

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: P597087

Luminaire Tested: **MSA-SA3D-835-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P597087
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-835-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12288 lumens
Efficiency: N/A
Efficacy: 64.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

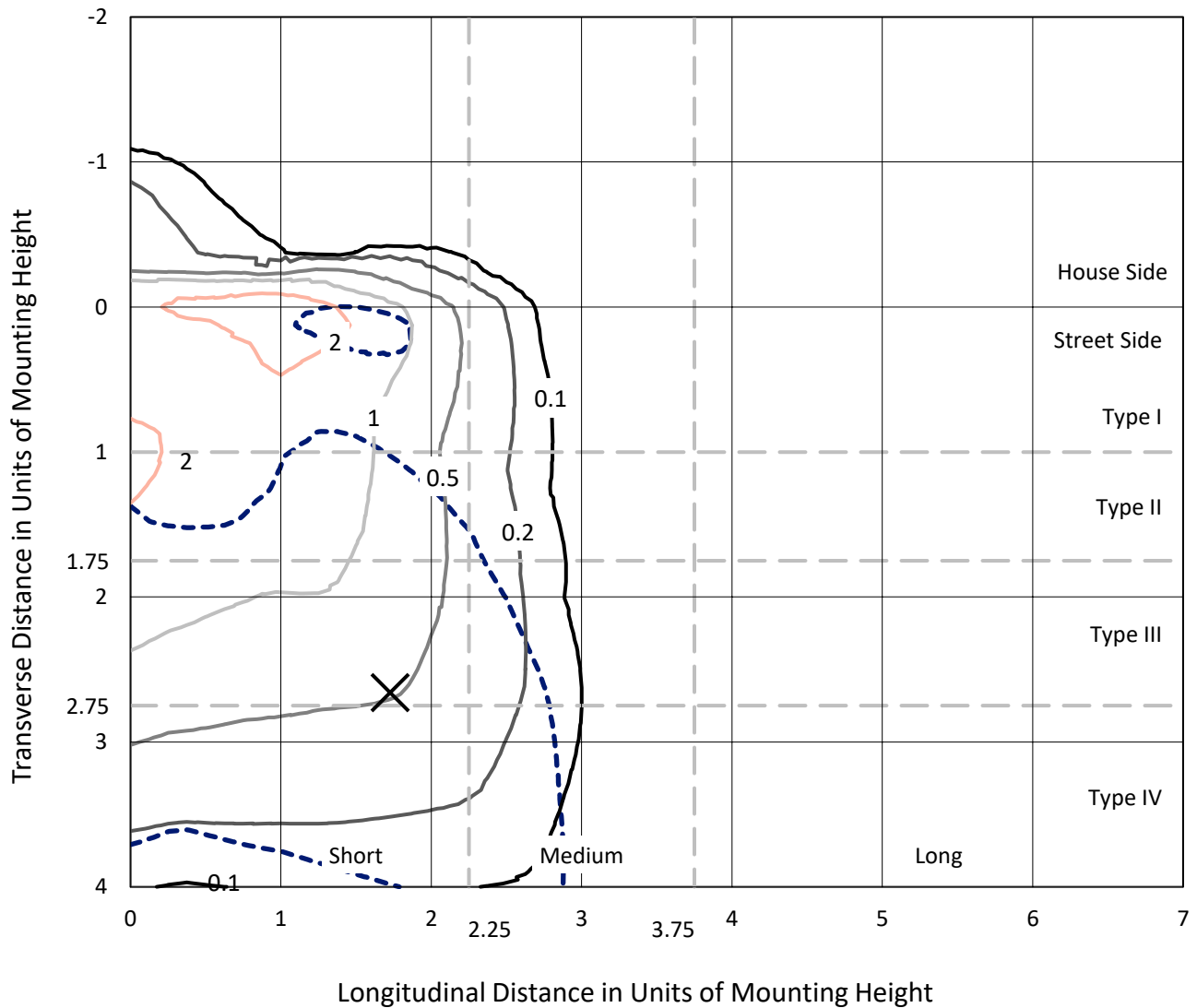
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

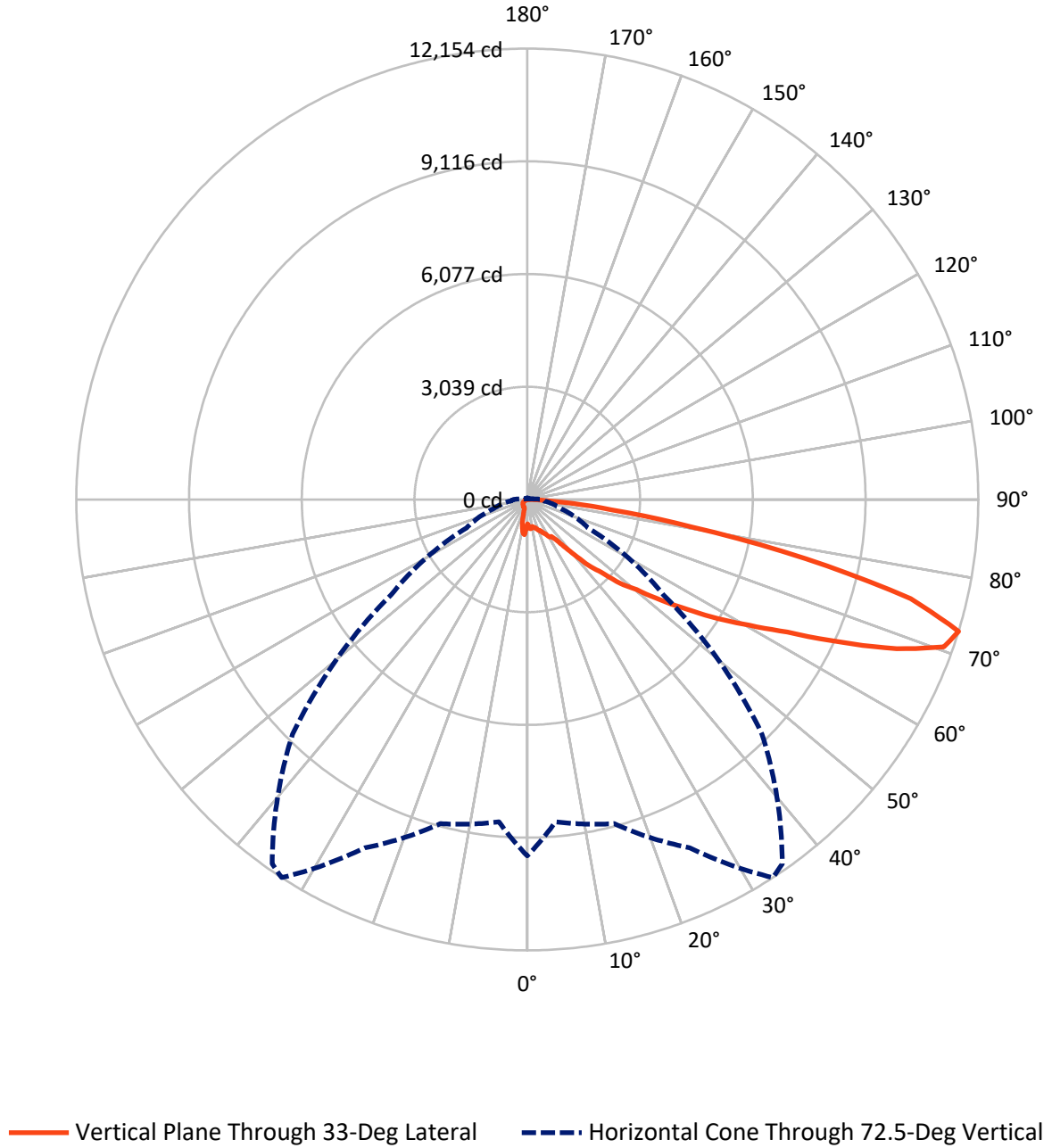
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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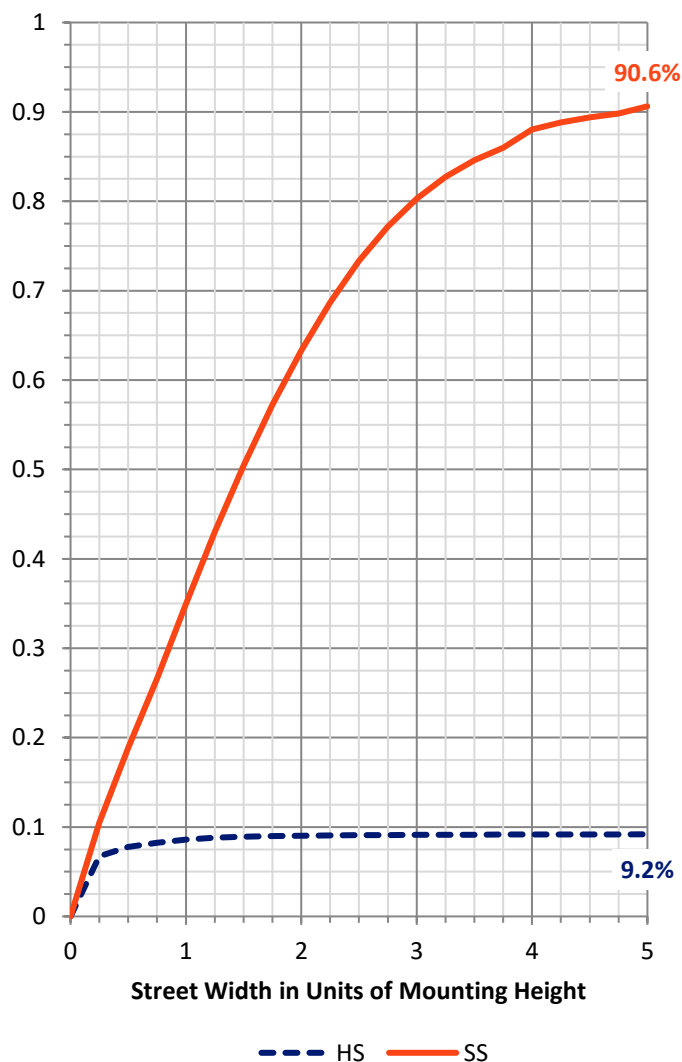
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1136.2	0.0	1136.2
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	11151.8	0.0	11151.8
	% Fixture	90.8	0.0	90.8
Total	Lumens	12288.0	0.0	12288.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.6	0.7
10°-20°	252.1	2.1
20°-30°	427.5	3.5
30°-40°	782.4	6.4
40°-50°	1651.2	13.4
50°-60°	2762.6	22.5
60°-70°	3697.9	30.1
70°-80°	2415.5	19.7
80°-90°	214.2	1.7
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°	12288.0	100.0
0°-180°	12288.0	100.0

