

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: P596522

Luminaire Tested: **MSA-SA1C-827-U-RW**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596522
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-SA1C-827-U-RW
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND RECTANGULAR WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4735 lumens
Efficiency: N/A
Efficacy: 80.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Short
BUG Rating: B2 - U0 - G2

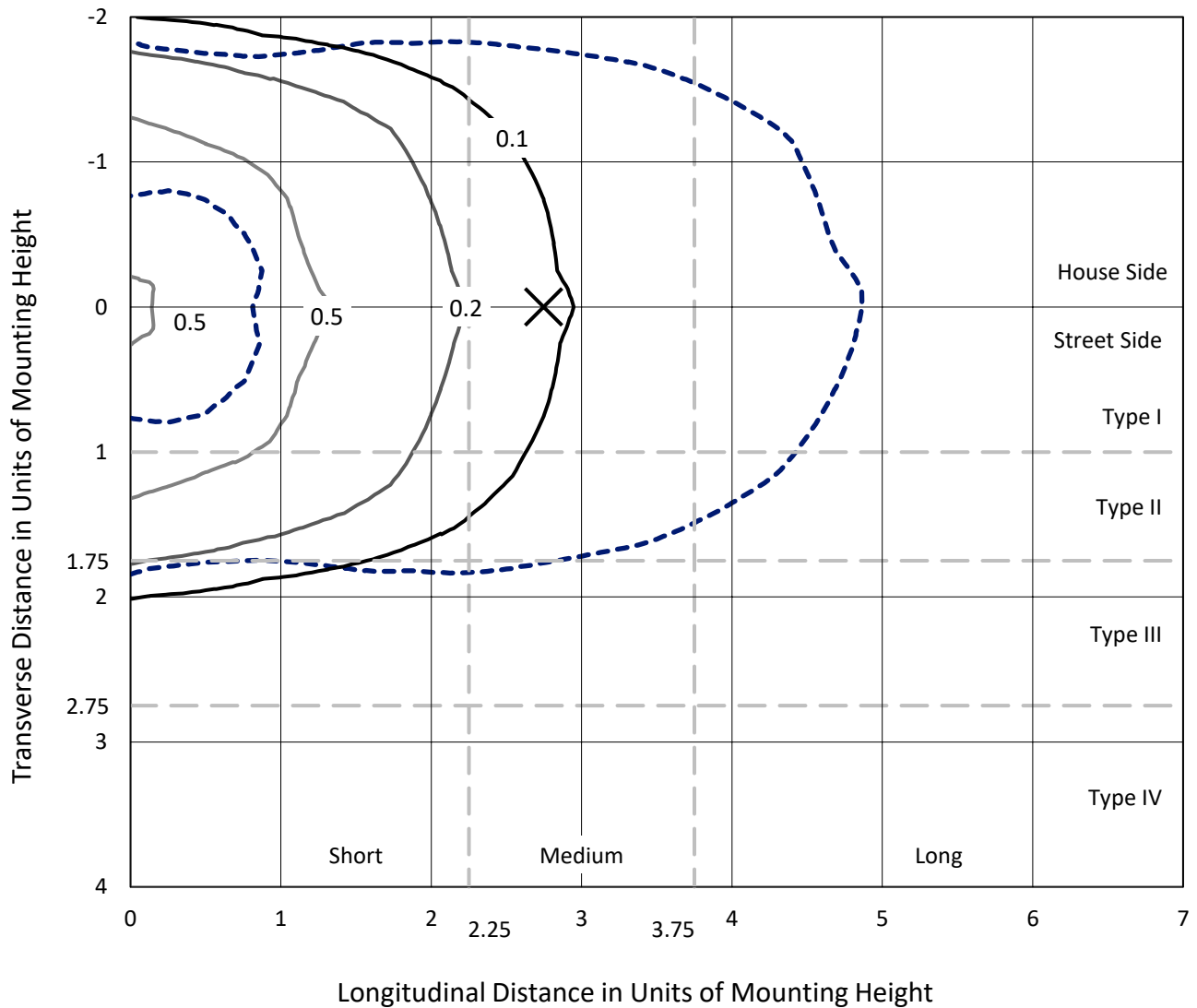
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

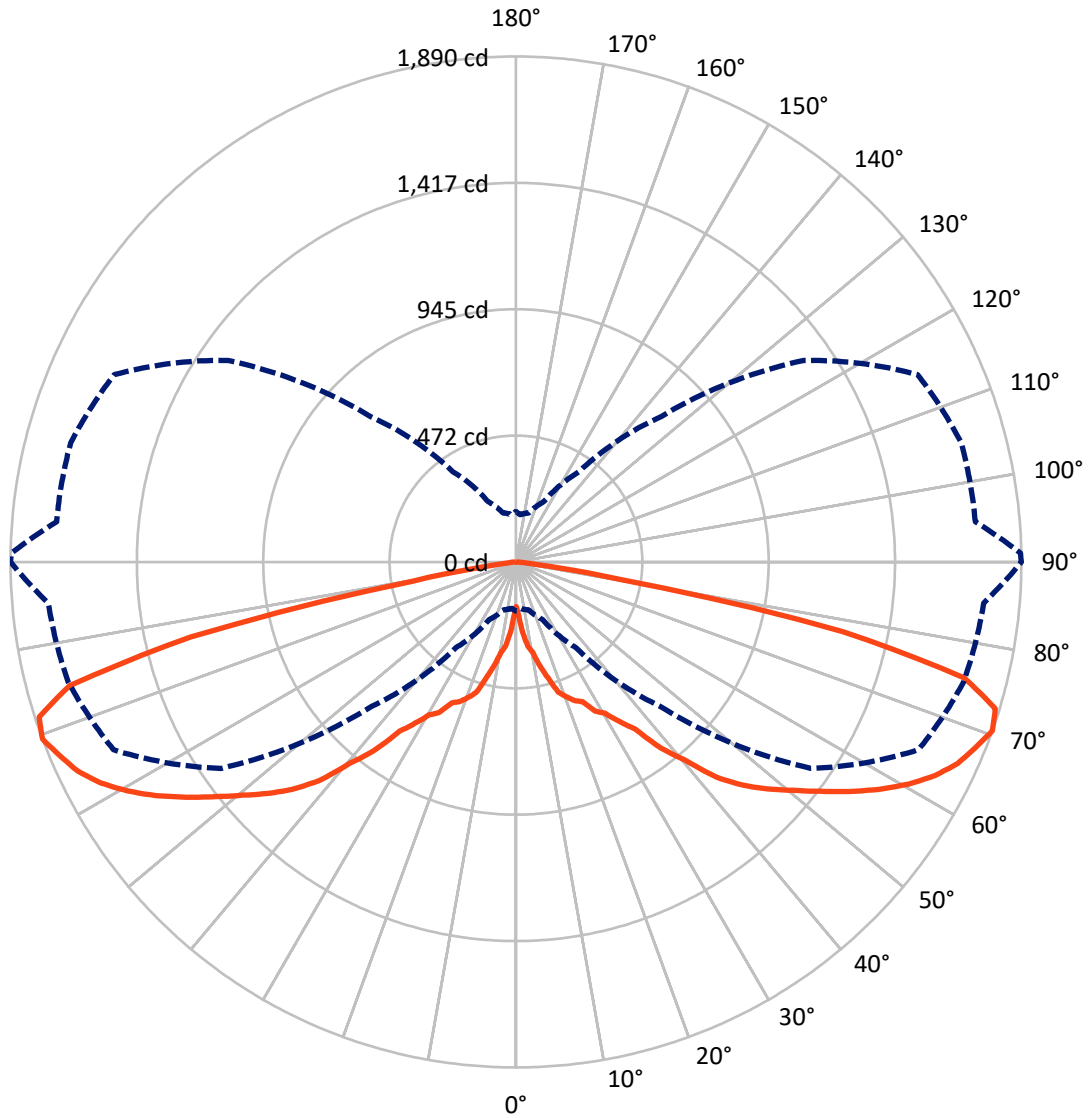
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 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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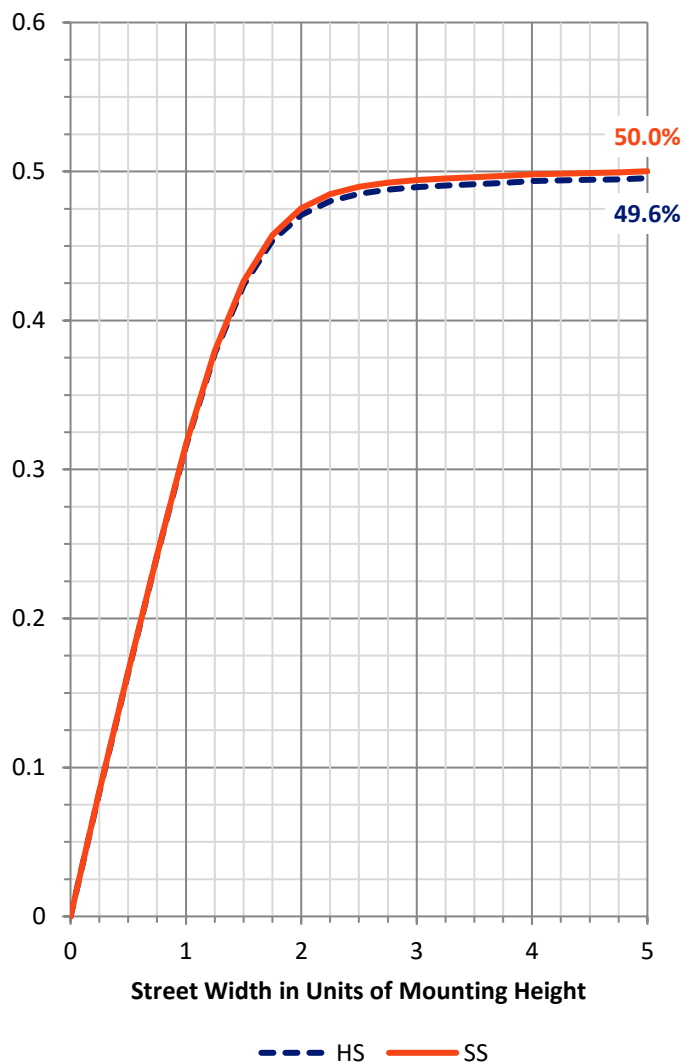
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2358.7	0.0	2358.7
	% Fixture	49.8	0.0	49.8
Street Side	Lumens	2376.3	0.0	2376.3
	% Fixture	50.2	0.0	50.2
Total	Lumens	4735.0	0.0	4735.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	25.1	0.5
10°-20°	114.9	2.4
20°-30°	248.4	5.2
30°-40°	474.0	10.0
40°-50°	861.1	18.2
50°-60°	1209.6	25.5
60°-70°	1154.9	24.4
70°-80°	592.7	12.5
