

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: P596676

Luminaire Tested: **MSA-SA3B-827-U-RW**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596676  
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-SA3B-827-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: 11098 lumens  
Efficiency: N/A  
Efficacy: 88.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B3 - U0 - G3

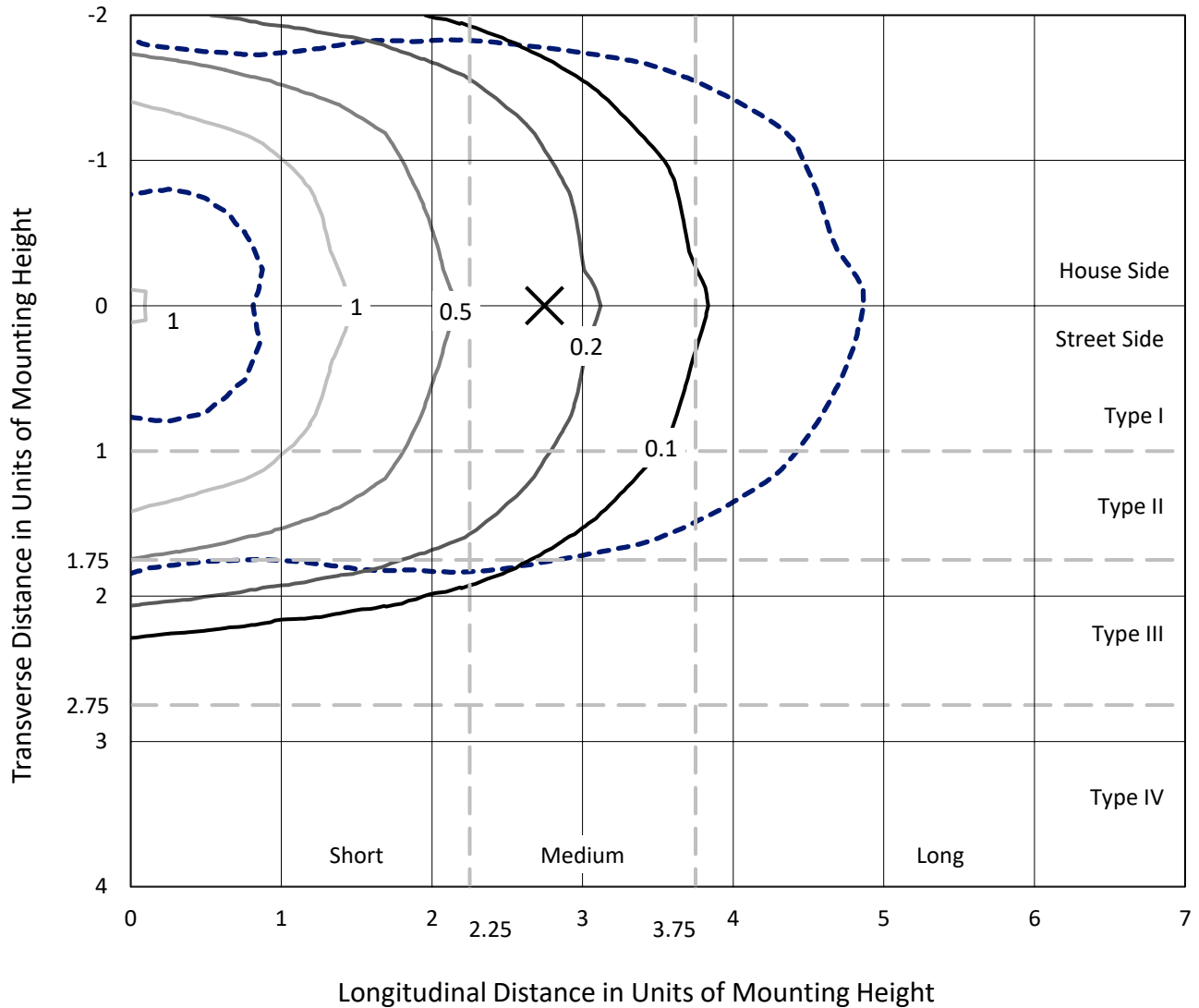
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

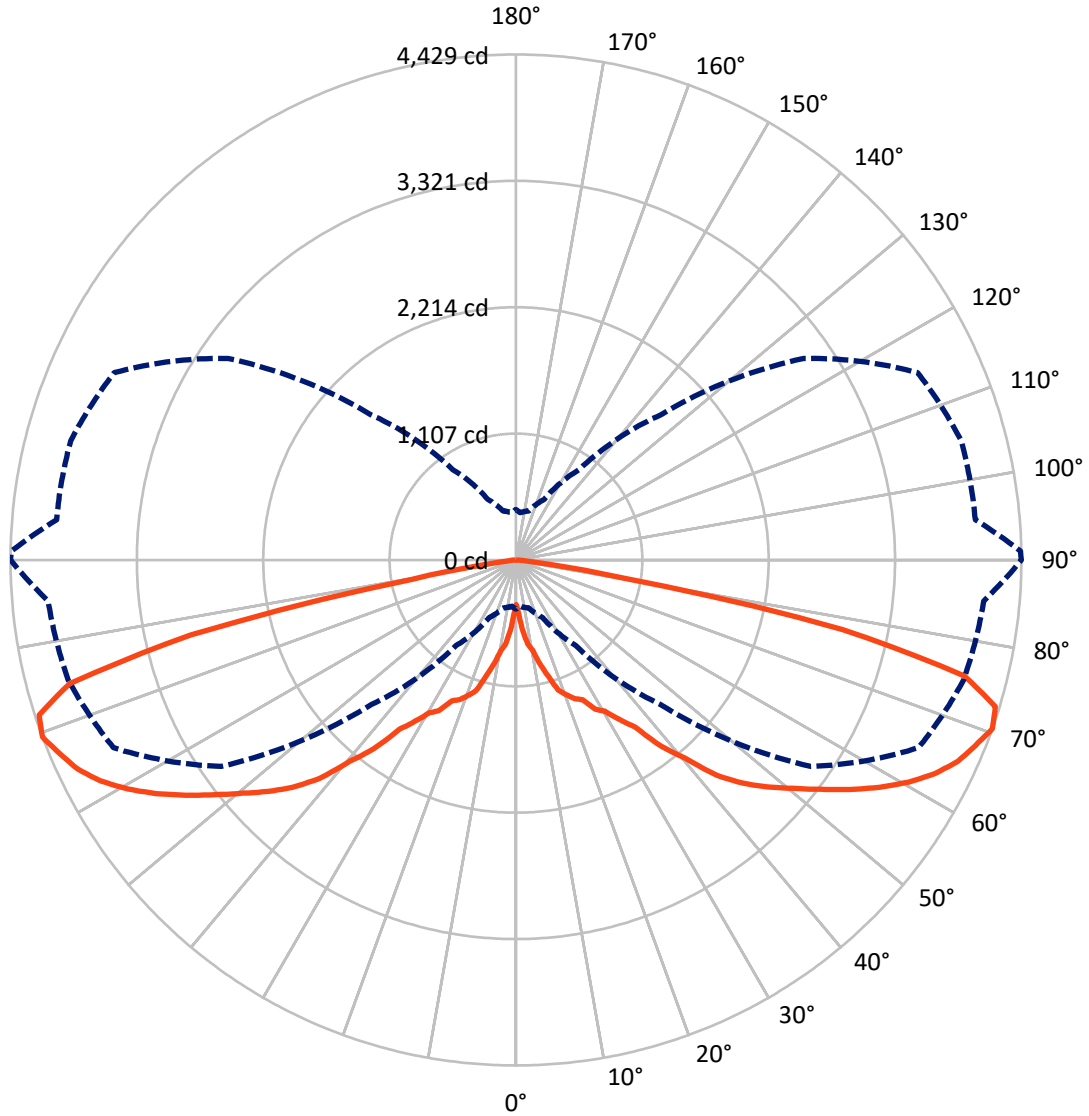
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 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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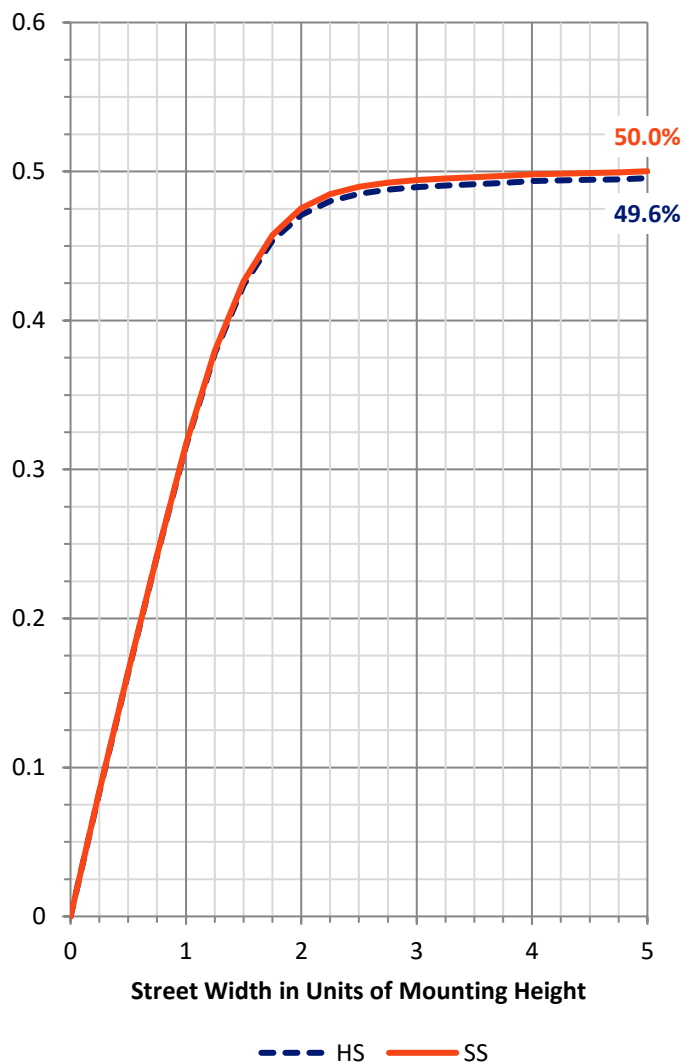
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	5528.4	0.0	5528.4
	% Fixture	49.8	0.0	49.8
<b>Street Side</b>	Lumens	5569.6	0.0	5569.6
	% Fixture	50.2	0.0	50.2
<b>Total</b>	Lumens	11098.0	0.0	11098.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.7	0.5
10°-20°	269.3	2.4
20°-30°	582.3	5.2
30°-40°	1110.9	10.0
40°-50°	2018.2	18.2
50°-60°	2835.1	25.5
60°-70°	2706.9	24.4
70°-80°	1389.2	12.5
80°-90°	127.4	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°	11098.0	100.0
0°-180°	11098.0	100.0