Coefficient of Utilization



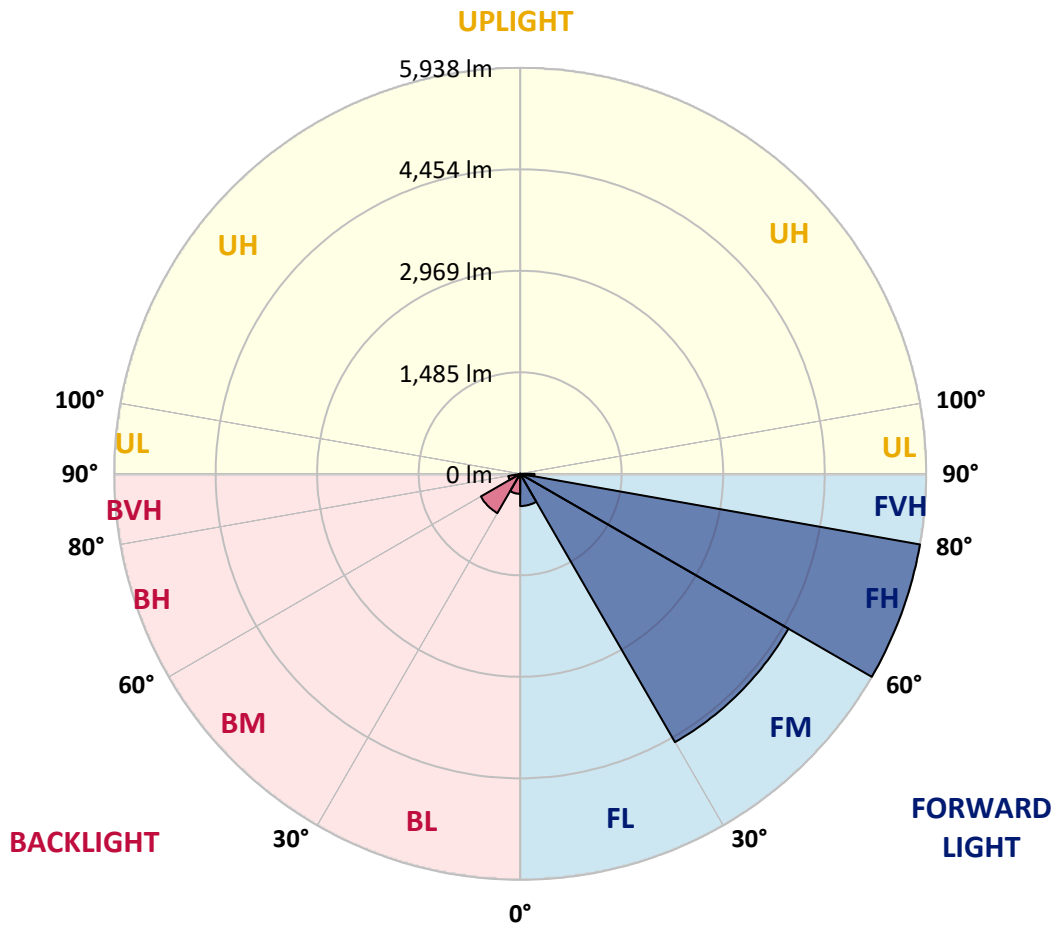
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	471.7	3.8			
FM (30°-60°)	4532.0	36.9			
FH (60°-80°)	5938.1	48.3			G3/7500
FVH (80°-90°)	210.0	1.7			G2/225
BL (0°-30°)	292.4	2.4	B1/500		
BM (30°-60°)	664.2	5.4	B1/1000		
BH (60°-80°)	175.4	1.4	B1/500		G1/500
BVH (80°-90°)	4.1	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G3

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	653.6	653.6	653.6	653.6	653.6	653.6	653.6	653.6	653.6	653.6	653.6
2.5°	779.1	749.1	705.4	708.2	715.7	721.8	738.2	731.4	718.4	717.7	779.1
5°	825.5	792.1	789.3	793.4	791.4	802.3	788.7	833.0	870.5	915.6	987.9
7.5°	803.0	787.3	767.5	788.0	787.3	781.8	790.7	880.8	971.5	1028.8	1148.2
10°	738.2	720.4	735.4	742.3	737.5	761.4	820.7	894.4	1002.9	1123.0	1180.9
12.5°	719.8	730.7	736.1	736.1	781.8	794.1	884.9	954.4	1083.4	1178.2	1346.7
15°	791.4	812.5	775.0	766.8	781.2	788.0	888.9	972.9	1138.0	1311.3	1452.5
17.5°	905.3	904.0	846.0	813.9	836.4	852.8	908.7	1007.0	1103.9	1415.6	1620.3
20°	983.8	985.1	880.8	813.9	888.3	897.8	959.9	1038.4	1114.8	1468.2	1730.1
22.5°	1084.7	1048.6	933.3	868.5	919.0	927.8	996.1	1058.1	1170.7	1462.0	1870.7
