

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: P472202

Luminaire Tested: **CCW-VA-2-850-U-T4W**

Issue Date: 01/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P472202  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CCW-VA-2-850-U-T4W  
Description: INVUE WALL PACK Wave Stream LUMINAIRE WITH T4W DISTRIBUTION LENS  
Light Source: 5000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4258.8 lumens  
Efficiency: N/A  
Efficacy: 108.6 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.54' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2

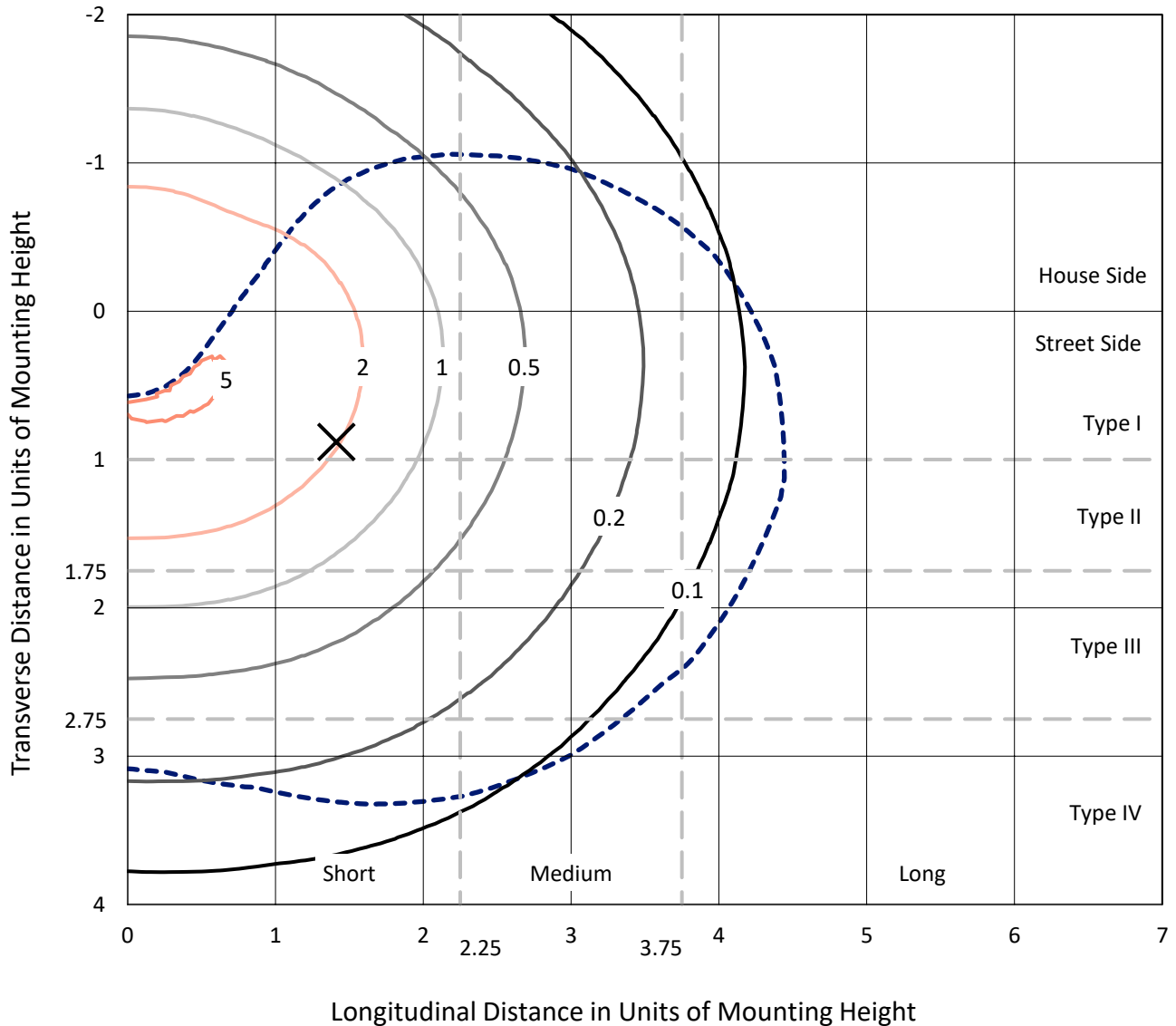
Input Watts (W): 39.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

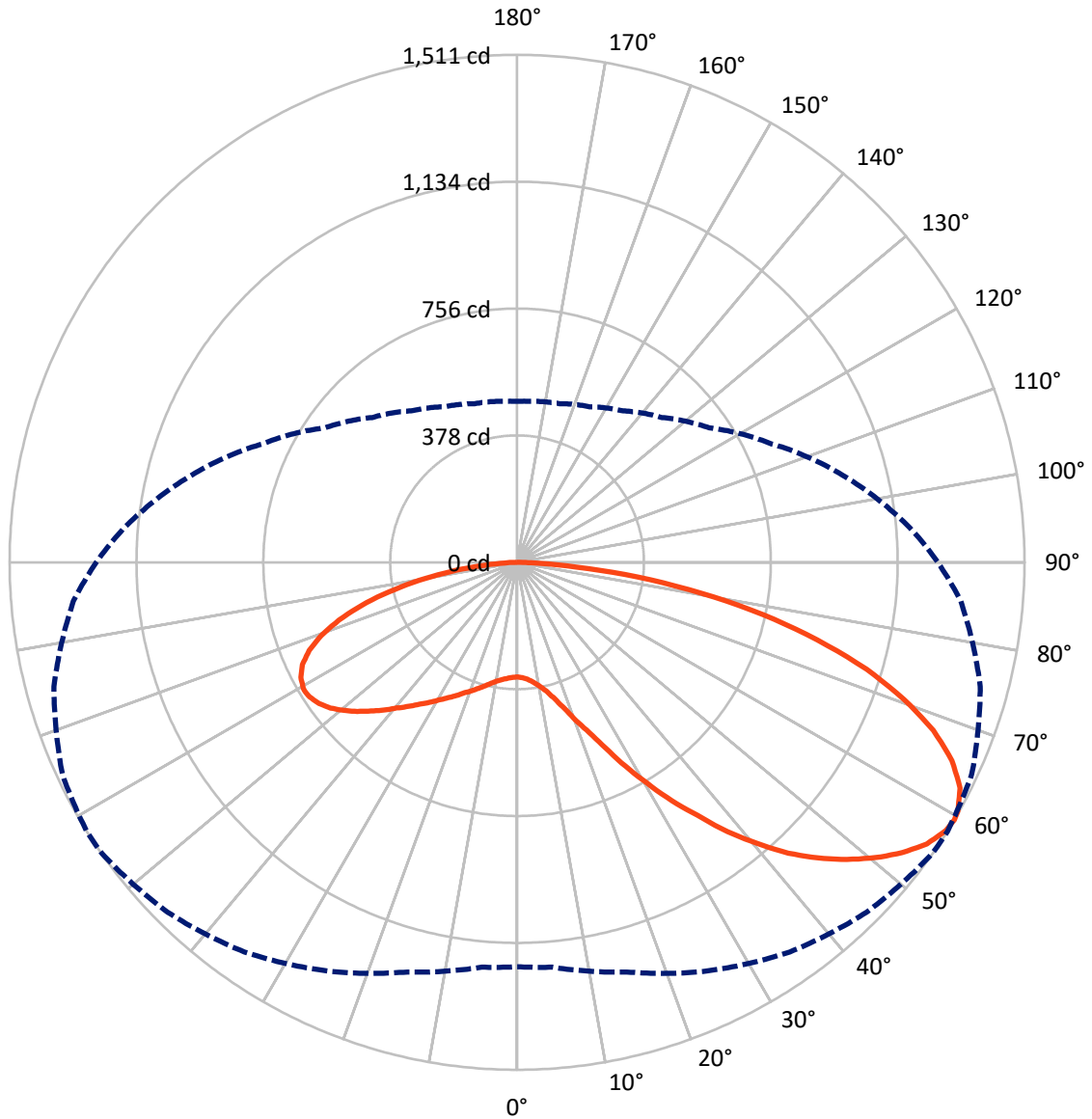
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral      - - - Horizontal Cone Through 59-Deg Vertical

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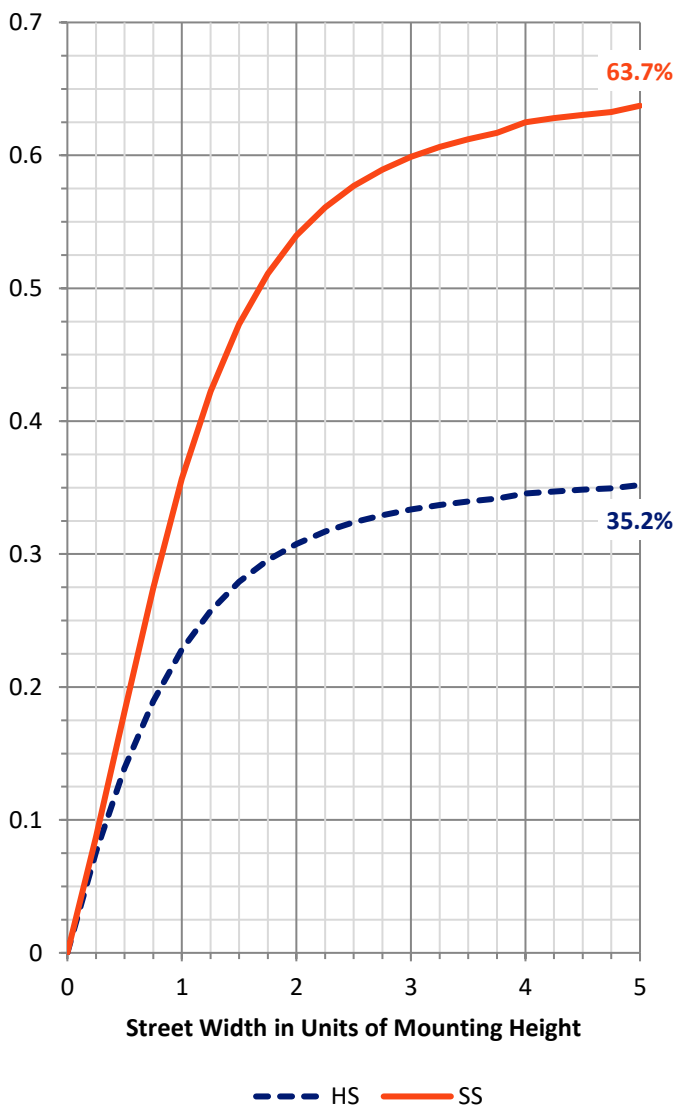
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1518.9	0.0	1518.9
	% Fixture	35.7	0.0	35.7
<b>Street Side</b>	Lumens	2740.0	0.0	2740.0
	% Fixture	64.3	0.0	64.3
<b>Total</b>	Lumens	4258.8	0.0	4258.8
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.9	0.8
10°-20°	115.5	2.7
20°-30°	243.8	5.7
