

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: P401796

Luminaire Tested: **ENT-SA1F-727-U-SL4**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401796  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-5)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1F-727-U-SL4  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 2700K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6174 lumens  
Efficiency: N/A  
Efficacy: 93.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G2

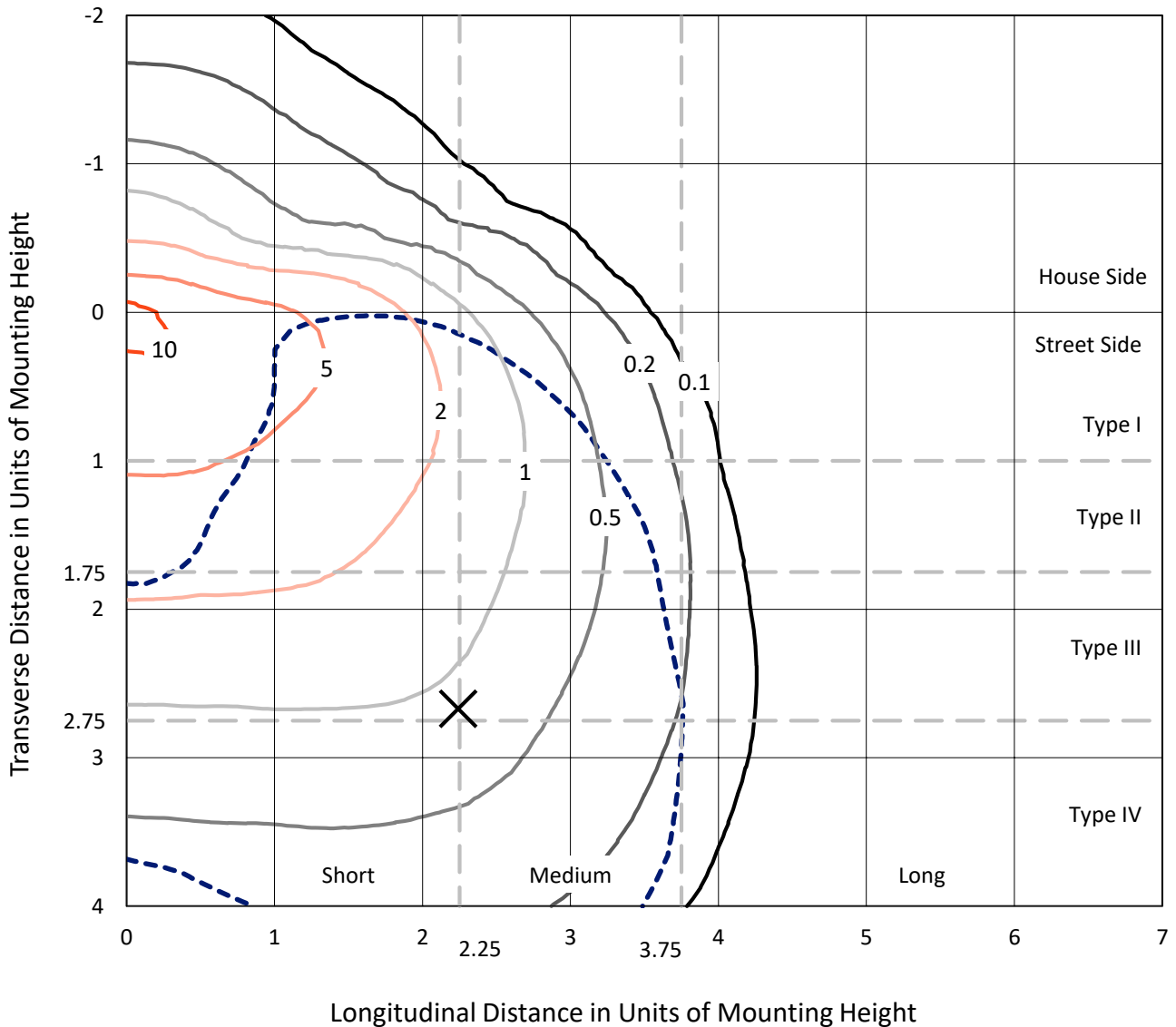
Input Watts (W): 66.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