80°-90°	54.3	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°	4735.0	100.0
0°-180°	4735.0	100.0

Coefficient of Utilization



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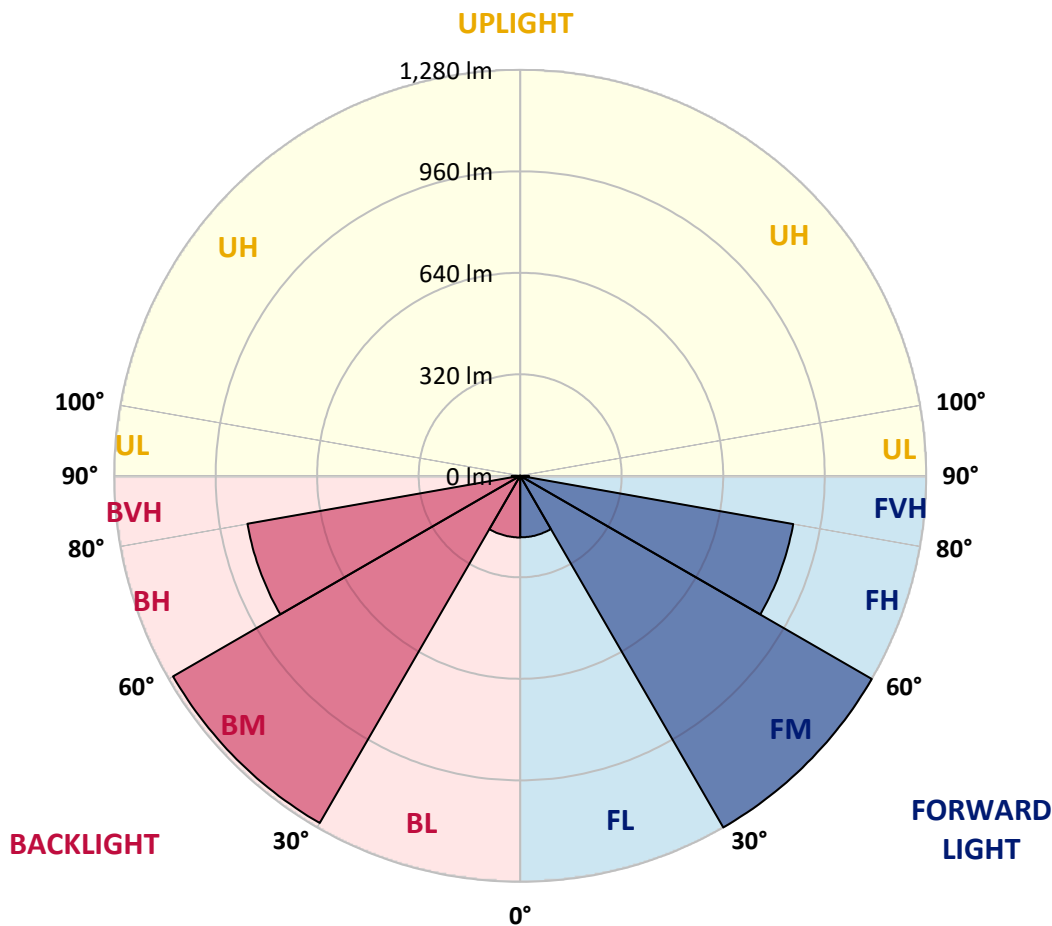
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	194.0	4.1			
FM (30°-60°)	1280.4	27.0			
FH (60°-80°)	874.3	18.5			G1/1800
FVH (80°-90°)	27.6	0.6			G1/100
BL (0°-30°)	194.4	4.1	B1/500		
BM (30°-60°)	1264.2	26.7	B2/2500		
BH (60°-80°)	873.3	18.4	B2/1000		G2/1000
BVH (80°-90°)	26.8	0.6			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 III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	166.2	166.2	166.2	166.2	166.2	166.2	166.2	166.2	166.2	166.2	166.2
2.5°	201.3	193.8	184.4	190.0	192.3	196.3	195.7	193.8	185.6	199.4	200.9
5°	252.0	240.1	235.7	234.9	236.0	232.2	244.7	241.0	247.7	260.2	263.1
7.5°	286.9	278.1	268.7	271.5	259.6	257.9	274.0	288.4	292.1	314.9	316.4
10°	303.4	294.8	297.3	295.5	294.2	305.3	312.8	323.4	338.5	340.6	343.9
12.5°	317.4	320.9	331.8	331.4	349.5	369.2	366.3	377.3	379.8	406.3	398.2
15°	352.9	360.0	359.2	366.0	373.8	406.3	406.5	425.1	442.1	452.5	449.8
17.5°	404.9	407.4	397.0	397.4	420.3	433.5	448.3	445.0	489.5	509.9	511.2