30°-40°	448.7	10.5
40°-50°	699.4	16.4
50°-60°	919.1	21.6
60°-70°	963.0	22.6
70°-80°	667.7	15.7
80°-90°	167.7	3.9
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°	4258.8	100.0
0°-180°	4258.8	100.0

**Coefficient of Utilization**

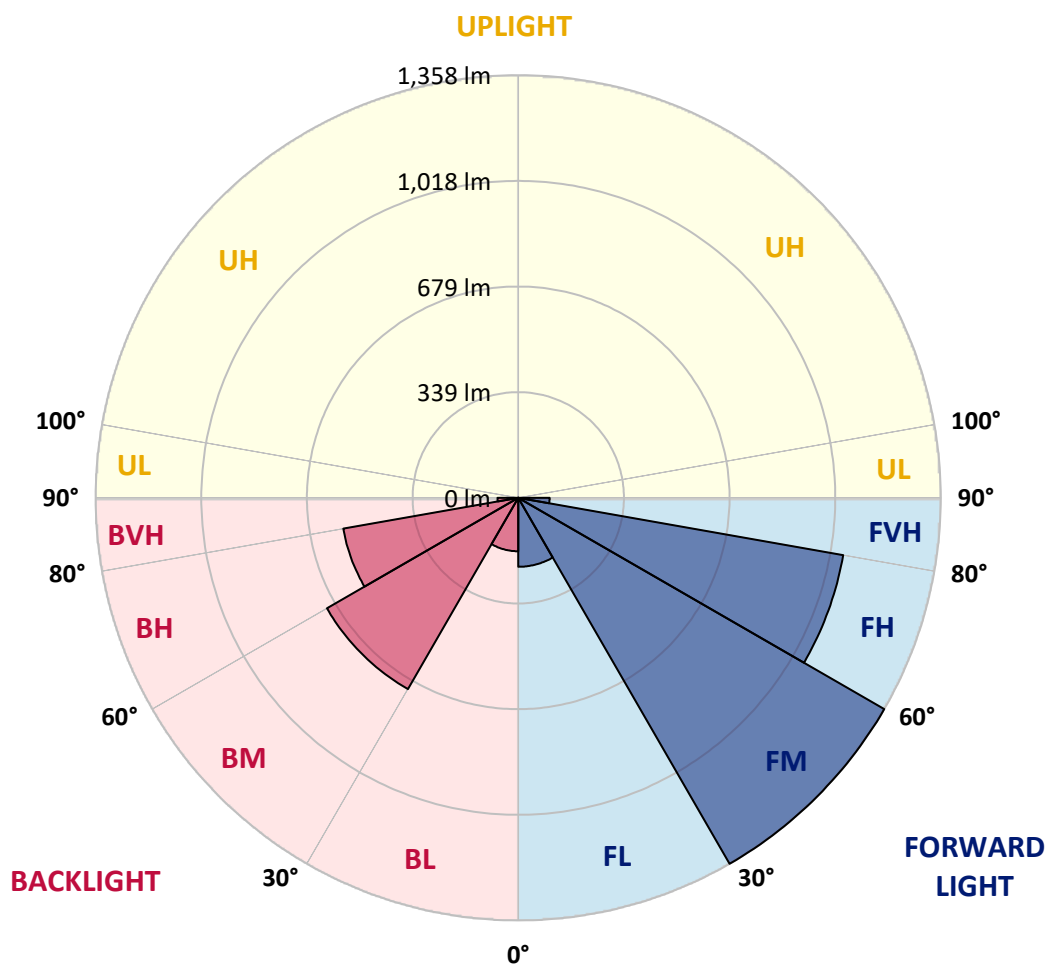


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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	221.6	5.2			
FM (30°-60°)	1357.6	31.9			
FH (60°-80°)	1060.0	24.9			G1/1800
FVH (80°-90°)	100.7	2.4			G2/225
BL (0°-30°)	171.7	4.0	B1/500		
BM (30°-60°)	709.6	16.7	B1/1000		
BH (60°-80°)	570.7	13.4	B2/1000		G2/1000
BVH (80°-90°)	66.9	1.6			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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4
2.5°	346.2	346.2	346.2	345.2	345.2	345.2	344.3	344.3	344.3	343.3	342.4
5°	353.9	353.9	352.9	353.9	352.9	352.0	351.0	351.0	351.0	350.0	349.1
7.5°	364.4	365.4	364.4	365.4	364.4	363.5	361.5	361.5	360.6	358.7	356.8
10°	380.7	380.7	380.7	379.8	378.8	377.9	376.9	375.9	375.0	372.1	369.2
12.5°	400.9	400.9	400.9	399.0	399.0	397.0	396.1	395.1	393.2	389.4	385.5
15°	425.8	424.8	427.7	427.7	426.8	426.8	423.9	422.0	420.0	414.3	405.7
17.5°	459.4	458.4	461.3	463.2	463.2	464.2	459.4	457.5	450.7	443.1	431.6
