

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: P596694

Luminaire Tested: **MSA-SA3B-827-U-T4W**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596694  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3B-827-U-T4W  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10957 lumens  
Efficiency: N/A  
Efficacy: 87.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2

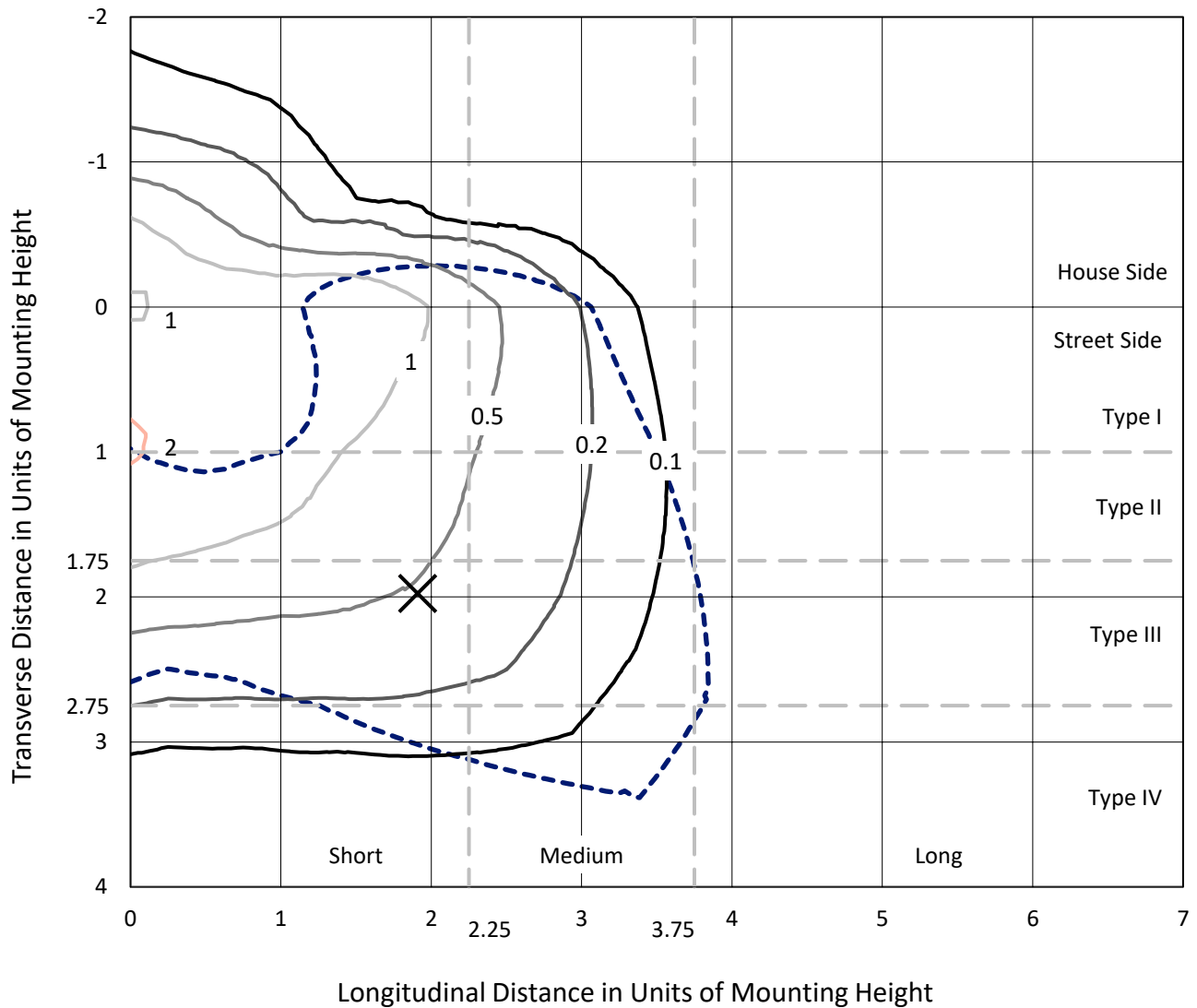
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

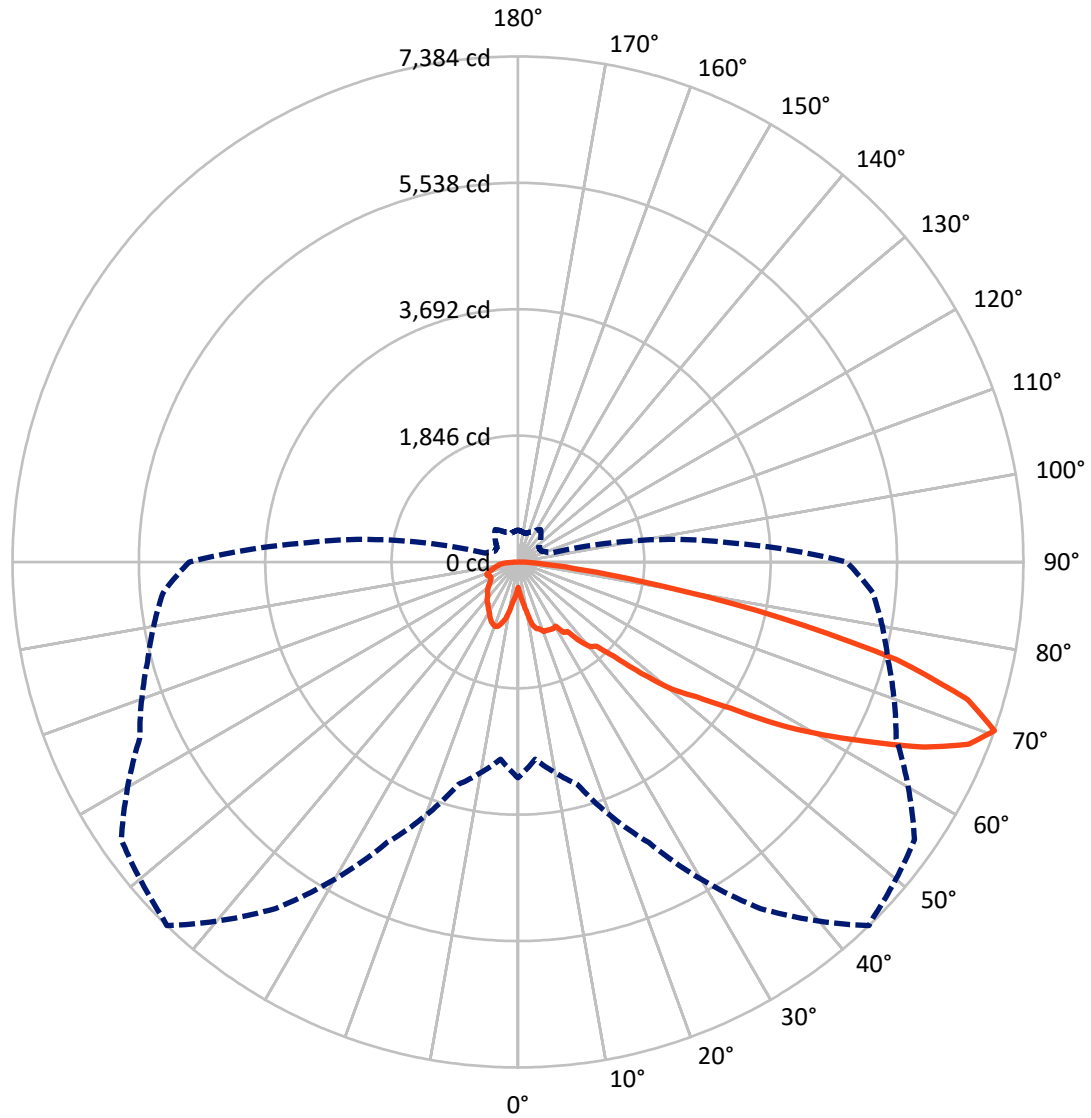
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 70-Deg Vertical

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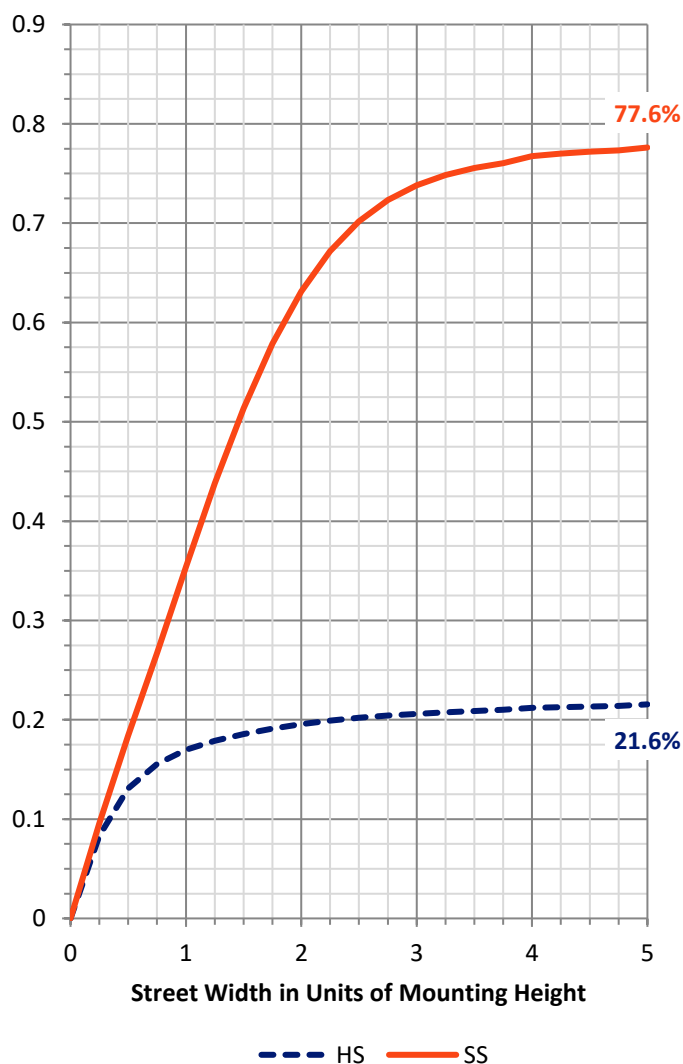
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2417.5	0.0	2417.5
	% Fixture	22.1	0.0	22.1
<b>Street Side</b>	Lumens	8539.5	0.0	8539.5
	% Fixture	77.9	0.0	77.9
<b>Total</b>	Lumens	10957.0	0.0	10957.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.4	0.5
10°-20°	268.9	2.5
20°-30°	502.5	4.6
30°-40°	806.6	7.4
40°-50°	1361.5	12.4
50°-60°	2426.1	22.1
60°-70°	3318.6	30.3
70°-80°	1951.5	17.8
80°-90°	262.8	2.4
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°	10957.0	100.0
0°-180°	10957.0	100.0

