

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: P597118

Luminaire Tested: **MSA-SA4B-835-U-SL2**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597118
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-SA4B-835-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: 15912 lumens
Efficiency: N/A
Efficacy: 93.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Medium
BUG Rating: B3 - U0 - G3

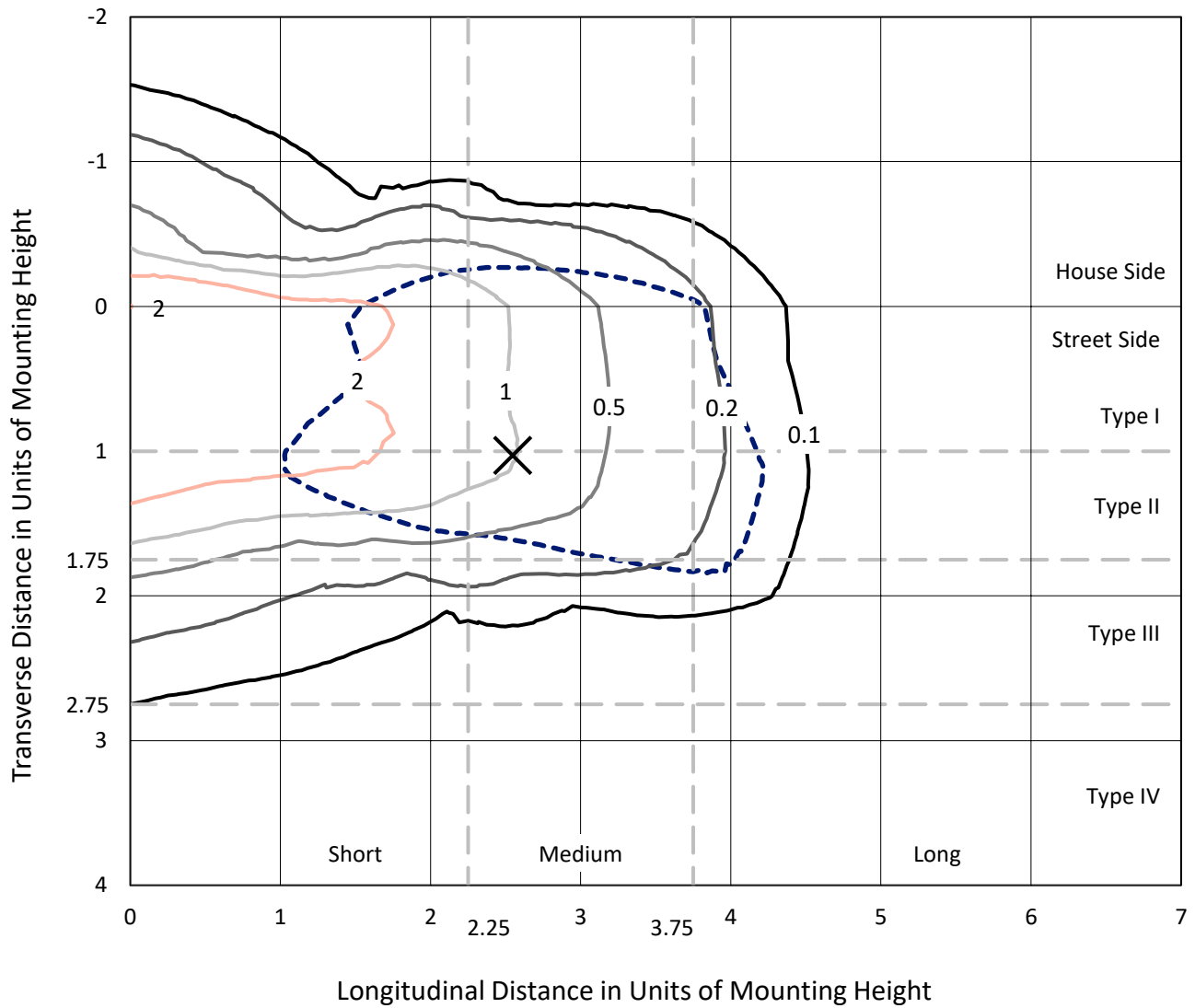
Input Watts (W): 171
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

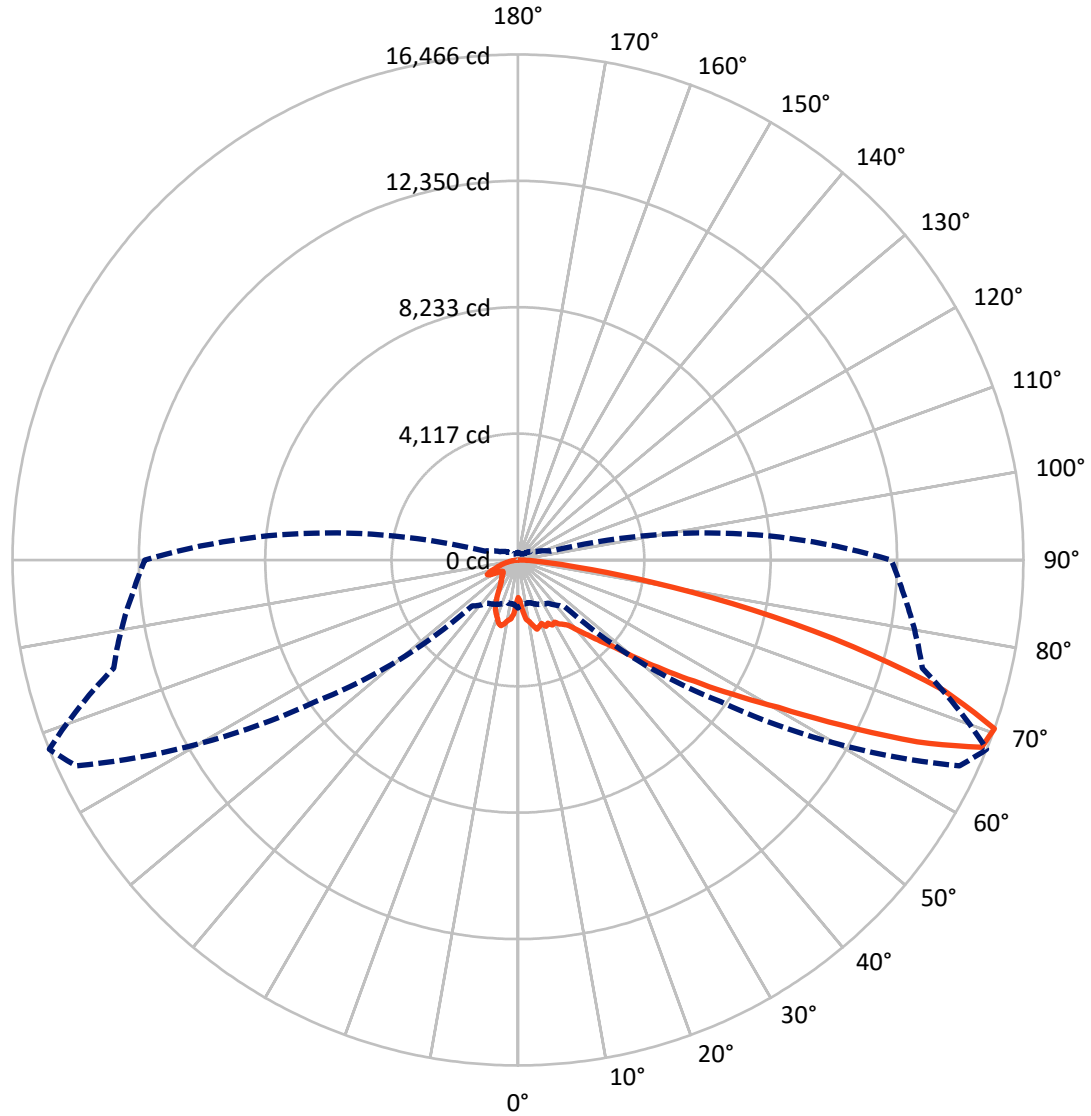
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type III - Medium - N/A

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Luminous Intensity Polar Plot



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

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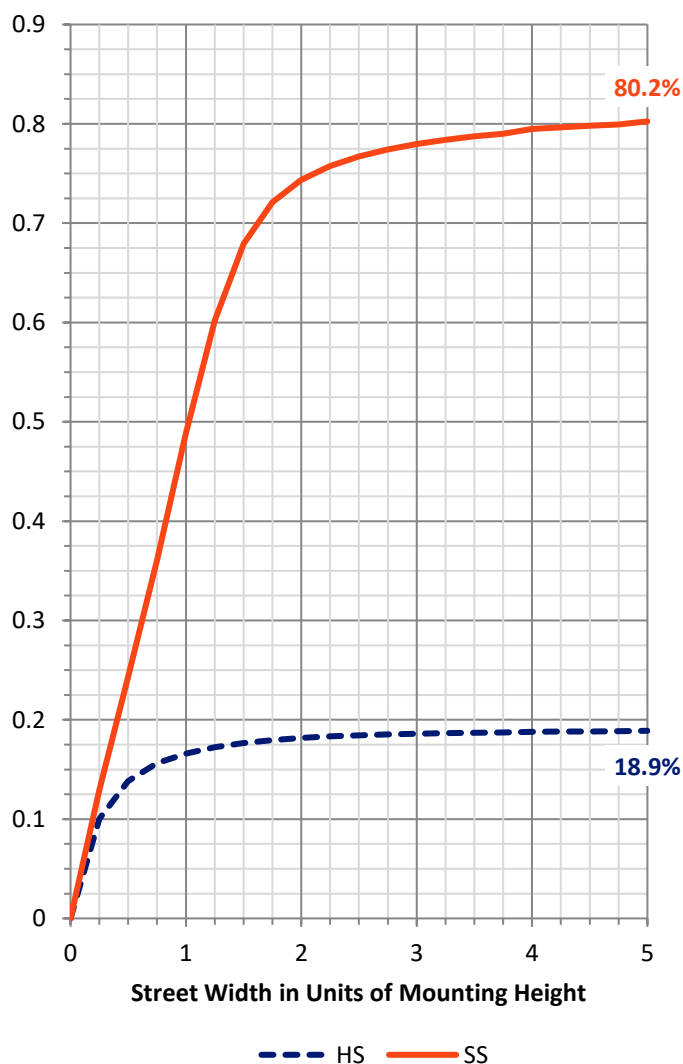
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	3038.0	0.0	3038.0
	% Fixture	19.1	0.0	19.1
Street Side	Lumens	12874.0	0.0	12874.0
	% Fixture	80.9	0.0	80.9
Total	Lumens	15912.0	0.0	15912.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	162.9	1.0
10°-20°	531.1	3.3
20°-30°	807.9	5.1
30°-40°	1234.0	7.8
40°-50°	2121.7	13.3
50°-60°	3511.9	22.1
60°-70°	4329.7	27.2
70°-80°	2781.3	17.5
