

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: P367720

Luminaire Tested: **MSA-SA3A-740-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367720
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3A-740-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: 11894 lumens
Efficiency: N/A
Efficacy: 123.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B2 - U0 - G2

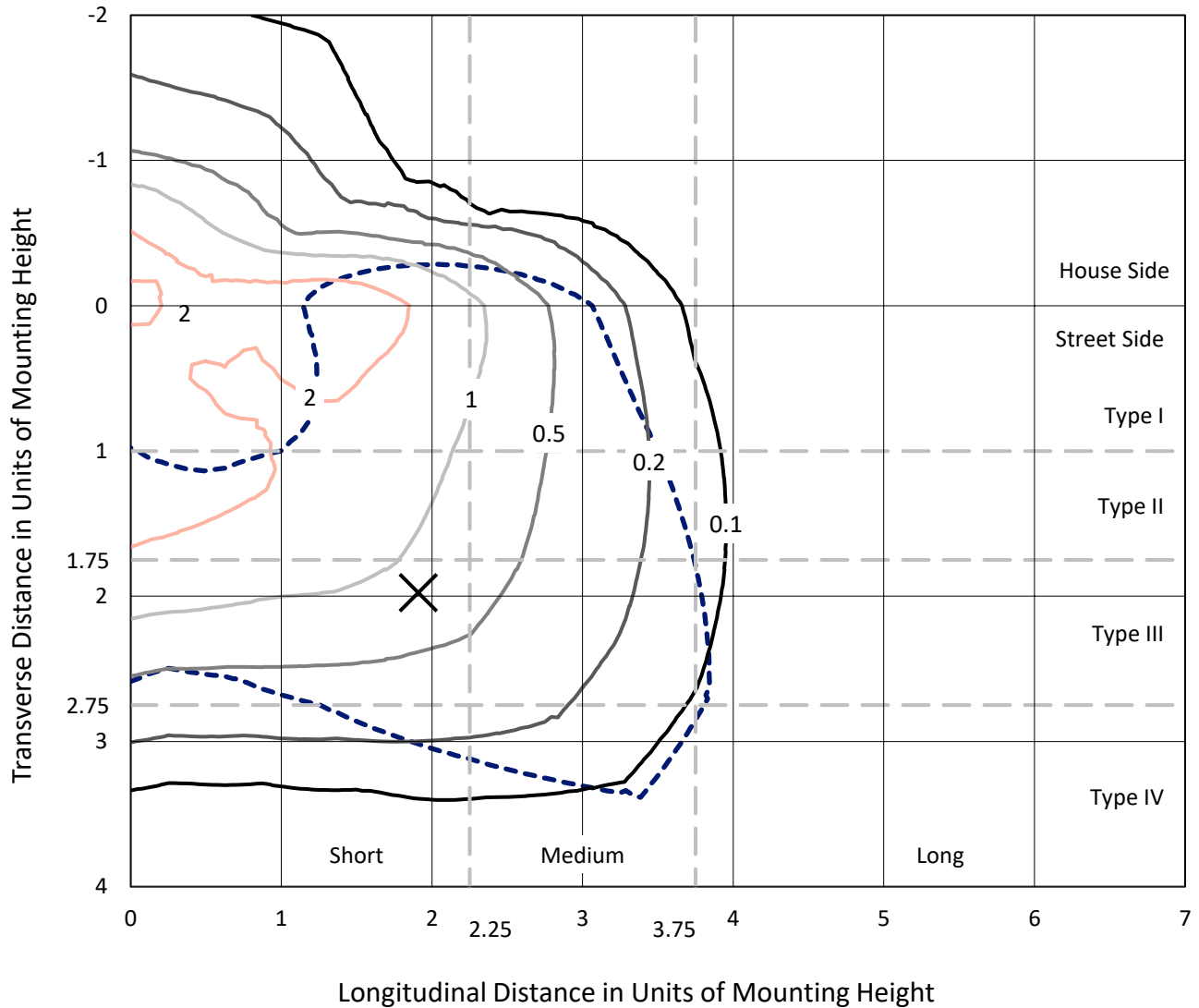
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

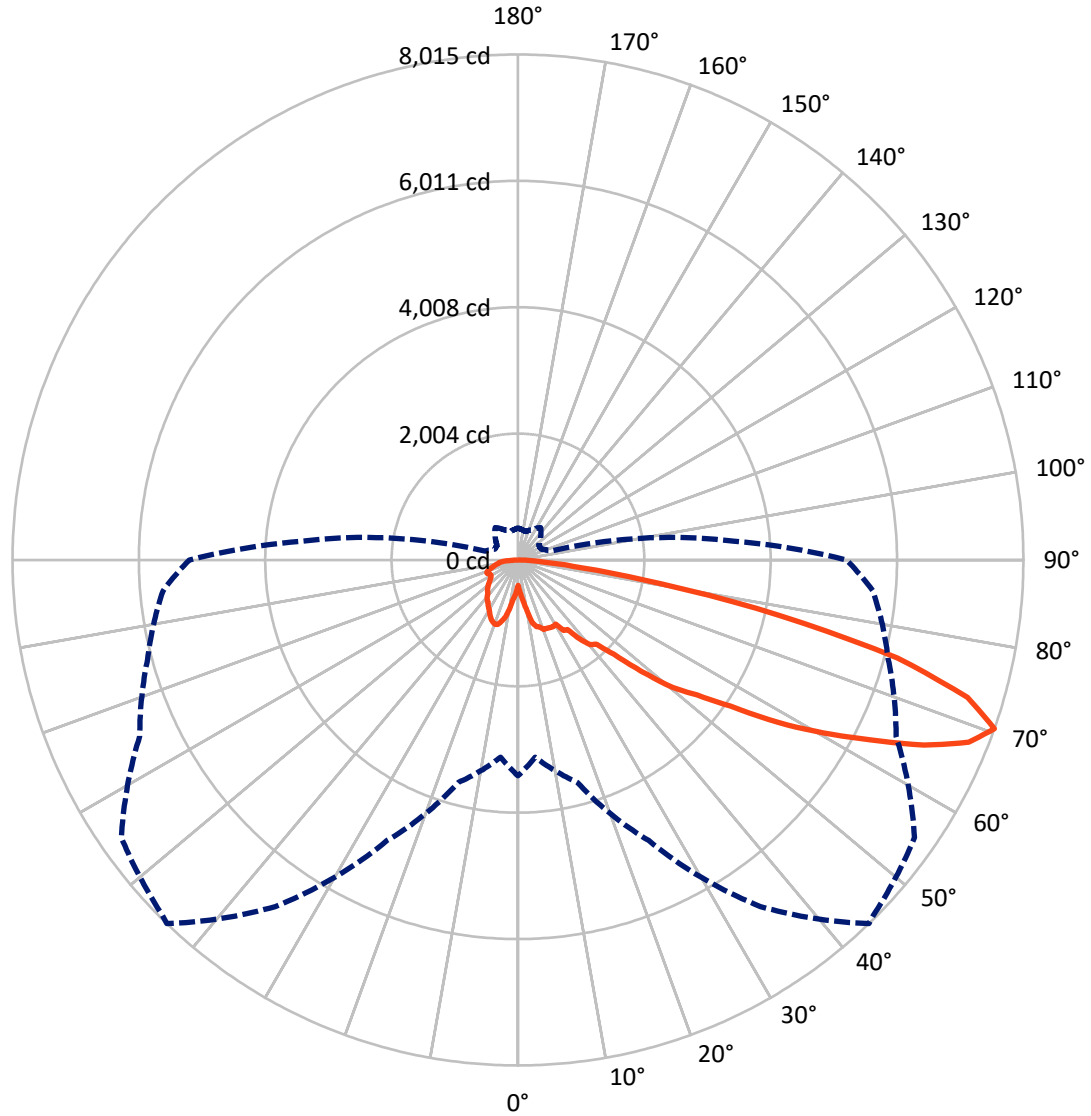
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 3.6 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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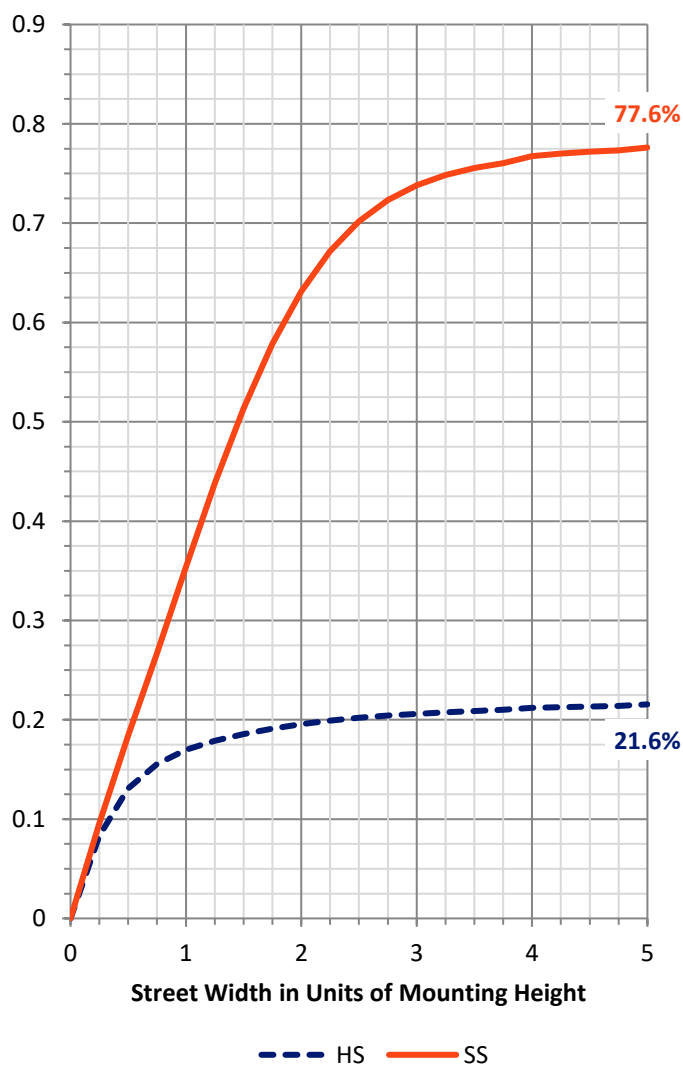
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2624.3	0.0	2624.3
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	9269.7	0.0	9269.7
	% Fixture	77.9	0.0	77.9
Total	Lumens	11894.0	0.0	11894.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	63.4	0.5
10°-20°	291.9	2.5
20°-30°	545.5	4.6
30°-40°	875.6	7.4
40°-50°	1477.9	12.4
50°-60°	2633.6	22.1
60°-70°	3602.4	30.3
70°-80°	2118.4	17.8
80°-90°	285.2	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°	11894.0	100.0