**Coefficient of Utilization**



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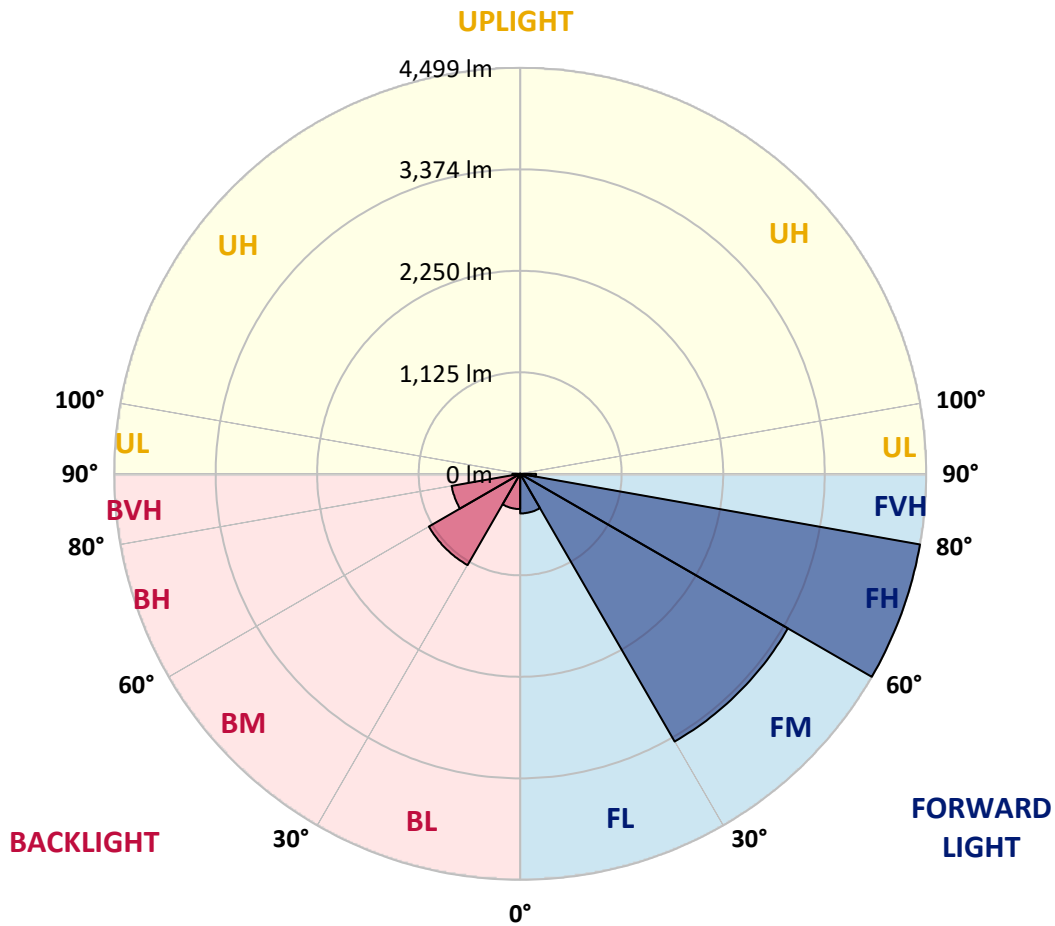
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	439.1	4.0			
FM (30°-60°)	3426.0	31.3			
FH (60°-80°)	4499.3	41.1			G2/5000
FVH (80°-90°)	175.1	1.6			G2/225
BL (0°-30°)	390.7	3.6	B1/500		
BM (30°-60°)	1168.3	10.7	B2/2500		
BH (60°-80°)	770.9	7.0	B2/1000		G2/1000
BVH (80°-90°)	87.6	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B2-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	372.4	372.4	372.4	372.4	372.4	372.4	372.4	372.4	372.4	372.4	372.4
2.5°	452.0	443.0	421.4	428.6	437.6	441.2	440.3	439.4	425.5	420.5	445.2
5°	614.1	594.4	578.7	572.4	551.7	535.5	525.6	551.7	547.7	554.4	571.5
7.5°	766.9	754.3	718.8	706.2	664.0	636.2	633.0	653.7	659.1	648.3	677.5
10°	865.3	843.7	836.5	806.4	777.2	772.7	770.0	760.6	747.6	746.7	720.6
12.5°	941.7	952.9	958.7	924.1	925.0	941.2	932.7	894.5	872.5	833.8	837.0
15°	1078.7	1094.9	1048.6	1026.6	984.3	1008.6	1005.5	973.6	970.4	945.3	916.1
17.5°	1198.2	1205.4	1128.1	1077.8	1063.4	1028.4	1037.8	1038.7	997.4	1042.3	1016.2
20°	1208.1	1233.7	1144.7	1044.5	1087.7	1083.2	1084.5	1075.5	1021.2	1095.3	1085.4
22.5°	1256.6	1217.5	1137.5	1064.3	1075.5	1082.3	1088.6	1077.8	1074.6	1116.0	1146.1
