

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: P367878

Luminaire Tested: **MSA-SA3B-760-U-RW**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367878  
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-SA3B-760-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: 15096 lumens  
Efficiency: N/A  
Efficacy: 119.8 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B4 - U0 - G4

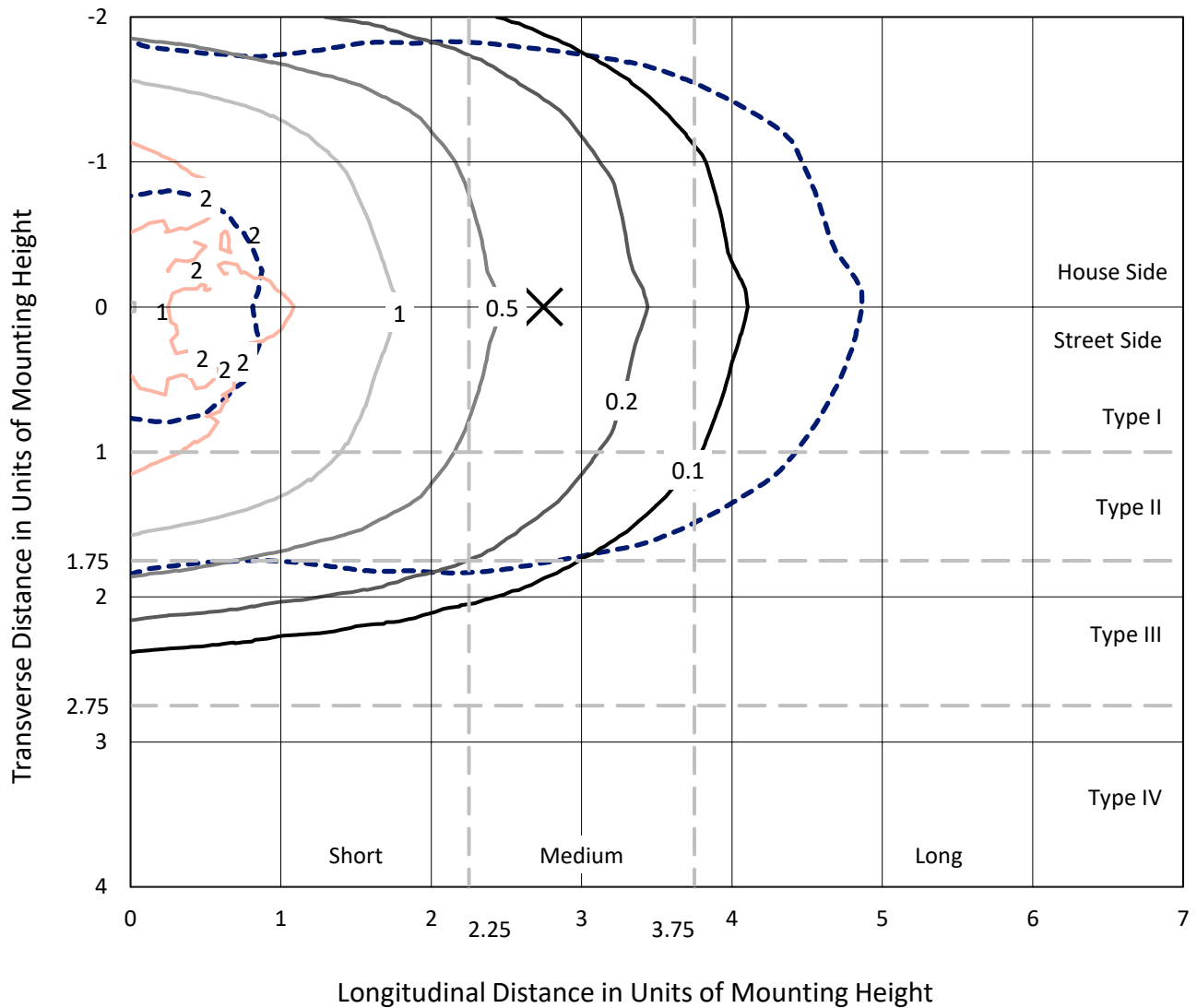
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

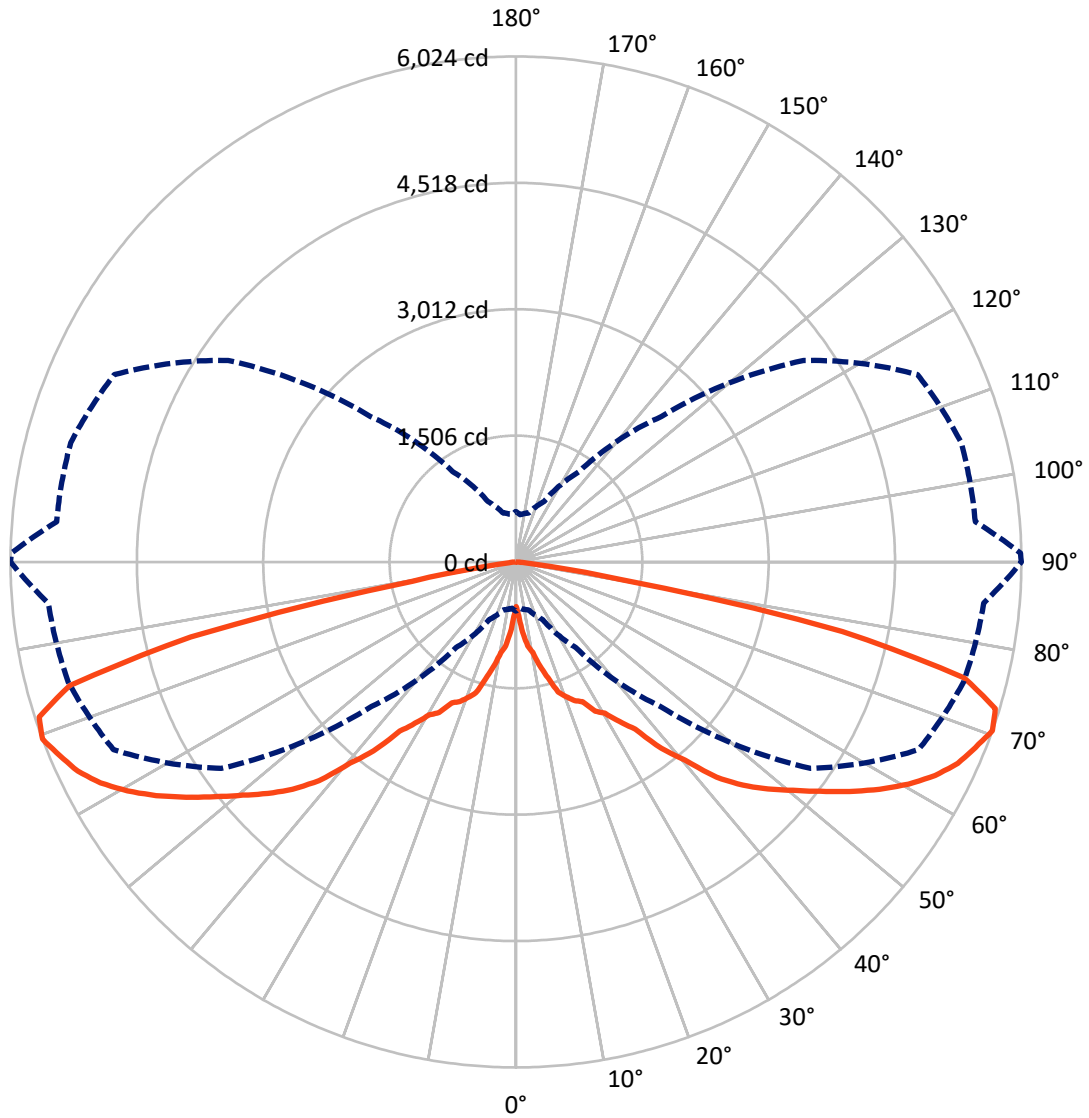
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.5 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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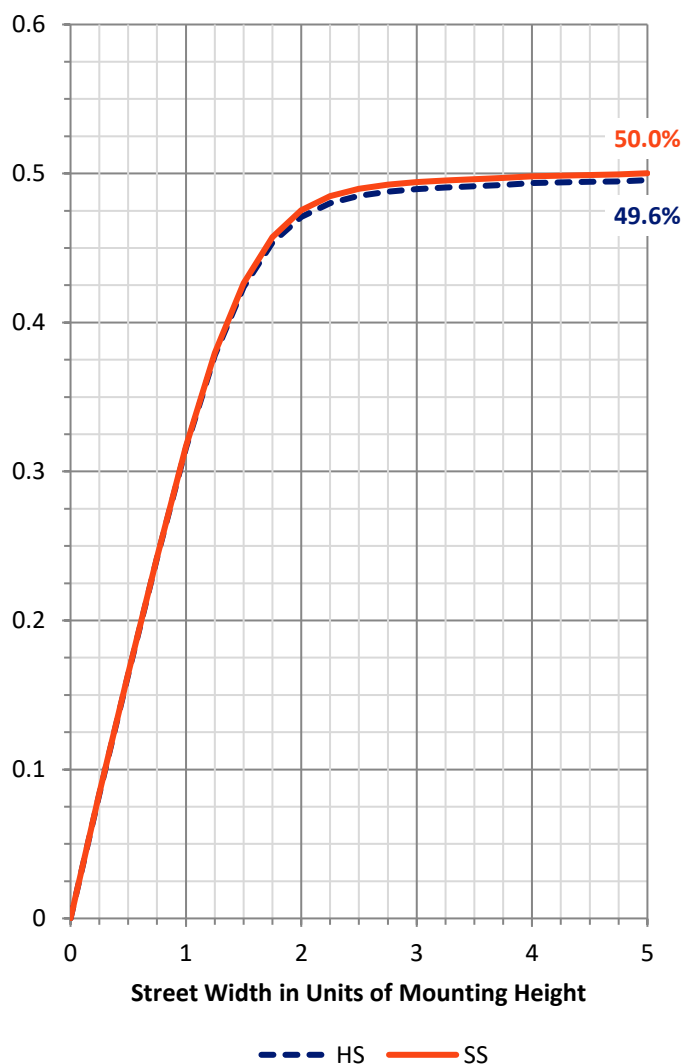
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	7520.0	0.0	7520.0
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	7576.0	0.0	7576.0
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	15096.0	0.0	15096.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	79.9	0.5
10°-20°	366.3	2.4
20°-30°	792.0	5.2
30°-40°	1511.1	10.0
40°-50°	2745.2	18.2
50°-60°	3856.4	25.5
60°-70°	3682.1	24.4
70°-80°	1889.7	12.5
80°-90°	173.2	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°	15096.0	100.0