80°-90°	431.4	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°	15912.0	100.0
0°-180°	15912.0	100.0

Coefficient of Utilization



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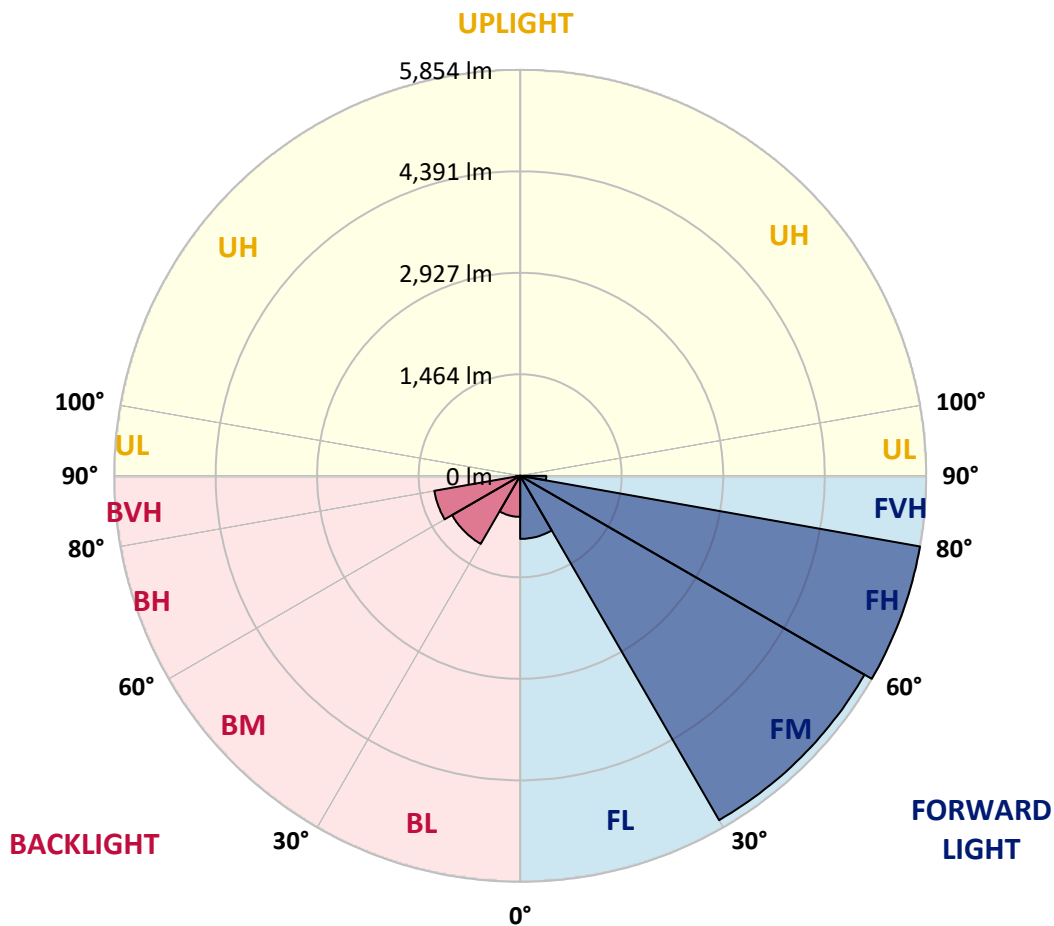
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	909.9	5.7			
FM	(30°-60°)	5733.7	36.0			
FH	(60°-80°)	5854.4	36.8			G3/7500
FVH	(80°-90°)	376.1	2.4			G3/500
BL	(0°-30°)	592.0	3.7	B2/1000		
BM	(30°-60°)	1134.0	7.1	B2/2500		
BH	(60°-80°)	1256.7	7.9	B3/2500		G3/2500
BVH	(80°-90°)	55.4	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





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	1220.0	1220.0	1220.0	1220.0	1220.0	1220.0	1220.0	1220.0	1220.0	1220.0	1220.0
2.5°	1401.8	1345.2	1288.0	1315.9	1360.5	1399.8	1391.8	1396.5	1342.6	1335.2	1477.1
5°	1651.6	1554.3	1552.3	1553.7	1557.7	1512.4	1622.9	1680.2	1692.9	1751.5	1890.6
7.5°	1738.1	1698.9	1658.9	1678.9	1628.3	1632.9	1768.8	1918.0	1953.2	1995.9	2186.3
10°	1720.2	1682.9	1694.9	1698.2	1707.5	1782.8	1870.0	2013.2	2043.1	2179.0	2228.3
12.5°	1722.8	1716.2	1772.1	1774.1	1874.0	2009.2	2043.8	2175.7	2187.7	2287.6	2493.3
15°	1814.1	1860.0	1828.7	1845.4	1864.7	2026.5	2076.4	2265.6	2337.5	2466.0	2620.5
17.5°	1991.9	2005.2	1911.3	1886.7	1949.9	1999.2	2113.1	2195.0	2270.2	2629.2	2842.3
