

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: P472196

Luminaire Tested: **CCW-VA-2-840-U-T4W**

Issue Date: 01/27/2021

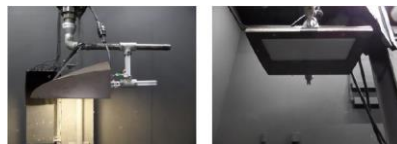
**Test Information**

Test Method: LM-79-08  
Report Number: P472196  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: CCW-VA-2-840-U-T4W  
Description: INVUE WALL PACK Wave Stream LUMINAIRE WITH T4W DISTRIBUTION LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4197 lumens  
Efficiency: N/A  
Efficacy: 107.1 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 0.54' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B2 - U0 - G2

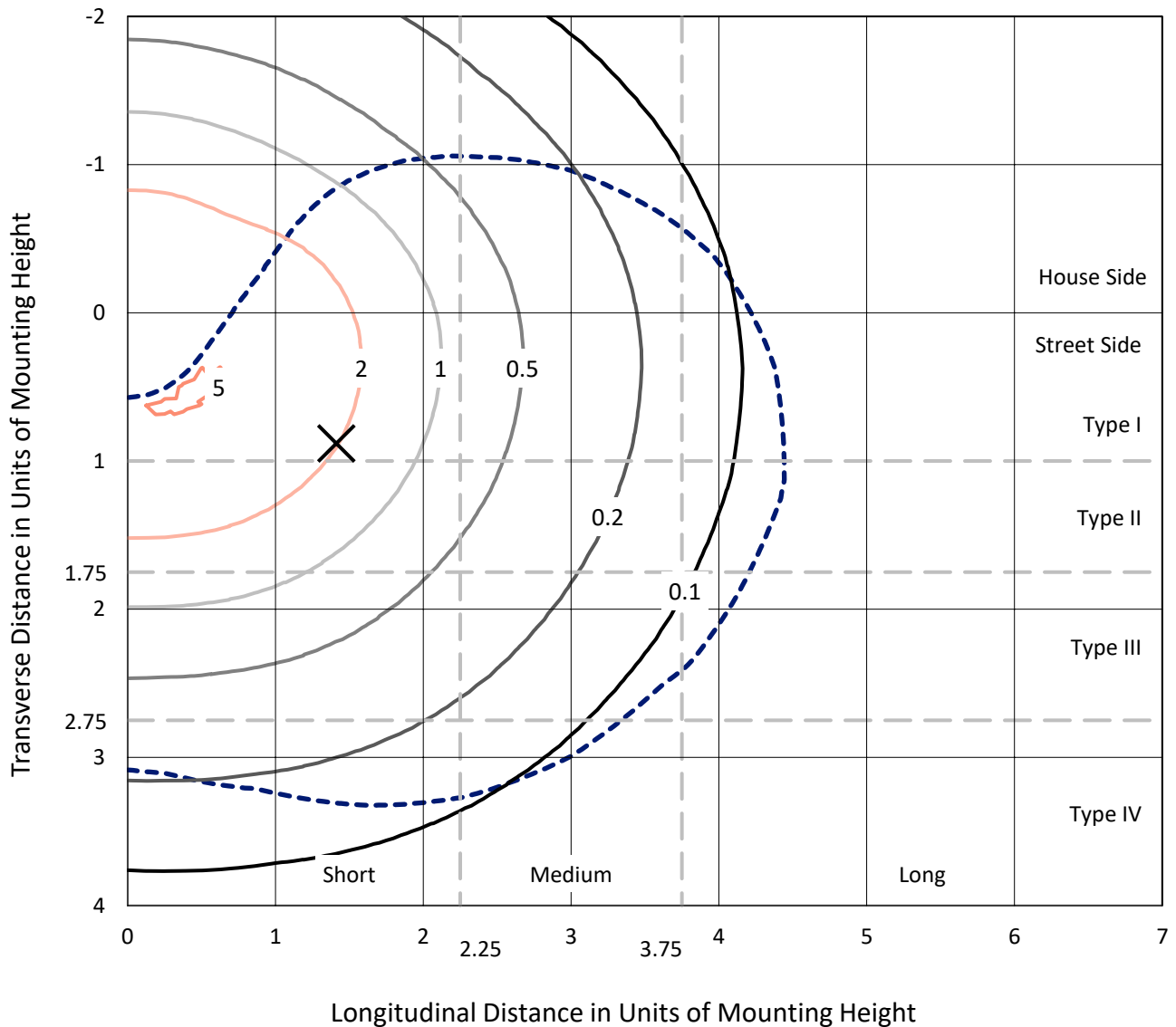
Input Watts (W): 39.2  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

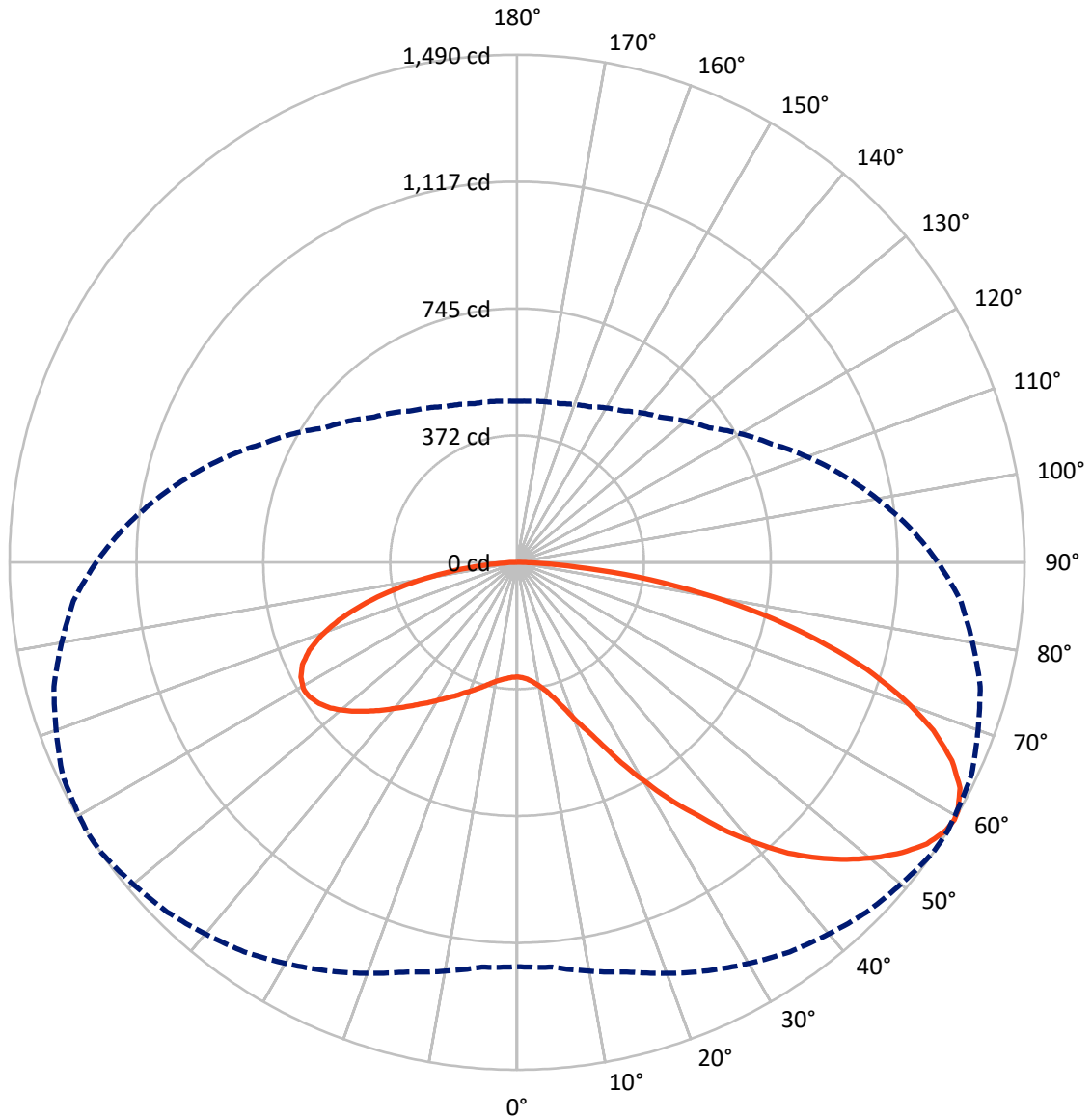
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.1 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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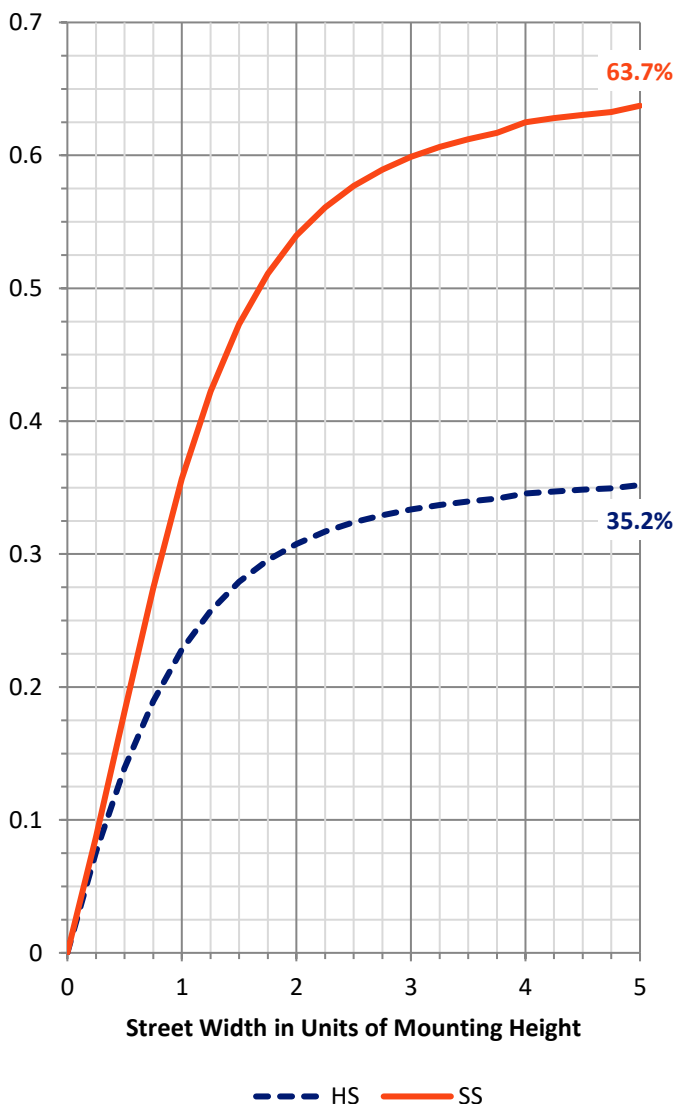
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1496.8	0.0	1496.8
	% Fixture	35.7	0.0	35.7
<b>Street Side</b>	Lumens	2700.2	0.0	2700.2
	% Fixture	64.3	0.0	64.3
<b>Total</b>	Lumens	4197.0	0.0	4197.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	33.4	0.8