0°-180°	15096.0	100.0

**Coefficient of Utilization**



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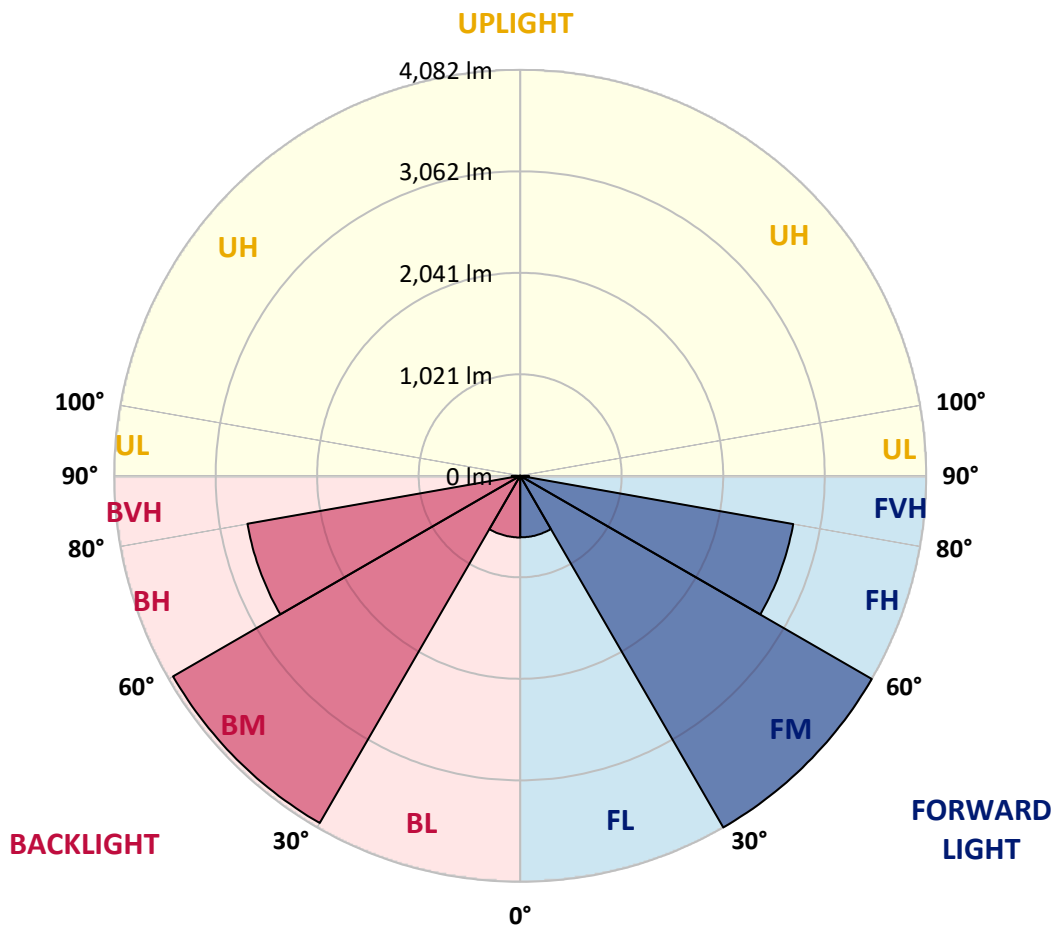
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	618.5	4.1			
FM (30°-60°)	4082.1	27.0			
FH (60°-80°)	2787.4	18.5			G2/5000
FVH (80°-90°)	87.9	0.6			G1/100
BL (0°-30°)	619.7	4.1	B2/1000		
BM (30°-60°)	4030.6	26.7	B3/5000		
BH (60°-80°)	2784.3	18.4	B4/5000		G4/5000
BVH (80°-90°)	85.3	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°	529.8	529.8	529.8	529.8	529.8	529.8	529.8	529.8	529.8	529.8	529.8
2.5°	641.8	617.9	588.0	605.7	613.0	625.9	624.1	617.9	591.6	635.7	640.6
5°	803.3	765.4	751.3	748.9	752.5	740.3	780.1	768.4	789.9	829.6	838.8
7.5°	914.7	886.5	856.5	865.7	827.8	822.3	873.7	919.6	931.2	1004.0	1008.9
10°	967.3	939.8	947.7	942.2	937.9	973.4	997.3	1030.9	1079.2	1086.0	1096.4
12.5°	1011.9	1023.0	1057.8	1056.6	1114.1	1177.1	1168.0	1202.8	1210.8	1295.2	1269.5
15°	1125.1	1147.8	1145.3	1166.7	1191.8	1295.2	1295.8	1355.2	1409.6	1442.7	1434.1
17.5°	1290.9	1298.9	1265.9	1267.1	1339.9	1382.1	1429.2	1418.8	1560.8	1625.6	1629.9
20°	1390.1	1410.2	1372.3	1322.1	1451.2	1509.4	1535.7	1475.1	1626.8	1714.3	1714.3
22.5°	1563.2	1511.2	1453.7	1420.0	1533.8	1595.6	1592.6	1575.4	1656.2	1811.0	1796.3