**Coefficient of Utilization**



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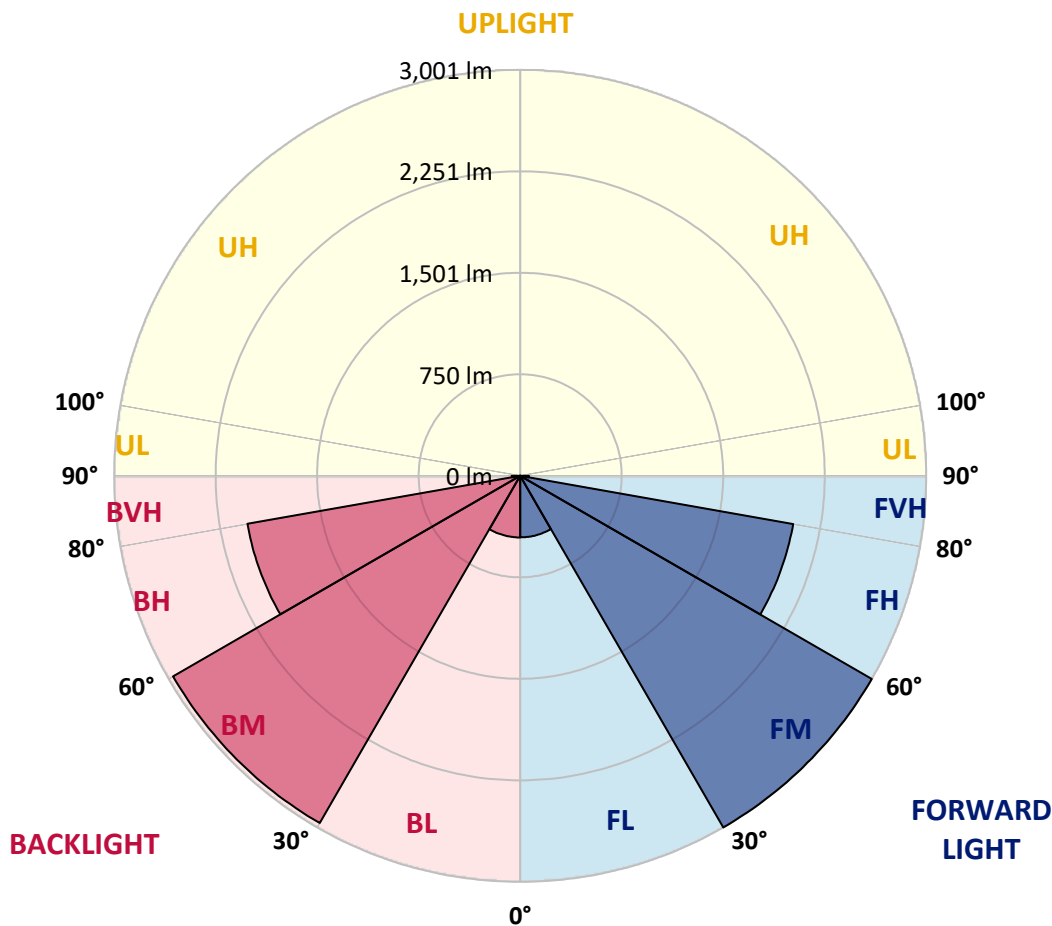
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	454.7	4.1			
FM (30°-60°)	3001.0	27.0			
FH (60°-80°)	2049.2	18.5			G2/5000
FVH (80°-90°)	64.6	0.6			G1/100
BL (0°-30°)	455.6	4.1	B1/500		
BM (30°-60°)	2963.2	26.7	B3/5000		
BH (60°-80°)	2046.9	18.4	B3/2500		G3/2500
BVH (80°-90°)	62.7	0.6			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 Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	389.5	389.5	389.5	389.5	389.5	389.5	389.5	389.5	389.5	389.5	389.5
2.5°	471.8	454.3	432.2	445.3	450.7	460.1	458.8	454.3	434.9	467.3	470.9
5°	590.6	562.7	552.3	550.5	553.2	544.2	573.5	564.9	580.7	609.9	616.7
7.5°	672.4	651.7	629.7	636.4	608.6	604.5	642.3	676.0	684.6	738.1	741.7
10°	711.1	690.9	696.7	692.7	689.5	715.6	733.2	757.9	793.4	798.4	806.0
12.5°	743.9	752.0	777.7	776.8	819.1	865.4	858.6	884.3	890.1	952.2	933.3
15°	827.2	843.8	842.0	857.7	876.2	952.2	952.6	996.3	1036.3	1060.6	1054.3
17.5°	949.0	954.9	930.6	931.5	985.0	1016.1	1050.7	1043.1	1147.4	1195.1	1198.2
20°	1021.9	1036.8	1008.9	972.0	1066.9	1109.6	1129.0	1084.4	1196.0	1260.3	1260.3
22.5°	1149.2	1111.0	1068.7	1044.0	1127.6	1173.0	1170.8	1158.2	1217.6	1331.4	1320.6