20°	2033.2	2069.1	1957.2	1830.0	1963.9	2032.5	2111.7	2149.0	2207.6	2653.2	2955.5
22.5°	2210.3	2135.7	2000.5	1890.0	1933.9	2000.5	2057.8	2198.3	2352.2	2584.6	3068.7
25°	2310.9	2267.6	2147.0	2028.5	1991.2	1993.2	2103.8	2229.6	2282.9	2685.1	3091.4
27.5°	2553.9	2484.7	2213.6	2191.0	2050.5	1941.3	2111.1	2306.9	2400.1	2606.5	3201.9
30°	2858.3	2805.7	2450.0	2420.1	2205.6	2015.2	2204.3	2364.1	2350.8	2657.8	3278.5
32.5°	3104.7	3192.6	2833.6	2597.2	2444.7	2262.2	2175.0	2354.2	2486.7	2777.0	3408.4
35°	3456.3	3538.9	3132.7	2972.8	2641.8	2376.8	2379.5	2491.3	2573.2	2916.2	3553.5
37.5°	4065.0	3992.4	3665.4	3413.0	3201.2	2805.7	2687.1	2647.8	2713.8	3086.7	3837.9
40°	4503.9	4442.6	4057.7	3913.8	3501.6	3271.8	2946.9	2909.6	3026.1	3262.5	4070.3
42.5°	5024.0	4914.7	4556.5	4437.9	4007.1	3592.8	3265.2	3286.5	3343.1	3594.2	4384.6
45°	5553.4	5288.3	5085.2	5075.9	4788.2	4216.2	3776.0	3758.6	3760.6	4082.3	4737.6
47.5°	5973.6	5735.2	5502.8	5392.2	5247.1	5294.3	4517.8	4314.7	4253.5	4573.8	5267.0
50°	6258.0	5983.6	5720.6	5694.6	6082.2	6337.2	5214.4	4997.3	5035.3	5277.0	5972.9
52.5°	6264.0	5938.3	5663.9	5845.8	6758.8	7123.7	6414.5	5807.8	5929.0	6093.5	6894.0
55°	5828.4	5490.8	5312.3	5726.5	7023.2	8056.7	8100.7	7106.4	6966.6	7027.2	7994.8