25°	1167.3	1144.1	998.8	953.8	998.8	986.5	1048.6	1142.1	1230.7	1559.6	1953.2
27.5°	1295.6	1256.0	1045.2	1053.4	1050.6	1059.5	1073.8	1217.1	1336.5	1564.4	2144.3
30°	1415.0	1391.8	1148.9	1148.9	1175.5	1158.4	1168.7	1342.0	1438.8	1674.9	2359.2
32.5°	1538.4	1539.8	1271.0	1206.2	1185.0	1255.3	1324.2	1402.7	1562.3	1864.5	2688.0
35°	1865.2	1837.9	1505.0	1343.3	1326.3	1322.2	1432.7	1644.9	1781.3	2111.5	3130.8
37.5°	2523.6	2428.7	2008.5	1654.4	1590.3	1568.5	1694.0	1911.6	2047.4	2474.5	3862.8
40°	3199.0	3025.0	2558.4	2159.3	1951.2	1857.0	2003.0	2187.9	2429.4	2875.6	4540.3
42.5°	3791.8	3576.9	2972.5	2703.7	2432.8	2391.9	2254.8	2555.6	2975.2	3459.6	5204.1
45°	4369.7	3946.7	3340.9	3128.0	2799.2	2822.4	2776.0	3036.6	3542.2	4099.5	5792.8
47.5°	4767.4	4387.4	3792.5	3516.2	3384.6	3248.8	3617.2	3888.0	4047.0	4506.1	6301.8
50°	5195.9	4811.1	4180.7	3987.6	3814.4	3951.5	4429.7	4465.9	4452.9	4885.5	6648.4
52.5°	5749.2	5295.5	4626.2	4407.9	4506.1	4642.6	5194.5	5201.3	4813.8	5204.8	6898.1
55°	6260.8	5758.0	5219.8	5013.7	5219.1	5334.4	5946.3	5721.9	5024.0	5421.7	7020.9
57.5°	6982.0	6400.0	6009.1	5646.2	6062.3	5951.8	6607.4	6273.8	5260.0	5565.7	6975.8