20°	436.0	442.3	430.4	414.7	455.2	473.4	481.7	462.7	510.3	537.7	537.7
22.5°	490.3	474.0	456.0	445.4	481.1	500.5	499.5	494.1	519.5	568.0	563.4
25°	520.2	511.0	502.0	504.7	522.7	532.7	546.0	533.5	557.3	593.4	578.2
27.5°	577.1	560.0	515.6	551.0	551.0	543.5	571.5	577.4	561.9	620.6	631.9
30°	641.3	635.4	572.6	610.1	598.5	577.4	631.2	627.3	601.2	661.1	655.9
32.5°	702.2	721.7	662.3	641.7	659.0	667.1	638.8	650.4	655.3	713.1	710.6
35°	795.4	811.9	733.1	727.9	699.1	691.6	713.1	716.9	717.3	778.2	767.0
37.5°	956.8	933.0	855.1	818.5	821.7	812.7	816.9	786.6	790.8	879.1	884.7
40°	1074.8	1048.0	961.2	935.0	870.5	909.0	874.9	871.8	863.4	977.7	974.7
42.5°	1205.1	1168.3	1072.4	1037.2	968.7	953.0	937.3	972.8	970.5	1076.4	1099.8
45°	1303.6	1229.1	1179.1	1157.2	1116.1	1077.5	1062.6	1078.5	1071.2	1149.9	1190.8
47.5°	1365.8	1301.1	1243.5	1197.5	1158.1	1252.7	1176.9	1155.6	1140.9	1228.9	1268.3
50°	1415.3	1340.6	1272.7	1257.3	1288.4	1372.1	1252.5	1205.5	1223.6	1288.4	1342.0
52.5°	1428.7	1349.7	1288.6	1278.8	1362.9	1378.1	1358.7	1279.6	1274.8	1359.8	1424.5
55°	1387.6	1311.8	1282.9	1336.4	1429.3	1416.6	1446.2	1395.7	1361.7	1432.7	1514.1
57.5°	1281.9	1206.7	1199.8	1276.9	1394.0	1501.8	1516.4	1476.5	1432.0	1507.2	1603.2