25°	1219.4	1197.8	1176.6	1182.9	1225.2	1248.6	1279.6	1250.4	1306.2	1390.7	1355.2
27.5°	1352.5	1312.5	1208.6	1291.3	1291.3	1273.8	1339.5	1353.4	1317.0	1454.6	1481.1
30°	1503.2	1489.2	1342.2	1429.9	1402.9	1353.4	1479.3	1470.4	1409.2	1549.5	1537.4
32.5°	1645.8	1691.6	1552.2	1504.1	1544.6	1563.5	1497.3	1524.3	1536.0	1671.4	1665.6
35°	1864.4	1903.0	1718.2	1706.0	1638.6	1621.0	1671.4	1680.4	1681.3	1823.9	1797.8
37.5°	2242.6	2186.9	2004.2	1918.3	1926.0	1904.8	1914.7	1843.7	1853.6	2060.5	2073.5
40°	2519.3	2456.3	2253.0	2191.4	2040.2	2130.6	2050.6	2043.4	2023.6	2291.7	2284.5
42.5°	2824.7	2738.3	2513.4	2431.1	2270.5	2233.6	2196.8	2280.0	2274.6	2522.8	2577.7
45°	3055.4	2880.9	2763.5	2712.2	2616.0	2525.5	2490.5	2527.8	2510.7	2695.1	2790.9
47.5°	3201.1	3049.5	2914.6	2806.7	2714.5	2936.2	2758.5	2708.6	2674.0	2880.4	2972.6
50°	3317.2	3142.2	2983.0	2947.0	3019.9	3216.0	2935.8	2825.6	2867.8	3019.9	3145.4
52.5°	3348.7	3163.3	3020.3	2997.4	3194.4	3229.9	3184.5	2999.2	2987.9	3187.2	3338.8
55°	3252.4	3074.7	3006.8	3132.3	3350.0	3320.3	3389.6	3271.3	3191.7	3358.1	3548.8
57.5°	3004.6	2828.3	2812.1	2992.9	3267.2	3520.0	3554.2	3460.7	3356.3	3532.6	3757.5
60°	2597.5	2436.5	2477.4	2677.1	3090.9	3450.8	3632.5	3547.0	3514.6	3690.0	3950.9