25°	1247.6	1235.0	1154.2	1092.2	1093.5	1094.9	1098.0	1130.4	1126.8	1182.9	1198.6
27.5°	1331.6	1312.3	1159.1	1143.8	1108.8	1101.2	1079.6	1147.0	1199.5	1198.2	1284.9
30°	1491.6	1471.8	1274.1	1229.6	1166.3	1088.1	1129.5	1219.3	1260.6	1274.6	1384.6
32.5°	1741.4	1773.7	1500.6	1321.3	1242.7	1225.6	1221.1	1212.1	1314.6	1383.3	1483.5
35°	2099.9	2074.3	1767.4	1517.6	1323.1	1249.9	1259.7	1314.6	1436.3	1480.8	1573.3
37.5°	2510.5	2457.5	2109.3	1740.0	1554.9	1463.3	1430.5	1483.5	1510.4	1545.5	1734.6
40°	2927.9	2798.5	2444.9	2032.5	1694.2	1625.0	1596.2	1531.1	1594.5	1665.4	1905.8
42.5°	3330.9	3230.7	2810.2	2381.6	1928.7	1682.1	1666.3	1602.5	1798.9	1873.9	2152.9
45°	3753.2	3520.9	3184.4	2775.6	2271.5	1962.0	1938.6	1824.0	2075.6	2232.0	2501.5
47.5°	4037.1	3821.9	3527.2	3095.5	2558.6	2430.1	2385.6	2189.7	2418.0	2621.0	3040.2
50°	4305.8	4084.3	3774.7	3445.4	3078.4	2930.6	2835.8	2509.6	2844.3	3175.0	3730.7
52.5°	4690.4	4492.2	4062.3	3798.1	3636.8	3273.4	3202.8	3023.6	3343.0	3789.1	4485.5
55°	5101.4	4831.4	4441.9	4295.4	4230.3	3764.9	3707.4	3593.2	4007.0	4417.6	5219.1
57.5°	5282.9	5001.2	4786.5	4698.9	4693.5	4479.2	4413.2	4333.6	4685.9	4956.8	5909.7