60°	1108.2	1039.5	1057.0	1142.2	1318.8	1472.3	1549.8	1513.3	1499.5	1574.4	1685.7
62.5°	837.8	784.3	830.9	949.7	1181.4	1434.1	1595.9	1590.1	1570.1	1645.8	1758.6
65°	534.3	506.0	553.6	674.3	968.1	1364.6	1617.9	1625.6	1644.0	1700.8	1815.0
67.5°	310.5	295.5	324.5	423.3	689.5	1120.5	1576.9	1687.0	1696.6	1729.2	1852.1
70°	183.7	173.9	185.8	237.8	390.3	763.4	1345.0	1660.2	1732.7	1755.3	1889.5
72.5°	140.1	130.9	125.7	140.7	203.8	394.4	909.4	1407.2	1703.7	1738.1	1873.7
75°	121.1	112.3	106.1	107.5	121.3	187.3	493.0	1006.5	1451.7	1582.6	1730.8
77.5°	104.0	96.1	91.7	91.3	93.1	102.9	206.1	545.8	909.2	1137.6	1247.8
80°	83.3	77.1	76.2	76.2	73.7	72.9	102.5	207.6	346.0	410.3	393.4
82.5°	60.8	54.7	60.8	60.1	56.2	53.2	65.2	89.8	106.7	84.2	66.6
85°	41.1	35.5	40.1	40.9	37.2	27.6	39.1	44.9	46.1	28.8	23.8
87.5°	14.4	14.0	22.6	19.8	16.1	9.4	14.4	15.5	16.3	10.2	6.9
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°	166.2	166.2	166.2	166.2	166.2	166.2	166.2	166.2	166.2	166.2	166.2
2.5°	201.5	199.2	187.7	189.4	193.8	195.9	198.0	189.4	185.2	198.6	197.3
5°	263.9	255.4	246.0	244.7	245.3	237.0	241.8	239.7	240.6	249.3	251.0
7.5°	316.1	305.9	293.4	283.6	266.7	253.3	264.6	270.4	272.1	287.5	293.2