10°-20°	113.8	2.7
20°-30°	240.3	5.7
30°-40°	442.2	10.5
40°-50°	689.3	16.4
50°-60°	905.7	21.6
60°-70°	949.0	22.6
70°-80°	658.0	15.7
80°-90°	165.2	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°	4197.0	100.0
0°-180°	4197.0	100.0

**Coefficient of Utilization**



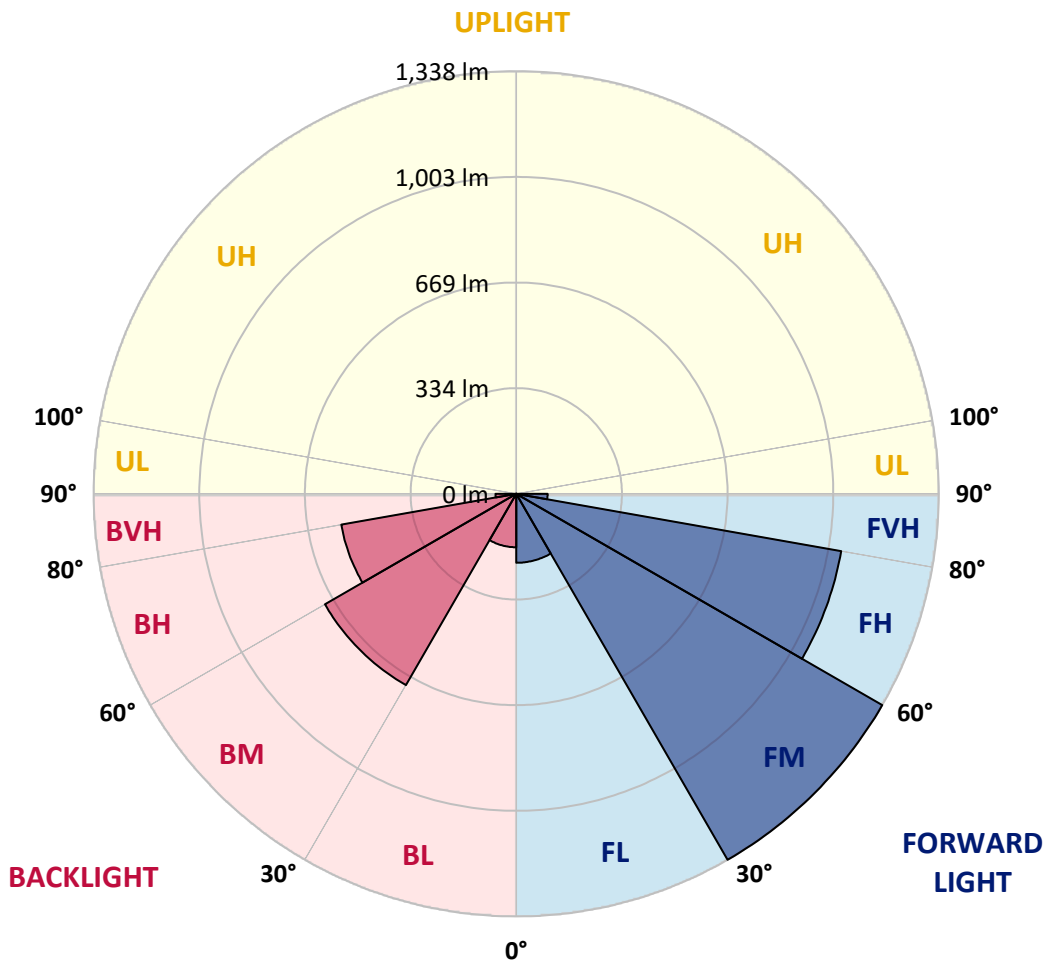
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	218.3	5.2			
FM (30°-60°)	1337.9	31.9			
FH (60°-80°)	1044.6	24.9			G1/1800
FVH (80°-90°)	99.3	2.4			G1/100
BL (0°-30°)	169.2	4.0	B1/500		
BM (30°-60°)	699.3	16.7	B1/1000		
BH (60°-80°)	562.4	13.4	B2/1000		G2/1000
BVH (80°-90°)	65.9	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°	336.5	336.5	336.5	336.5	336.5	336.5	336.5	336.5	336.5	336.5	336.5
2.5°	341.2	341.2	341.2	340.2	340.2	340.2	339.3	339.3	339.3	338.3	337.4
5°	348.7	348.7	347.8	348.7	347.8	346.8	345.9	345.9	345.9	345.0	344.0
7.5°	359.1	360.1	359.1	360.1	359.1	358.2	356.3	356.3	355.4	353.5	351.6
10°	375.2	375.2	375.2	374.3	373.3	372.4	371.4	370.5	369.5	366.7	363.9
12.5°	395.0	395.0	395.0	393.2	393.2	391.3	390.3	389.4	387.5	383.7	379.9
15°	419.6	418.7	421.5	421.5	420.6	420.6	417.7	415.8	413.9	408.3	399.8
17.5°	452.7	451.8	454.6	456.5	456.5	457.4	452.7	450.8	444.2	436.6	425.3