0°-180°	11894.0	100.0

Coefficient of Utilization

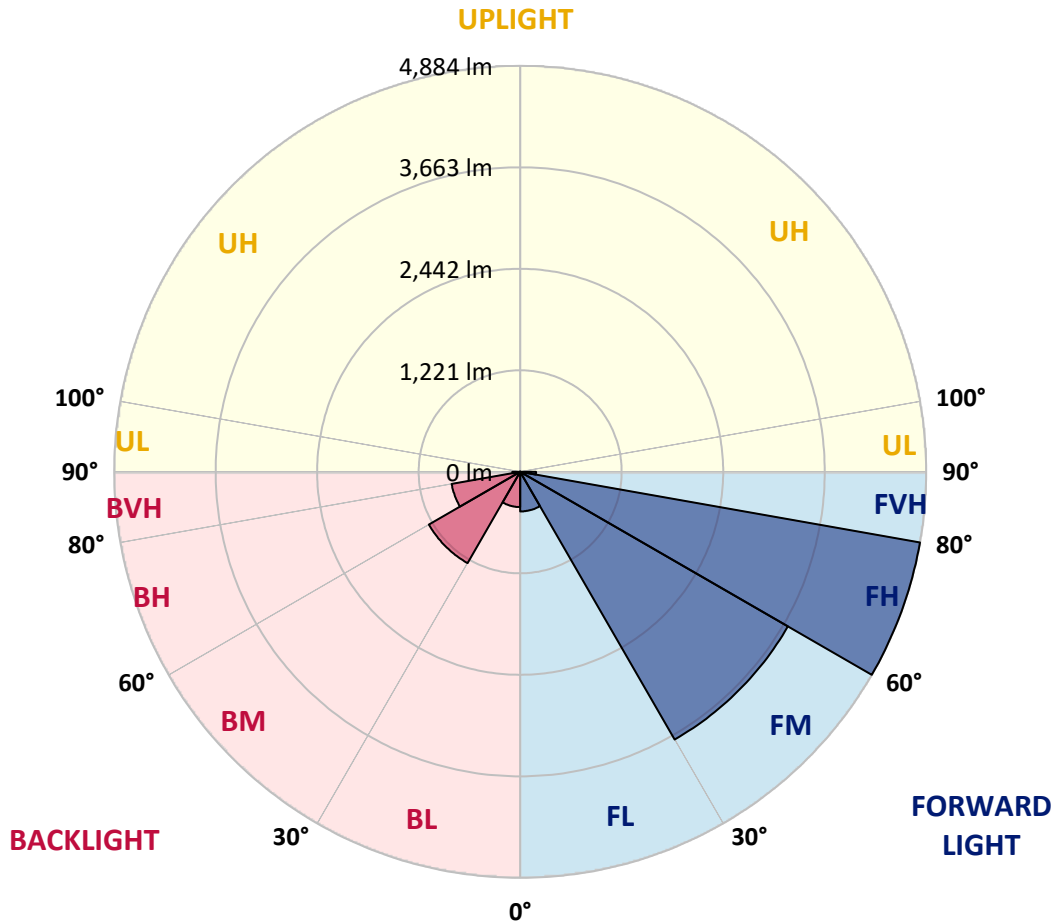


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	476.6	4.0			
FM (30°-60°)	3718.9	31.3			
FH (60°-80°)	4884.0	41.1			G2/5000
FVH (80°-90°)	190.1	1.6			G2/225
BL (0°-30°)	424.1	3.6	B1/500		
BM (30°-60°)	1268.2	10.7	B2/2500		
BH (60°-80°)	836.8	7.0	B2/1000		G2/1000
BVH (80°-90°)	95.1	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°	404.3	404.3	404.3	404.3	404.3	404.3	404.3	404.3	404.3	404.3	404.3
2.5°	490.6	480.9	457.5	465.3	475.0	478.9	477.9	477.0	461.8	456.5	483.3
5°	666.7	645.2	628.1	621.3	598.9	581.3	570.6	598.9	594.5	601.8	620.3
7.5°	832.5	818.8	780.3	766.6	720.8	690.6	687.2	709.6	715.4	703.7	735.4
10°	939.3	915.9	908.1	875.4	843.7	838.8	835.9	825.7	811.5	810.5	782.3
12.5°	1022.2	1034.4	1040.7	1003.2	1004.1	1021.7	1012.4	971.0	947.1	905.1	908.6
15°	1170.9	1188.5	1138.3	1114.4	1068.5	1094.9	1091.4	1056.8	1053.4	1026.1	994.4
17.5°	1300.7	1308.5	1224.6	1170.0	1154.4	1116.3	1126.6	1127.5	1082.7	1131.4	1103.1
20°	1311.4	1339.2	1242.6	1133.9	1180.7	1175.8	1177.3	1167.5	1108.5	1189.0	1178.3
22.5°	1364.1	1321.6	1234.8	1155.3	1167.5	1174.8	1181.7	1170.0	1166.5	1211.4	1244.1