25°	1658.6	1629.3	1600.5	1609.1	1666.6	1698.4	1740.6	1700.9	1776.7	1891.7	1843.4
27.5°	1839.7	1785.3	1644.0	1756.5	1756.5	1732.7	1822.0	1841.0	1791.4	1978.6	2014.7
30°	2044.7	2025.7	1825.7	1945.0	1908.3	1841.0	2012.3	2000.0	1916.8	2107.7	2091.2
32.5°	2238.6	2301.1	2111.4	2045.9	2101.0	2126.7	2036.7	2073.5	2089.4	2273.5	2265.6
35°	2536.0	2588.6	2337.1	2320.6	2228.9	2205.0	2273.5	2285.8	2287.0	2480.9	2445.4
37.5°	3050.5	2974.7	2726.3	2609.4	2619.8	2591.1	2604.5	2507.8	2521.3	2802.7	2820.5
40°	3426.8	3341.1	3064.6	2980.8	2775.2	2898.2	2789.3	2779.5	2752.6	3117.2	3107.4
42.5°	3842.2	3724.8	3418.8	3306.9	3088.5	3038.3	2988.1	3101.3	3094.0	3431.7	3506.3
45°	4156.1	3918.7	3759.0	3689.3	3558.3	3435.4	3387.6	3438.4	3415.2	3666.0	3796.3
47.5°	4354.3	4148.1	3964.6	3817.8	3692.3	3994.0	3752.3	3684.4	3637.3	3918.1	4043.5
50°	4512.2	4274.2	4057.6	4008.6	4107.8	4374.5	3993.3	3843.4	3901.0	4107.8	4278.5
52.5°	4555.0	4302.9	4108.4	4077.2	4345.1	4393.5	4331.7	4079.6	4064.3	4335.4	4541.5
55°	4424.1	4182.4	4090.0	4260.7	4556.8	4516.4	4610.7	4449.8	4341.5	4567.8	4827.3
57.5°	4087.0	3847.1	3825.1	4071.0	4444.3	4788.1	4834.6	4707.3	4565.4	4805.2	5111.1
60°	3533.3	3314.2	3369.9	3641.5	4204.4	4693.9	4941.1	4824.8	4780.8	5019.4	5374.2