62.5°	1963.8	1838.3	1947.6	2226.0	2768.9	3361.3	3740.4	3726.9	3680.1	3857.4	4121.8
65°	1252.2	1186.1	1297.6	1580.5	2269.2	3198.4	3792.1	3810.1	3853.3	3986.5	4254.1
67.5°	727.8	692.7	760.6	992.2	1616.1	2626.3	3695.9	3954.1	3976.6	4053.0	4340.9
70°	430.4	407.5	435.4	557.3	914.9	1789.2	3152.6	3891.1	4061.1	4114.2	4428.6
72.5°	328.3	306.8	294.6	329.7	477.7	924.3	2131.5	3298.3	3993.2	4073.7	4391.7
75°	283.8	263.1	248.7	251.9	284.3	439.0	1155.5	2359.1	3402.6	3709.4	4056.6
77.5°	243.8	225.3	215.0	214.1	218.1	241.1	483.1	1279.2	2131.1	2666.3	2924.5
80°	195.2	180.8	178.6	178.6	172.7	170.9	240.2	486.7	811.0	961.6	922.1
82.5°	142.6	128.2	142.6	140.8	131.8	124.6	152.9	210.5	250.1	197.5	156.1
85°	96.3	83.2	94.0	95.8	87.3	64.8	91.8	105.2	107.9	67.5	55.8
87.5°	33.7	32.8	53.1	46.3	37.8	22.0	33.7	36.4	38.2	23.8	16.2
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°	389.5	389.5	389.5	389.5	389.5	389.5	389.5	389.5	389.5	389.5	389.5
2.5°	472.3	466.9	439.9	443.9	454.3	459.2	464.2	443.9	434.0	465.5	462.4
5°	618.5	598.7	576.6	573.5	574.8	555.5	566.7	561.8	564.0	584.3	588.3
7.5°	740.8	717.0	687.7	664.8	625.2	593.7	620.3	633.7	637.8	673.8	687.3
10°	806.9	786.7	778.1	735.0	721.9	717.9	711.6	690.0	713.8	705.3	712.0
