	3238.7	1463.6	776.6	503.4	458.3	474.0	506.8
75°	6174.9	5483.0	5334.8	3706.6	1837.2	680.3	447.4	381.1	378.4	402.3	434.4
77.5°	4479.0	3818.6	3426.5	2100.9	787.5	368.1	329.2	318.3	318.3	337.4	366.1
80°	1476.6	1277.9	1331.8	812.8	372.2	254.1	256.8	261.6	260.2	265.0	288.9
82.5°	242.5	251.3	388.6	331.9	224.7	173.5	194.0	203.5	206.3	184.4	209.7
85°	86.1	97.0	165.3	153.7	129.8	87.4	127.7	142.7	140.7	122.9	135.9
87.5°	26.6	34.1	60.1	46.4	38.9	23.9	47.8	56.0	70.3	28.7	26.0
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)