62.5°	2671.2	2500.5	2649.2	3027.9	3766.4	4572.1	5087.9	5069.5	5005.9	5247.0	5606.7
65°	1703.3	1613.4	1765.1	2149.9	3086.6	4350.6	5158.2	5182.7	5241.5	5422.6	5786.6
67.5°	989.9	942.2	1034.6	1349.7	2198.3	3572.4	5027.3	5378.5	5409.1	5513.1	5904.7
70°	585.5	554.3	592.2	758.0	1244.4	2433.8	4288.2	5292.8	5524.1	5596.3	6024.0
72.5°	446.6	417.3	400.7	448.5	649.8	1257.3	2899.4	4486.5	5431.7	5541.2	5973.8
75°	386.1	357.9	338.3	342.6	386.7	597.1	1571.8	3209.0	4628.4	5045.7	5518.0
77.5°	331.6	306.5	292.4	291.2	296.7	327.9	657.1	1740.0	2898.8	3626.9	3978.0
80°	265.5	246.0	242.9	242.9	234.9	232.5	326.7	662.0	1103.1	1308.1	1254.2
82.5°	193.9	174.4	193.9	191.5	179.3	169.5	208.0	286.3	340.2	268.6	212.3
85°	130.9	113.2	127.9	130.3	118.7	88.1	124.8	143.2	146.8	91.8	75.9
87.5°	45.9	44.7	72.2	63.0	51.4	30.0	45.9	49.6	52.0	32.4	22.0
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°	529.8	529.8	529.8	529.8	529.8	529.8	529.8	529.8	529.8	529.8	529.8
2.5°	642.4	635.1	598.4	603.9	617.9	624.7	631.4	603.9	590.4	633.2	629.0
5°	841.3	814.3	784.4	780.1	781.9	755.6	770.9	764.2	767.2	794.8	800.3
7.5°	1007.7	975.2	935.5	904.3	850.4	807.6	843.7	862.1	867.6	916.5	934.9
10°	1097.6	1070.1	1058.4	999.7	982.0	976.5	967.9	938.5	971.0	959.3	968.5