60°	5427.2	5124.8	5039.0	5088.0	5265.9	5124.8	5039.0	4968.9	5238.5	5489.6	6473.0
62.5°	5400.6	5097.4	5141.4	5290.6	5744.8	5786.1	5720.1	5550.3	5786.1	5926.3	6796.1
65°	4972.9	4692.6	4949.1	5303.2	6190.0	6520.2	6516.6	6072.3	6154.1	6154.1	6761.9
67.5°	4223.6	3933.3	4353.4	5192.2	6497.8	7102.0	7102.9	6625.8	6187.8	6131.2	6233.6
70°	3153.9	2891.0	3363.2	4521.9	6180.1	7383.7	7342.8	7072.4	6095.2	5600.6	5207.0
72.5°	1883.8	1714.0	2148.4	3291.8	5271.7	6865.7	6974.4	6558.0	5579.9	4657.6	3722.2
75°	855.4	781.7	1009.5	1891.0	3763.5	5726.8	5845.0	5534.5	4432.0	3349.7	2151.1
77.5°	366.2	346.4	440.7	838.8	2075.2	3916.3	4158.4	3955.4	3002.9	1946.7	951.5
80°	235.4	222.8	270.9	403.4	963.7	2116.1	2324.5	2248.6	1529.8	757.0	335.2
82.5°	140.6	136.6	181.1	253.4	525.6	931.3	1049.5	1077.3	635.3	339.6	191.8
85°	76.8	77.7	99.3	153.6	315.4	362.6	388.2	422.3	299.2	196.8	93.0
87.5°	25.6	29.7	40.0	62.4	112.3	102.4	102.9	119.5	126.2	81.8	29.7
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°	372.4	372.4	372.4	372.4	372.4	372.4	372.4	372.4	372.4	372.4	372.4
2.5°	449.3	441.2	420.5	421.9	429.5	431.3	433.5	420.5	417.8	442.5	444.8
5°	574.2	547.7	535.5	531.5	519.8	515.8	537.3	547.2	557.1	576.4	585.8
7.5°	674.4	644.7	622.7	602.5	585.4	575.5	611.9	639.8	656.8	696.4	714.3