20°	504.4	502.5	505.4	507.3	505.4	507.3	502.5	503.5	493.9	480.5	462.2
22.5°	553.4	553.4	556.2	556.2	557.2	559.1	553.4	550.5	542.8	523.6	500.6
25°	613.8	618.6	618.6	618.6	622.4	623.4	617.6	612.8	602.3	576.4	544.7
27.5°	687.6	686.7	685.7	691.5	691.5	693.4	689.5	687.6	675.1	643.5	595.5
30°	766.3	760.5	764.3	766.3	770.1	773.0	769.1	763.4	748.0	713.5	654.0
32.5°	838.2	842.0	847.8	849.7	855.4	856.4	846.8	846.8	831.5	787.4	726.0
35°	919.7	919.7	935.0	941.8	941.8	947.5	933.1	925.5	914.9	868.9	791.2
37.5°	990.7	992.6	1005.0	1020.4	1022.3	1030.9	1020.4	1017.5	998.3	951.3	865.0
40°	1056.8	1058.8	1074.1	1092.3	1102.9	1116.3	1105.7	1101.0	1080.8	1027.1	938.9
42.5°	1108.6	1112.5	1131.6	1158.5	1175.8	1192.1	1187.3	1184.4	1156.6	1100.0	1007.0
45°	1147.9	1154.7	1181.5	1213.2	1237.1	1261.1	1262.1	1256.3	1230.4	1167.1	1073.1
47.5°	1179.6	1187.3	1217.0	1257.3	1293.7	1323.4	1329.2	1322.5	1298.5	1232.3	1132.6
50°	1205.5	1209.3	1242.9	1294.7	1339.7	1377.1	1388.7	1382.9	1361.8	1287.0	1184.4
52.5°	1218.9	1224.7	1263.0	1322.5	1377.1	1422.2	1439.5	1436.6	1411.7	1336.9	1230.4
55°	1225.6	1231.4	1276.5	1344.5	1405.9	1458.7	1479.8	1480.7	1456.7	1381.9	1273.6
57.5°	1218.0	1225.6	1274.5	1350.3	1418.4	1475.0	1507.6	1506.6	1487.4	1416.5	1310.0