57.5°	4910.1	4569.1	4465.2	4961.4	6521.7	8956.4	10137.2	8658.1	8247.9	7994.8	9122.9
60°	3696.0	3401.0	3336.4	3652.8	5406.9	8692.0	11786.1	10589.3	9753.6	9075.6	10254.4
62.5°	2771.7	2559.9	2462.7	2508.0	3741.3	7832.3	12868.9	13029.4	11846.0	10255.7	11359.9
65°	2252.3	2081.1	1994.5	1935.9	2326.8	6056.2	12673.1	15083.2	14290.1	11495.0	12220.3
67.5°	1881.3	1729.5	1689.5	1746.8	1839.4	3513.6	11141.4	16232.0	16285.9	12717.7	12723.1
70°	1561.7	1449.1	1434.5	1597.0	1718.8	2120.4	8047.4	15871.0	16466.4	13634.8	12605.2
72.5°	1206.7	1146.1	1144.1	1399.2	1707.5	1807.4	4792.2	13710.7	14510.5	13341.7	11451.8
75°	837.1	795.2	827.1	1150.1	1668.2	1833.4	2735.1	10679.3	11277.9	11353.2	9173.5
77.5°	576.1	540.8	575.4	831.8	1489.7	1877.3	1913.3	7721.7	7788.3	7613.2	5254.4
80°	400.9	376.3	402.9	588.7	1159.4	1858.0	1628.9	4861.5	4460.6	3397.7	1682.2
82.5°	248.4	241.1	270.4	419.6	816.5	1690.2	1543.7	2508.7	1915.3	937.7	600.7
85°	130.5	119.9	157.2	273.7	510.8	1326.6	1446.5	1144.8	739.2	333.0	241.1
87.5°	38.6	34.6	60.6	110.5	216.4	594.7	827.8	485.5	275.7	97.9	75.3
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°	1220.0	1220.0	1220.0	1220.0	1220.0	1220.0	1220.0	1220.0	1220.0	1220.0	1220.0
2.5°	1487.1	1479.8	1381.2	1393.8	1415.2	1420.5	1419.8	1383.9	1345.9	1451.8	1448.5