10°	720.2	694.6	686.5	670.3	683.3	713.0	719.7	720.6	758.4	757.5	765.1
12.5°	811.4	794.8	768.2	774.1	808.2	838.8	830.2	843.3	856.8	889.1	874.3
15°	894.5	890.0	865.3	869.3	876.1	914.3	919.2	932.2	952.9	978.5	961.0
17.5°	996.9	995.1	934.9	929.5	945.3	982.5	970.9	948.0	1016.2	1043.6	1036.5
20°	1066.6	1053.1	975.8	952.9	992.9	997.8	984.3	948.0	1007.3	1067.0	1083.2
22.5°	1124.5	1108.8	1029.3	984.3	976.3	978.5	978.5	971.8	1001.0	1049.9	1049.5
25°	1171.2	1186.1	1085.0	1041.9	998.7	944.8	938.1	943.9	960.5	1054.9	1051.7
27.5°	1288.5	1247.6	1103.9	1071.5	983.0	898.1	916.5	925.5	930.9	1034.2	1051.3
30°	1364.9	1377.5	1171.2	1089.0	960.1	846.0	852.3	878.3	909.8	1032.0	1036.9
32.5°	1467.8	1440.8	1276.4	1059.8	899.0	814.5	802.8	837.9	884.6	995.6	1009.1
35°	1563.5	1595.3	1320.8	1054.4	856.3	767.3	779.9	792.1	840.6	955.1	970.9
37.5°	1788.1	1715.3	1445.7	1028.4	820.8	743.5	730.1	748.5	789.8	878.3	914.7
40°	1958.8	1963.3	1472.7	995.6	753.0	709.4	680.6	699.1	716.6	787.1	802.8
42.5°	2279.1	2181.2	1538.7	923.7	710.3	658.2	642.0	650.1	652.8	682.4	708.5
45°	2686.6	2457.0	1564.8	827.1	654.1	637.1	604.3	600.2	585.4	589.4	612.4
47.5°	3250.5	2887.4	1545.9	724.2	604.3	609.7	562.5	544.1	523.4	528.3	549.9