20°	497.1	495.2	498.1	499.9	498.1	499.9	495.2	496.2	486.7	473.5	455.5
22.5°	545.3	545.3	548.1	548.1	549.1	551.0	545.3	542.5	534.9	516.0	493.3
25°	604.9	609.6	609.6	609.6	613.4	614.3	608.6	603.9	593.5	568.0	536.8
27.5°	677.6	676.7	675.7	681.4	681.4	683.3	679.5	677.6	665.3	634.2	586.9
30°	755.1	749.5	753.2	755.1	758.9	761.7	758.0	752.3	737.2	703.1	644.5
32.5°	826.0	829.8	835.5	837.3	843.0	844.0	834.5	834.5	819.4	775.9	715.4
35°	906.3	906.3	921.5	928.1	928.1	933.7	919.6	912.0	901.6	856.2	779.7
37.5°	976.3	978.2	990.4	1005.6	1007.5	1016.0	1005.6	1002.7	983.8	937.5	852.5
40°	1041.5	1043.4	1058.5	1076.5	1086.8	1100.1	1089.7	1085.0	1065.1	1012.2	925.2
42.5°	1092.5	1096.3	1115.2	1141.7	1158.7	1174.7	1170.0	1167.2	1139.8	1084.0	992.3
45°	1131.3	1137.9	1164.3	1195.5	1219.2	1242.8	1243.7	1238.1	1212.5	1150.2	1057.5
47.5°	1162.5	1170.0	1199.3	1239.0	1274.9	1304.2	1309.9	1303.3	1279.6	1214.4	1116.1
50°	1188.0	1191.8	1224.8	1275.9	1320.3	1357.1	1368.5	1362.8	1342.0	1268.3	1167.2
52.5°	1201.2	1206.9	1244.7	1303.3	1357.1	1401.6	1418.6	1415.7	1391.2	1317.4	1212.5
55°	1207.8	1213.5	1257.9	1325.0	1385.5	1437.5	1458.3	1459.2	1435.6	1361.9	1255.1
57.5°	1200.3	1207.8	1256.0	1330.7	1397.8	1453.5	1485.7	1484.7	1465.8	1395.9	1291.0