5°	1894.0	1828.0	1778.8	1768.1	1707.5	1646.9	1668.2	1660.9	1651.6	1699.5	1705.5
7.5°	2187.0	2095.8	2038.5	1891.3	1751.5	1630.3	1668.9	1680.9	1656.9	1743.5	1769.4
10°	2264.2	2192.3	2130.4	1941.3	1864.0	1793.4	1688.9	1569.7	1553.7	1503.7	1509.7
12.5°	2463.4	2453.4	2242.3	2075.8	1975.2	1834.7	1608.9	1464.4	1340.6	1346.6	1310.6
15°	2620.5	2625.9	2372.1	2139.0	1869.3	1654.9	1389.2	1209.4	1082.2	1056.9	1030.9
17.5°	2831.6	2821.0	2382.8	2063.1	1721.5	1407.2	1081.5	903.0	881.7	896.4	873.7
20°	2923.5	2829.6	2314.9	1874.7	1490.4	1068.9	817.1	722.6	763.9	822.5	823.8
22.5°	3006.1	2845.6	2279.6	1722.8	1182.7	777.2	656.0	638.7	687.3	766.5	773.2
25°	3002.8	2919.5	2216.3	1569.7	917.0	606.7	570.1	582.7	640.6	723.2	727.9
27.5°	3154.0	2862.9	2051.8	1368.5	690.6	519.4	528.8	552.1	579.4	658.0	673.3
30°	3152.6	2968.2	1969.2	1124.1	554.7	476.2	500.1	520.1	542.8	614.7	623.3
32.5°	3227.2	2899.6	1919.3	874.4	497.5	465.5	471.5	491.5	524.1	572.7	578.7
35°	3317.1	2977.5	1759.5	694.6	476.2	456.2	460.8	472.2	502.1	546.7	552.7
37.5°	3605.5	2992.1	1696.2	585.4	474.8	452.2	451.5	457.5	491.5	532.1	550.1
40°	3718.0	3126.0	1511.7	546.7	470.2	452.2	442.9	446.2	474.2	526.1	540.1
42.5°	3987.7	3170.6	1375.2	533.4	470.2	444.2	429.5	434.9	467.5	513.5	535.4
45°	4265.4	3233.9	1212.7	530.8	469.5	443.5	415.6	427.5	454.2	492.8	516.8