50°	3979.6	3437.3	1544.6	637.1	570.1	573.7	535.1	501.8	481.2	491.5	510.4
52.5°	4797.7	3989.0	1550.9	577.3	532.8	531.0	517.1	476.7	460.1	470.8	492.4
55°	5580.4	4463.5	1597.6	539.6	494.2	497.3	502.7	468.6	450.2	460.1	482.5
57.5°	6261.4	4838.2	1580.1	499.6	458.3	472.6	487.0	457.4	443.4	457.8	480.3
60°	6737.7	5012.0	1441.7	461.4	431.7	451.5	479.4	456.0	454.2	485.2	512.2
62.5°	6911.5	4947.8	1172.1	431.3	416.0	448.8	496.9	485.7	487.5	525.6	562.9
65°	6657.7	4609.9	874.3	412.0	403.9	461.8	537.3	503.2	478.5	509.9	544.1
67.5°	5935.7	4009.3	638.9	395.4	390.0	482.5	574.6	501.4	455.6	487.5	515.3
70°	4802.2	3164.6	494.6	374.2	371.5	468.6	578.2	487.9	430.8	451.5	467.2
72.5°	3290.4	2166.8	409.7	354.0	339.6	415.1	549.0	457.8	401.2	413.3	426.4
75°	1838.9	1216.2	344.6	328.9	297.4	369.7	514.9	439.8	379.2	382.8	400.7
77.5°	825.3	526.1	292.5	295.6	259.2	327.1	470.4	411.1	345.5	337.4	355.4
80°	312.2	256.5	237.2	249.8	217.9	283.5	424.1	385.0	310.0	299.7	310.0
82.5°	181.1	155.4	176.1	192.3	173.0	260.6	404.8	361.2	273.2	247.1	256.1
85°	84.0	80.4	105.6	124.9	120.9	203.1	346.4	271.8	194.5	164.4	182.0
87.5°	22.0	24.7	37.3	44.0	44.9	69.6	133.4	101.1	75.9	57.5	55.3
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)