25°	1354.3	1340.7	1252.9	1185.6	1187.0	1188.5	1191.9	1227.0	1223.1	1284.1	1301.1
27.5°	1445.5	1424.5	1258.2	1241.7	1203.6	1195.3	1171.9	1245.1	1302.1	1300.7	1394.8
30°	1619.1	1597.7	1383.1	1334.8	1266.0	1181.2	1226.0	1323.6	1368.5	1383.6	1503.1
32.5°	1890.3	1925.4	1628.9	1434.3	1348.9	1330.4	1325.5	1315.8	1427.0	1501.6	1610.3
35°	2279.5	2251.7	1918.6	1647.4	1436.2	1356.7	1367.5	1427.0	1559.1	1607.4	1707.9
37.5°	2725.2	2667.6	2289.7	1888.8	1687.9	1588.4	1552.8	1610.3	1639.6	1677.6	1883.0
40°	3178.3	3037.8	2654.0	2206.3	1839.1	1764.0	1732.8	1662.0	1730.8	1807.9	2068.8
42.5°	3615.7	3507.0	3050.5	2585.2	2093.6	1825.9	1808.8	1739.6	1952.7	2034.1	2337.0
45°	4074.1	3822.0	3456.7	3012.9	2465.7	2129.7	2104.4	1980.0	2253.1	2422.8	2715.4
47.5°	4382.4	4148.8	3828.8	3360.2	2777.4	2637.9	2589.6	2377.0	2624.7	2845.2	3300.2
50°	4674.0	4433.6	4097.5	3740.1	3341.6	3181.2	3078.3	2724.2	3087.5	3446.5	4049.8
52.5°	5091.5	4876.4	4409.7	4122.9	3947.8	3553.3	3476.7	3282.1	3628.9	4113.2	4869.1
55°	5537.7	5244.6	4821.8	4662.8	4592.1	4086.8	4024.4	3900.5	4349.7	4795.4	5665.5
57.5°	5734.7	5428.9	5195.8	5100.7	5094.9	4862.2	4790.6	4704.2	5086.6	5380.7	6415.0
60°	5891.3	5563.0	5469.9	5523.1	5716.2	5563.0	5469.9	5393.8	5686.4	5959.1	7026.6