59°	1187.0	1192.7	1244.7	1323.1	1395.9	1451.7	1488.5	1489.5	1472.4	1407.2	1307.1
60°	1171.9	1178.5	1231.4	1313.7	1388.3	1445.0	1483.8	1485.7	1471.5	1410.1	1313.7
62.5°	1119.9	1128.4	1187.0	1274.9	1356.2	1410.1	1456.4	1459.2	1451.7	1402.5	1318.4
65°	1047.2	1054.7	1118.0	1211.6	1296.7	1352.4	1395.9	1402.5	1401.6	1368.5	1299.5
67.5°	958.3	959.3	1018.8	1120.9	1209.7	1264.5	1306.1	1317.4	1326.0	1304.2	1243.7
70°	851.5	850.6	908.2	1009.4	1098.2	1155.8	1197.4	1205.0	1226.7	1209.7	1160.6
72.5°	719.2	730.6	784.4	869.5	957.4	1021.6	1058.5	1072.7	1085.0	1088.7	1048.1
75°	594.5	606.7	649.3	728.7	804.3	863.8	903.5	910.1	932.8	938.5	900.7
77.5°	475.4	476.3	507.5	570.8	639.8	689.0	721.1	738.1	750.4	761.7	722.0
80°	333.6	338.3	360.1	405.4	459.3	511.3	537.8	549.1	557.6	565.2	551.9
82.5°	208.9	210.8	224.9	252.3	289.2	318.5	345.9	355.4	357.2	374.3	372.4
85°	99.2	100.2	109.6	122.9	138.9	162.6	173.0	173.0	186.2	198.5	198.5
87.5°	13.2	13.2	16.1	18.0	22.7	29.3	40.6	41.6	49.1	54.8	59.5
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°	336.5	336.5	336.5	336.5	336.5	336.5	336.5	336.5	336.5	336.5	336.5
2.5°	337.4	337.4	337.4	337.4	337.4	336.5	337.4	337.4	337.4	337.4	337.4
5°	344.0	343.1	342.1	341.2	341.2	340.2	340.2	340.2	340.2	340.2	340.2