12.5°	1273.8	1268.3	1207.7	1169.2	1172.9	1183.3	1129.4	1100.1	1057.8	1123.9	1100.1
15°	1423.7	1447.6	1387.0	1316.6	1281.8	1299.5	1258.5	1215.7	1177.8	1197.9	1172.2
17.5°	1615.2	1614.6	1496.5	1421.3	1418.2	1417.0	1356.4	1262.2	1307.5	1293.4	1294.6
20°	1716.8	1700.2	1553.4	1466.5	1540.6	1514.3	1459.8	1338.7	1391.3	1408.4	1419.4
22.5°	1801.8	1792.6	1614.6	1551.0	1598.7	1599.3	1544.8	1481.2	1474.5	1527.7	1499.0
25°	1861.2	1897.9	1730.2	1714.9	1735.7	1714.9	1661.7	1620.1	1593.2	1672.7	1593.2
27.5°	2001.9	1949.9	1748.0	1834.8	1847.7	1743.1	1809.8	1760.8	1686.2	1784.7	1817.1
30°	2102.2	2132.8	1872.8	2003.7	1988.4	1891.7	1919.3	1917.4	1828.1	2020.2	1997.6
32.5°	2274.7	2238.0	2076.5	2066.1	2102.8	2098.5	2052.0	2074.7	2096.7	2236.2	2269.8
35°	2451.6	2490.7	2206.8	2277.2	2266.8	2200.7	2322.5	2308.4	2373.9	2660.2	2565.4
37.5°	2850.5	2663.9	2499.3	2490.1	2559.9	2570.3	2531.1	2592.9	2734.2	2954.5	3056.0
40°	3111.7	3026.7	2747.1	2758.1	2661.4	2827.8	2717.7	2916.5	3024.2	3395.6	3359.5
42.5°	3506.9	3299.5	3031.0	3067.7	3048.1	2967.9	3112.9	3215.1	3369.3	3652.6	3835.5
45°	3801.2	3516.7	3389.5	3366.8	3364.4	3503.9	3485.5	3648.9	3704.0	3916.9	4068.6
47.5°	4024.5	3782.9	3594.4	3620.1	3545.5	3943.8	3731.5	3782.3	3893.6	4094.3	4271.1
50°	4289.5	4020.3	3806.1	3869.8	4051.5	4204.4	4012.3	3925.4	3979.9	4216.7	4413.7