59°	1204.5	1210.3	1263.0	1342.6	1416.5	1473.0	1510.5	1511.4	1494.1	1428.0	1326.3
60°	1189.2	1195.9	1249.6	1333.0	1408.8	1466.3	1505.7	1507.6	1493.2	1430.9	1333.0
62.5°	1136.4	1145.1	1204.5	1293.7	1376.2	1430.9	1477.8	1480.7	1473.0	1423.2	1337.8
65°	1062.6	1070.3	1134.5	1229.5	1315.8	1372.4	1416.5	1423.2	1422.2	1388.7	1318.6
67.5°	972.4	973.4	1033.8	1137.4	1227.5	1283.2	1325.4	1336.9	1345.5	1323.4	1262.1
70°	864.1	863.1	921.6	1024.2	1114.4	1172.9	1215.1	1222.7	1244.8	1227.5	1177.7
72.5°	729.8	741.3	796.0	882.3	971.5	1036.7	1074.1	1088.5	1101.0	1104.8	1063.5
75°	603.2	615.7	658.8	739.4	816.1	876.5	916.8	923.5	946.5	952.3	913.9
77.5°	482.4	483.3	515.0	579.2	649.3	699.1	731.7	749.0	761.5	773.0	732.7
80°	338.5	343.3	365.4	411.4	466.1	518.8	545.7	557.2	565.8	573.5	560.1
82.5°	211.9	213.9	228.2	256.1	293.5	323.2	351.0	360.6	362.5	379.8	377.9
85°	100.7	101.7	111.2	124.7	141.0	165.0	175.5	175.5	188.9	201.4	201.4
87.5°	13.4	13.4	16.3	18.2	23.0	29.7	41.2	42.2	49.9	55.6	60.4
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°	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4	341.4
2.5°	342.4	342.4	342.4	342.4	342.4	341.4	342.4	342.4	342.4	342.4	342.4
5°	349.1	348.1	347.2	346.2	346.2	345.2	345.2	345.2	345.2	345.2	345.2