47.5°	4661.0	3461.6	1050.2	522.8	464.2	446.9	412.2	411.6	434.9	468.2	490.8
50°	5306.3	3817.3	924.3	512.8	464.8	444.2	405.6	396.2	411.6	440.9	462.8
52.5°	6204.7	4423.3	875.1	507.5	459.5	433.5	394.2	379.6	388.3	411.6	432.9
55°	7247.6	5241.7	923.7	507.5	448.9	416.9	378.3	360.9	365.6	381.6	402.2
57.5°	8466.3	6258.6	1158.8	500.1	435.5	396.9	358.9	339.0	340.3	354.3	372.9
60°	9738.9	7394.8	1685.5	494.1	426.2	374.9	336.3	315.7	313.7	327.0	343.6
62.5°	11013.6	8443.0	2239.6	508.1	423.5	356.3	312.3	291.7	291.0	303.0	317.0
65°	12027.1	9159.5	2377.5	564.7	440.9	335.0	287.7	268.4	267.0	277.0	292.4
67.5°	12524.6	9263.4	1806.1	635.3	477.5	315.0	263.7	245.7	244.4	255.1	268.4
70°	12156.3	8553.5	1114.8	642.6	475.5	291.7	239.1	223.8	221.1	232.4	242.4
72.5°	10793.8	7482.0	847.1	568.7	411.6	258.4	214.4	201.1	197.1	207.1	216.4
75°	8663.4	5940.3	678.6	458.8	324.3	217.8	189.8	177.1	172.5	181.8	189.8
77.5°	5046.6	3341.8	496.1	358.3	245.1	177.8	161.8	150.5	145.2	155.2	161.2
80°	1640.9	1113.5	311.7	257.1	179.1	139.2	131.2	123.2	117.9	124.5	126.5
82.5°	589.4	414.2	172.5	157.8	119.2	99.9	99.2	94.6	87.9	90.6	90.6
85°	261.1	189.1	102.6	84.6	71.3	53.3	62.6	59.3	52.6	51.3	49.3
87.5°	73.3	62.6	37.3	28.6	23.3	8.7	20.0	18.0	14.7	13.3	9.3
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)