7.5°	350.6	349.7	348.7	346.8	345.9	345.0	345.0	344.0	344.0	344.0	344.0
10°	362.0	361.0	357.2	354.4	352.5	351.6	350.6	349.7	348.7	348.7	348.7
12.5°	377.1	375.2	368.6	364.8	362.0	360.1	358.2	357.2	356.3	355.4	355.4
15°	396.0	391.3	382.8	377.1	373.3	370.5	367.6	365.7	364.8	363.9	363.9
17.5°	418.7	413.0	401.7	391.3	384.6	379.9	376.1	373.3	372.4	372.4	372.4
20°	447.0	437.6	421.5	407.3	396.9	390.3	384.6	381.8	380.9	379.9	379.0
22.5°	480.1	467.8	444.2	422.5	409.2	399.8	393.2	389.4	386.5	385.6	385.6
25°	517.9	499.9	468.8	442.3	424.3	411.1	402.6	397.9	393.2	391.3	391.3
27.5°	563.3	539.6	498.1	463.1	438.5	422.5	413.0	406.4	401.7	397.9	396.0
30°	612.4	586.0	530.2	485.8	454.6	436.6	425.3	417.7	411.1	404.5	403.6
32.5°	674.8	637.0	568.9	511.3	473.5	450.8	437.6	428.1	419.6	413.0	411.1
35°	738.1	692.7	609.6	537.8	491.4	464.0	448.0	437.6	429.1	421.5	420.6
37.5°	803.3	755.1	654.0	568.9	512.2	479.2	459.3	448.0	437.6	430.0	429.1
40°	871.4	814.7	699.4	601.1	534.0	494.3	471.6	457.4	446.1	439.5	438.5
42.5°	935.6	874.2	748.5	638.9	559.5	510.3	483.9	468.8	454.6	448.0	447.0
45°	997.1	930.9	797.7	673.8	585.0	527.4	496.2	478.2	463.1	456.5	455.5
47.5°	1052.8	986.7	843.0	711.6	611.5	546.3	509.4	487.7	470.7	464.0	464.0