7.5°	355.8	354.8	353.9	352.0	351.0	350.0	350.0	349.1	349.1	349.1	349.1
10°	367.3	366.3	362.5	359.6	357.7	356.8	355.8	354.8	353.9	353.9	353.9
12.5°	382.6	380.7	374.0	370.2	367.3	365.4	363.5	362.5	361.5	360.6	360.6
15°	401.8	397.0	388.4	382.6	378.8	375.9	373.1	371.1	370.2	369.2	369.2
17.5°	424.8	419.1	407.6	397.0	390.3	385.5	381.7	378.8	377.9	377.9	377.9
20°	453.6	444.0	427.7	413.3	402.8	396.1	390.3	387.4	386.5	385.5	384.6
22.5°	487.2	474.7	450.7	428.7	415.3	405.7	399.0	395.1	392.2	391.3	391.3
25°	525.5	507.3	475.7	448.8	430.6	417.2	408.5	403.7	399.0	397.0	397.0
27.5°	571.6	547.6	505.4	469.9	445.0	428.7	419.1	412.4	407.6	403.7	401.8
30°	621.4	594.6	538.0	492.9	461.3	443.1	431.6	423.9	417.2	410.5	409.5
32.5°	684.7	646.4	577.3	518.8	480.5	457.5	444.0	434.4	425.8	419.1	417.2
35°	749.0	703.0	618.6	545.7	498.7	470.9	454.6	444.0	435.4	427.7	426.8
37.5°	815.2	766.3	663.6	577.3	519.8	486.2	466.1	454.6	444.0	436.4	435.4
40°	884.2	826.7	709.7	609.9	541.8	501.6	478.5	464.2	452.7	445.9	445.0
42.5°	949.4	887.1	759.5	648.3	567.7	517.9	491.0	475.7	461.3	454.6	453.6
45°	1011.8	944.6	809.4	683.8	593.6	535.1	503.5	485.3	469.9	463.2	462.2
47.5°	1068.3	1001.2	855.4	722.1	620.5	554.3	516.9	494.9	477.6	470.9	470.9