60°	7893.4	7208.5	6816.9	6432.8	6879.0	6954.0	7252.8	6549.4	5351.4	5612.7	6705.0
62.5°	8820.6	8131.5	7616.4	7355.8	7862.0	8109.0	7850.5	6686.6	5241.6	5520.6	6091.7
65°	9970.8	9088.7	8487.0	8334.2	9272.2	9635.2	8557.2	6720.0	5029.4	5013.7	4897.7
67.5°	10758.8	9899.9	9348.0	9603.8	10737.0	10766.3	9191.7	6730.2	4315.1	3925.6	3214.7
70°	10945.7	10026.1	9779.1	10532.3	11905.6	11536.6	9396.4	6211.7	3200.4	2329.8	1469.5
72.5°	9608.6	8723.0	9044.4	10357.0	12154.0	11984.8	8944.1	4481.6	1801.8	931.9	451.0
75°	5893.8	5358.3	6784.8	8781.0	10668.8	10559.6	6977.9	2315.5	725.9	372.5	168.5
77.5°	2563.1	2380.3	3540.8	5826.3	7666.2	7568.7	4088.6	852.8	375.2	262.0	85.3
80°	848.0	822.8	1341.3	2758.9	4490.5	4404.5	1722.6	354.8	267.4	210.1	47.8
82.5°	201.3	199.9	468.0	1269.6	2287.5	2215.9	528.7	195.8	193.8	165.8	25.2
85°	50.5	51.8	129.6	519.2	929.2	819.4	137.8	97.6	136.4	112.6	13.0
87.5°	0.0	0.0	33.4	74.4	140.5	88.0	15.0	25.9	38.2	40.3	6.8
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°	653.6	653.6	653.6	653.6	653.6	653.6	653.6	653.6	653.6	653.6	653.6
2.5°	792.8	785.2	723.8	738.9	762.1	760.0	775.0	763.4	753.2	803.7	798.9
5°	1008.3	967.4	948.3	974.9	960.6	927.2	955.1	950.4	942.2	959.2	972.2