10°	344.3	335.6	332.0	313.6	308.0	306.3	303.6	294.4	304.5	300.9	303.8
12.5°	399.5	397.8	378.8	366.7	367.9	371.1	354.3	345.0	331.8	352.5	345.0
15°	446.6	454.0	435.0	413.0	402.0	407.6	394.7	381.3	369.4	375.7	367.7
17.5°	506.6	506.4	469.4	445.8	444.8	444.4	425.4	395.9	410.1	405.7	406.1
20°	538.5	533.3	487.2	460.0	483.2	475.0	457.9	419.9	436.4	441.8	445.2
22.5°	565.2	562.3	506.4	486.5	501.4	501.6	484.6	464.6	462.5	479.2	470.2
25°	583.8	595.3	542.7	537.9	544.4	537.9	521.2	508.2	499.7	524.7	499.7
27.5°	627.9	611.6	548.3	575.5	579.5	546.7	567.6	552.3	528.9	559.8	570.0
30°	659.4	669.0	587.4	628.5	623.7	593.4	602.0	601.4	573.4	633.7	626.6
32.5°	713.5	702.0	651.3	648.1	659.6	658.2	643.6	650.7	657.7	701.4	712.0
35°	769.0	781.2	692.2	714.3	711.0	690.3	728.5	724.0	744.6	834.4	804.6
37.5°	894.1	835.5	783.9	781.0	802.9	806.2	793.9	813.3	857.6	926.7	958.6
40°	976.0	949.3	861.6	865.1	834.8	887.0	852.4	914.8	948.6	1065.1	1053.7
42.5°	1100.0	1034.9	950.7	962.2	956.1	930.9	976.4	1008.4	1056.8	1145.7	1203.0
45°	1192.3	1103.1	1063.1	1056.0	1055.3	1099.0	1093.3	1144.5	1161.8	1228.6	1276.2
47.5°	1262.3	1186.5	1127.4	1135.5	1112.1	1237.0	1170.4	1186.3	1221.3	1284.2	1339.7