50°	1119.2	1049.2	900.5	757.6	645.4	573.5	528.4	503.5	486.2	479.5	478.5
52.5°	1167.1	1091.4	939.8	788.3	669.4	590.8	539.9	510.2	492.0	484.3	483.3
55°	1205.5	1129.7	972.4	813.2	685.7	602.3	547.6	514.0	493.9	487.2	486.2
57.5°	1239.0	1161.4	995.5	830.5	696.2	609.0	551.4	514.0	492.9	485.3	484.3
59°	1253.4	1174.8	1003.1	835.3	698.2	609.9	550.5	511.2	489.1	481.4	479.5
60°	1261.1	1180.5	1006.0	836.3	697.2	608.0	549.5	508.3	485.3	476.6	476.6
62.5°	1268.8	1185.3	1002.2	828.6	686.7	597.5	539.9	496.8	470.9	461.3	461.3
65°	1252.5	1168.1	980.1	807.5	665.6	579.2	521.7	477.6	448.8	439.2	439.2
67.5°	1204.5	1125.9	939.8	768.2	631.0	547.6	492.0	446.9	420.0	409.5	406.6
70°	1123.0	1056.8	876.5	711.6	584.0	507.3	454.6	411.4	383.6	373.1	369.2
72.5°	1013.7	948.5	792.1	642.5	521.7	454.6	408.5	367.3	336.6	326.1	327.0
75°	863.1	817.1	682.8	555.3	449.8	387.4	349.1	314.6	288.7	280.0	281.0
77.5°	700.1	661.7	553.4	452.7	367.3	319.4	286.7	258.9	241.7	236.9	234.0
80°	536.1	498.7	415.3	337.6	279.1	245.5	223.5	204.3	190.8	184.1	186.0
82.5°	359.6	336.6	275.2	223.5	189.9	165.9	158.2	145.8	141.0	137.1	140.0
85°	193.7	173.6	143.9	119.9	104.5	97.8	99.7	98.8	94.9	94.0	96.9
87.5°	63.3	54.7	42.2	35.5	36.4	32.6	32.6	30.7	27.8	26.9	28.8
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)