62.5°	5862.5	5533.3	5581.1	5743.0	6236.1	6280.9	6209.2	6024.9	6280.9	6433.1	7377.2
65°	5398.2	5093.9	5372.4	5756.7	6719.4	7077.8	7073.9	6591.6	6680.3	6680.3	7340.2
67.5°	4584.7	4269.7	4725.7	5636.2	7053.4	7709.4	7710.3	7192.4	6716.9	6655.5	6766.7
70°	3423.6	3138.3	3650.8	4908.6	6708.6	8015.1	7970.8	7677.2	6616.5	6079.5	5652.3
72.5°	2044.9	1860.5	2332.1	3573.3	5722.5	7452.8	7570.9	7118.8	6057.1	5055.9	4040.5
75°	928.6	848.6	1095.8	2052.7	4085.4	6216.5	6344.8	6007.8	4811.0	3636.2	2335.0
77.5°	397.5	376.0	478.4	910.5	2252.6	4251.2	4514.0	4293.6	3259.7	2113.1	1032.9
80°	255.5	241.9	294.1	437.9	1046.1	2297.0	2523.3	2440.9	1660.6	821.8	363.8
82.5°	152.6	148.3	196.5	275.1	570.6	1011.0	1139.2	1169.5	689.6	368.7	208.2
85°	83.4	84.4	107.8	166.8	342.4	393.6	421.4	458.4	324.8	213.6	101.0
87.5°	27.8	32.2	43.4	67.8	121.9	111.2	111.7	129.7	137.0	88.8	32.2
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	404.3	404.3	404.3	404.3	404.3	404.3	404.3	404.3	404.3	404.3	404.3
2.5°	487.7	478.9	456.5	457.9	466.2	468.2	470.6	456.5	453.5	480.4	482.8
5°	623.3	594.5	581.3	576.9	564.3	559.9	583.3	594.0	604.7	625.7	635.9
7.5°	732.0	699.8	675.9	654.0	635.5	624.7	664.2	694.5	713.0	755.9	775.4