12.5°	936.5	932.4	887.9	859.5	862.2	869.9	830.3	808.7	777.7	826.3	808.7
15°	1046.7	1064.2	1019.7	967.9	942.3	955.3	925.2	893.7	865.8	880.7	861.8
17.5°	1187.4	1187.0	1100.2	1044.9	1042.6	1041.7	997.2	927.9	961.2	950.8	951.7
20°	1262.1	1250.0	1142.0	1078.1	1132.6	1113.2	1073.2	984.1	1022.8	1035.4	1043.5
22.5°	1324.6	1317.9	1187.0	1140.2	1175.3	1175.7	1135.7	1088.9	1084.0	1123.1	1102.0
25°	1368.2	1395.2	1272.0	1260.8	1276.0	1260.8	1221.6	1191.0	1171.2	1229.7	1171.2
27.5°	1471.7	1433.5	1285.0	1348.9	1358.4	1281.4	1330.5	1294.5	1239.6	1312.0	1335.9
30°	1545.5	1568.0	1376.8	1473.0	1461.8	1390.7	1411.0	1409.6	1344.0	1485.2	1468.6
32.5°	1672.3	1645.3	1526.6	1518.9	1545.9	1542.8	1508.6	1525.2	1541.4	1644.0	1668.7
35°	1802.3	1831.1	1622.4	1674.1	1666.5	1617.9	1707.4	1697.0	1745.2	1955.7	1886.0
37.5°	2095.6	1958.4	1837.4	1830.6	1881.9	1889.6	1860.8	1906.2	2010.1	2172.0	2246.7
40°	2287.6	2225.1	2019.5	2027.6	1956.6	2078.9	1997.9	2144.1	2223.3	2496.3	2469.8
42.5°	2578.2	2425.7	2228.2	2255.2	2240.8	2181.9	2288.5	2363.6	2477.0	2685.2	2819.7
45°	2794.5	2585.4	2491.8	2475.2	2473.4	2575.9	2562.4	2682.5	2723.0	2879.5	2991.1
47.5°	2958.7	2781.0	2642.5	2661.4	2606.5	2899.3	2743.2	2780.6	2862.4	3010.0	3140.0