7.5°	1170.0	1132.5	1115.5	1059.5	978.3	914.2	924.4	900.5	878.0	904.6	931.9
10°	1223.2	1202.8	1200.7	1091.6	1015.2	922.4	812.5	717.7	692.5	659.0	674.0
12.5°	1367.9	1380.2	1303.1	1175.5	1028.1	850.1	654.9	520.5	466.0	430.5	432.5
15°	1486.6	1529.6	1417.7	1188.4	904.6	648.1	435.9	315.2	281.1	272.2	269.5
17.5°	1663.3	1704.9	1453.2	1096.3	729.3	439.4	280.4	245.6	247.7	253.8	252.4
20°	1794.3	1788.1	1422.5	933.3	537.6	287.9	234.7	229.9	240.8	258.6	254.5
22.5°	1920.5	1878.2	1403.4	782.5	347.9	231.3	226.5	225.8	236.1	253.1	257.9
25°	2010.5	2017.4	1371.3	612.6	253.1	214.9	219.0	225.1	235.4	253.8	251.1
27.5°	2268.4	2077.4	1237.6	444.8	213.5	206.0	216.3	228.5	232.0	255.2	255.8
30°	2435.6	2303.9	1150.2	299.5	197.2	190.3	210.8	227.2	231.3	261.3	263.3
32.5°	2726.9	2401.5	1049.3	222.4	183.5	185.6	198.5	220.4	239.5	271.5	272.9
35°	3089.1	2714.6	866.4	199.9	178.7	175.3	181.5	206.7	238.1	272.9	279.7
37.5°	3778.9	2902.2	687.0	193.8	178.7	172.6	178.7	193.8	234.0	286.5	300.9
40°	4240.8	3284.3	495.3	192.4	175.3	169.9	171.9	186.9	222.4	278.4	299.5
42.5°	4809.7	3445.3	365.0	189.0	171.9	163.7	165.1	184.2	210.8	261.3	277.0
45°	5275.7	3562.6	287.2	187.6	163.7	161.0	163.7	182.2	199.9	224.5	238.8