50°	1102.9	1033.9	887.4	746.6	636.0	565.2	520.7	496.2	479.2	472.5	471.6
52.5°	1150.2	1075.5	926.2	776.9	659.7	582.2	532.1	502.8	484.8	477.3	476.3
55°	1188.0	1113.3	958.3	801.4	675.7	593.5	539.6	506.6	486.7	480.1	479.2
57.5°	1221.0	1144.5	981.0	818.4	686.1	600.1	543.4	506.6	485.8	478.2	477.3
59°	1235.2	1157.7	988.6	823.2	688.0	601.1	542.5	503.7	482.0	474.4	472.5
60°	1242.8	1163.4	991.4	824.1	687.1	599.2	541.5	500.9	478.2	469.7	469.7
62.5°	1250.3	1168.1	987.6	816.6	676.7	588.8	532.1	489.6	464.0	454.6	454.6
65°	1234.3	1151.1	965.9	795.8	655.9	570.8	514.1	470.7	442.3	432.8	432.8
67.5°	1187.0	1109.5	926.2	757.0	621.9	539.6	484.8	440.4	413.9	403.6	400.7
70°	1106.7	1041.5	863.8	701.3	575.6	499.9	448.0	405.4	378.0	367.6	363.9
72.5°	999.0	934.7	780.6	633.2	514.1	448.0	402.6	362.0	331.7	321.3	322.3
75°	850.6	805.2	672.9	547.2	443.2	381.8	344.0	310.0	284.5	276.0	276.9
77.5°	689.9	652.1	545.3	446.1	362.0	314.7	282.6	255.2	238.2	233.4	230.6
80°	528.3	491.4	409.2	332.7	275.0	241.9	220.2	201.3	188.1	181.5	183.3
82.5°	354.4	331.7	271.2	220.2	187.1	163.5	155.9	143.7	138.9	135.1	138.0
85°	190.9	171.1	141.8	118.1	103.0	96.4	98.3	97.3	93.6	92.6	95.5
87.5°	62.4	53.9	41.6	35.0	35.9	32.1	32.1	30.2	27.4	26.5	28.4
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)