10°	781.8	754.0	745.2	727.6	741.8	774.0	781.3	782.3	823.2	822.2	830.5
12.5°	880.8	862.7	833.9	840.3	877.3	910.5	901.2	915.4	930.0	965.1	949.0
15°	971.0	966.1	939.3	943.7	951.0	992.4	997.8	1012.0	1034.4	1062.2	1043.2
17.5°	1082.2	1080.2	1014.9	1009.0	1026.1	1066.6	1053.9	1029.0	1103.1	1132.9	1125.1
20°	1157.8	1143.1	1059.3	1034.4	1077.8	1083.2	1068.5	1029.0	1093.4	1158.3	1175.8
22.5°	1220.7	1203.6	1117.3	1068.5	1059.7	1062.2	1062.2	1054.9	1086.6	1139.7	1139.2
25°	1271.4	1287.5	1177.8	1130.9	1084.1	1025.6	1018.3	1024.6	1042.7	1145.1	1141.7
27.5°	1398.7	1354.3	1198.2	1163.1	1067.1	974.9	994.9	1004.6	1010.5	1122.7	1141.2
30°	1481.6	1495.2	1271.4	1182.2	1042.2	918.3	925.1	953.4	987.6	1120.2	1125.6
32.5°	1593.3	1564.0	1385.5	1150.5	975.9	884.2	871.5	909.5	960.3	1080.7	1095.3
35°	1697.2	1731.8	1433.8	1144.6	929.5	833.0	846.6	859.8	912.5	1036.8	1053.9
37.5°	1941.0	1862.0	1569.4	1116.3	891.0	807.1	792.5	812.5	857.4	953.4	992.9
40°	2126.3	2131.2	1598.6	1080.7	817.4	770.1	738.8	758.8	777.9	854.4	871.5
42.5°	2474.0	2367.7	1670.3	1002.7	771.0	714.5	696.9	705.7	708.6	740.8	769.1
45°	2916.4	2667.2	1698.6	897.8	710.1	691.5	655.9	651.6	635.5	639.8	664.7
47.5°	3528.4	3134.4	1678.1	786.2	655.9	661.8	610.6	590.6	568.2	573.5	596.9