47.5°	5629.8	3699.1	230.6	178.7	161.7	161.0	157.6	170.6	181.5	187.6	197.2
50°	5889.0	3668.4	191.0	165.1	154.9	159.0	152.8	154.9	157.6	154.2	165.1
52.5°	6048.0	3557.8	159.0	148.7	146.7	150.1	142.6	136.4	131.7	128.9	135.8
55°	6106.0	3336.1	135.1	127.6	132.4	133.7	127.6	116.7	108.5	104.4	109.8
57.5°	5996.1	2998.4	117.3	105.7	116.7	116.7	108.5	96.9	87.3	80.5	86.0
60°	5717.8	2625.2	104.4	88.0	99.6	100.3	90.7	78.5	71.0	64.1	67.5
62.5°	5199.3	2218.6	91.4	76.4	86.0	86.6	75.0	63.4	58.0	50.5	53.2
65°	4162.3	1696.7	77.8	67.5	74.4	72.3	62.1	53.9	47.1	40.3	41.6
67.5°	2701.6	1047.2	67.5	61.4	62.8	60.7	52.5	47.1	39.6	34.1	34.8
70°	1209.6	451.0	59.4	55.3	54.6	51.2	44.3	43.7	38.9	34.1	34.1
72.5°	373.2	169.9	51.2	49.8	47.1	43.0	38.9	41.6	38.2	32.7	32.1
75°	147.4	77.8	42.3	42.3	40.9	35.5	34.8	37.5	35.5	30.0	28.7
77.5°	77.1	49.1	34.8	36.2	35.5	27.3	31.4	34.1	32.7	25.2	21.1
80°	45.7	30.0	25.9	29.3	28.7	19.1	23.9	21.8	15.7	7.5	2.0
82.5°	25.2	13.6	11.6	17.1	17.1	6.8	12.3	10.9	6.1	0.0	0.0
85°	12.3	9.6	8.9	9.6	6.8	2.0	6.1	6.1	3.4	0.0	0.0
87.5°	6.1	5.5	4.1	3.4	2.7	0.0	2.0	2.7	0.0	0.0	0.0
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)