50°	3153.4	2955.5	2798.1	2844.9	2978.5	3090.9	2949.7	2885.8	2925.9	3099.9	3244.8
52.5°	3333.8	3125.6	2952.4	2991.5	3209.7	3158.4	3143.1	2981.6	2976.7	3116.6	3281.2
55°	3544.8	3310.0	3157.0	3281.2	3358.6	3295.1	3270.8	3074.3	2952.8	3030.7	3185.8
57.5°	3751.7	3492.6	3340.6	3366.2	3464.3	3401.3	3219.1	2916.4	2764.8	2780.1	2937.1
60°	3945.5	3660.4	3534.9	3510.1	3588.4	3341.5	3022.6	2627.2	2426.1	2389.3	2525.1
62.5°	4111.5	3800.7	3681.9	3614.5	3689.1	3343.7	2716.3	2163.0	1942.2	1817.1	1922.8
65°	4243.3	3917.2	3832.6	3797.5	3824.5	3140.4	2239.0	1588.2	1317.4	1178.9	1240.5
67.5°	4331.0	3982.4	3943.7	3989.6	3629.8	2615.5	1658.8	1016.5	766.0	690.4	729.1
70°	4421.8	4040.0	4038.6	3882.6	3077.9	1803.2	968.8	586.1	445.7	416.5	440.8
72.5°	4391.3	3971.6	3991.9	3395.4	2132.9	963.9	511.4	331.5	301.8	312.2	333.7
75°	4066.5	3610.9	3513.3	2441.0	1209.9	448.0	294.6	251.0	249.2	264.9	286.1
77.5°	2949.7	2514.8	2256.6	1383.5	518.6	242.4	216.8	209.6	209.6	222.2	241.1
80°	972.4	841.5	877.1	535.2	245.1	167.3	169.1	172.3	171.4	174.5	190.3
82.5°	159.7	165.5	255.9	218.6	148.0	114.2	127.7	134.0	135.8	121.4	138.1
85°	56.7	63.9	108.8	101.2	85.5	57.6	84.1	94.0	92.7	81.0	89.5
87.5°	17.5	22.5	39.6	30.6	25.6	15.7	31.5	36.9	46.3	18.9	17.1
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)