52.5°	4534.8	4251.5	4016.0	4069.2	4365.9	4296.2	4275.4	4055.7	4049.0	4239.3	4463.2
55°	4821.7	4502.4	4294.4	4463.2	4568.5	4482.2	4449.1	4181.8	4016.6	4122.4	4333.5
57.5°	5103.2	4750.8	4544.0	4578.9	4712.2	4626.6	4378.8	3967.0	3760.9	3781.7	3995.2
60°	5366.9	4979.0	4808.3	4774.6	4881.1	4545.2	4111.4	3573.6	3300.2	3250.0	3434.8
62.5°	5592.6	5169.9	5008.4	4916.6	5018.1	4548.3	3694.8	2942.2	2641.8	2471.7	2615.5
65°	5771.9	5328.3	5213.3	5165.6	5202.3	4271.7	3045.6	2160.3	1792.0	1603.6	1687.4
67.5°	5891.2	5417.0	5364.4	5426.8	4937.4	3557.7	2256.4	1382.7	1041.9	939.1	991.8
70°	6014.8	5495.4	5493.5	5281.2	4186.7	2452.8	1317.9	797.2	606.3	566.5	599.6
72.5°	5973.2	5402.4	5429.9	4618.6	2901.2	1311.1	695.6	450.9	410.5	424.6	454.0
75°	5531.5	4911.7	4778.9	3320.3	1645.8	609.4	400.7	341.4	338.9	360.4	389.1
77.5°	4012.3	3420.7	3069.5	1882.0	705.4	329.8	294.9	285.1	285.1	302.2	327.9
80°	1322.8	1144.7	1193.0	728.1	333.4	227.6	230.0	234.3	233.1	237.4	258.8
82.5°	217.2	225.1	348.1	297.3	201.3	155.4	173.8	182.3	184.8	165.2	187.8
85°	77.1	86.9	148.1	137.7	116.2	78.3	114.4	127.9	126.0	110.1	121.8
87.5°	23.9	30.6	53.8	41.6	34.9	21.4	42.8	50.2	63.0	25.7	23.2
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)