50°	1345.4	1261.0	1193.8	1213.8	1270.8	1318.8	1258.5	1231.2	1248.3	1322.6	1384.4
52.5°	1422.4	1333.5	1259.6	1276.3	1369.4	1347.5	1341.0	1272.1	1270.0	1329.7	1399.9
55°	1512.4	1412.2	1347.0	1399.9	1432.9	1405.9	1395.5	1311.7	1259.8	1293.0	1359.2
57.5°	1600.7	1490.1	1425.3	1436.2	1478.0	1451.2	1373.4	1244.3	1179.6	1186.2	1253.1
60°	1683.4	1561.7	1508.2	1497.6	1531.0	1425.6	1289.6	1120.9	1035.1	1019.4	1077.3
62.5°	1754.2	1621.6	1570.9	1542.1	1574.0	1426.6	1158.9	922.9	828.6	775.3	820.4
65°	1810.4	1671.3	1635.2	1620.2	1631.7	1339.9	955.3	677.6	562.1	503.0	529.3
67.5°	1847.8	1699.1	1682.6	1702.2	1548.7	1115.9	707.7	433.7	326.8	294.6	311.1
70°	1886.6	1723.7	1723.1	1656.5	1313.2	769.3	413.4	250.0	190.2	177.7	188.1
72.5°	1873.5	1694.5	1703.1	1448.7	910.0	411.2	218.2	141.4	128.8	133.2	142.4
75°	1735.0	1540.6	1499.0	1041.5	516.2	191.1	125.7	107.1	106.3	113.0	122.1
77.5°	1258.5	1072.9	962.8	590.3	221.3	103.4	92.5	89.4	89.4	94.8	102.9
80°	414.9	359.1	374.2	228.4	104.6	71.4	72.2	73.5	73.1	74.5	81.2
82.5°	68.1	70.6	109.2	93.3	63.1	48.7	54.5	57.2	58.0	51.8	58.9
85°	24.2	27.3	46.4	43.2	36.5	24.6	35.9	40.1	39.5	34.5	38.2
87.5°	7.5	9.6	16.9	13.0	10.9	6.7	13.4	15.7	19.8	8.1	7.3
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)