50°	4319.9	3731.3	1676.7	691.5	618.9	622.8	580.8	544.7	522.3	533.5	554.0
52.5°	5208.0	4330.2	1683.5	626.7	578.4	576.4	561.3	517.4	499.4	511.1	534.5
55°	6057.6	4845.2	1734.2	585.7	536.5	539.9	545.7	508.7	488.7	499.4	523.8
57.5°	6796.9	5251.9	1715.2	542.3	497.4	513.0	528.7	496.5	481.3	497.0	521.3
60°	7313.8	5440.6	1565.0	500.9	468.7	490.1	520.4	495.0	493.1	526.7	556.0
62.5°	7502.6	5370.9	1272.4	468.2	451.6	487.2	539.4	527.2	529.1	570.6	611.1
65°	7227.0	5004.2	949.0	447.2	438.4	501.3	583.3	546.2	519.4	553.5	590.6
67.5°	6443.3	4352.1	693.5	429.2	423.3	523.8	623.8	544.3	494.5	529.1	559.4
70°	5212.9	3435.3	536.9	406.2	403.3	508.7	627.7	529.6	467.7	490.1	507.2
72.5°	3571.8	2352.1	444.8	384.3	368.7	450.6	596.0	497.0	435.5	448.7	462.8
75°	1996.1	1320.2	374.1	357.0	322.8	401.4	558.9	477.4	411.6	415.5	435.0
77.5°	895.9	571.1	317.5	320.9	281.4	355.0	510.6	446.2	375.0	366.3	385.8
80°	338.9	278.5	257.5	271.2	236.5	307.7	460.4	417.9	336.5	325.3	336.5
82.5°	196.5	168.7	191.2	208.7	187.8	282.9	439.4	392.1	296.5	268.2	278.0
85°	91.2	87.3	114.6	135.6	131.2	220.4	376.0	295.1	211.2	178.5	197.5
87.5°	23.9	26.8	40.5	47.8	48.8	75.6	144.8	109.7	82.4	62.4	60.0
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)