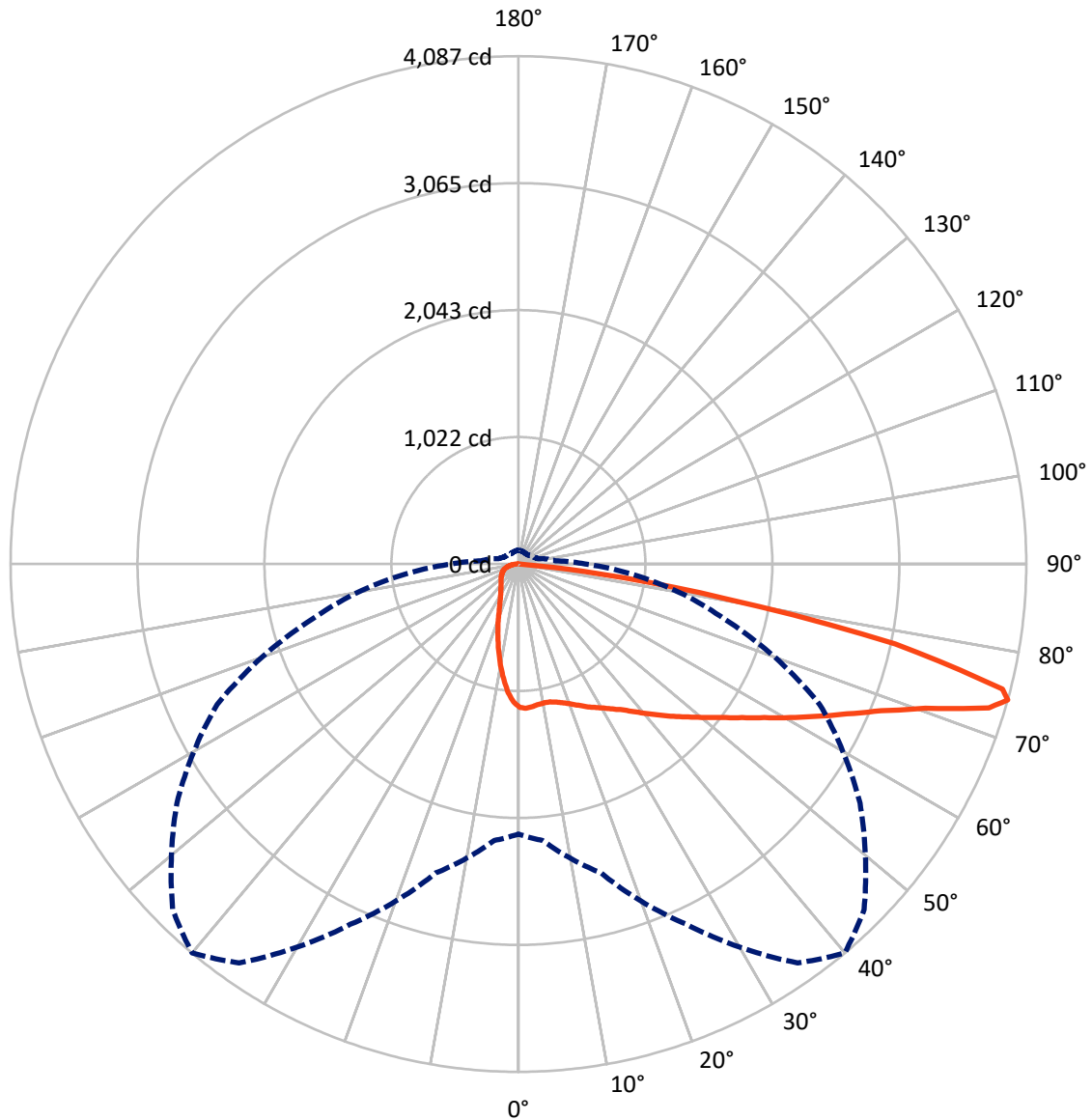
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11.5 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral    - - - Horizontal Cone Through 74-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	962.6	0.0	962.6
	% Fixture	15.6	0.0	15.6
<b>Street Side</b>	Lumens	5211.4	0.0	5211.4
	% Fixture	84.4	0.0	84.4
<b>Total</b>	Lumens	6174.0	0.0	6174.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.7	1.6
10°-20°	262.0	4.2
20°-30°	401.8	6.5
30°-40°	580.4	9.4
40°-50°	835.0	13.5
50°-60°	1152.9	18.7
60°-70°	1453.5	23.5
70°-80°	1260.4	20.4
80°-90°	126.2	2.0
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°	6174.0	100.0
0°-180°	6174.0	100.0

**Coefficient of Utilization**



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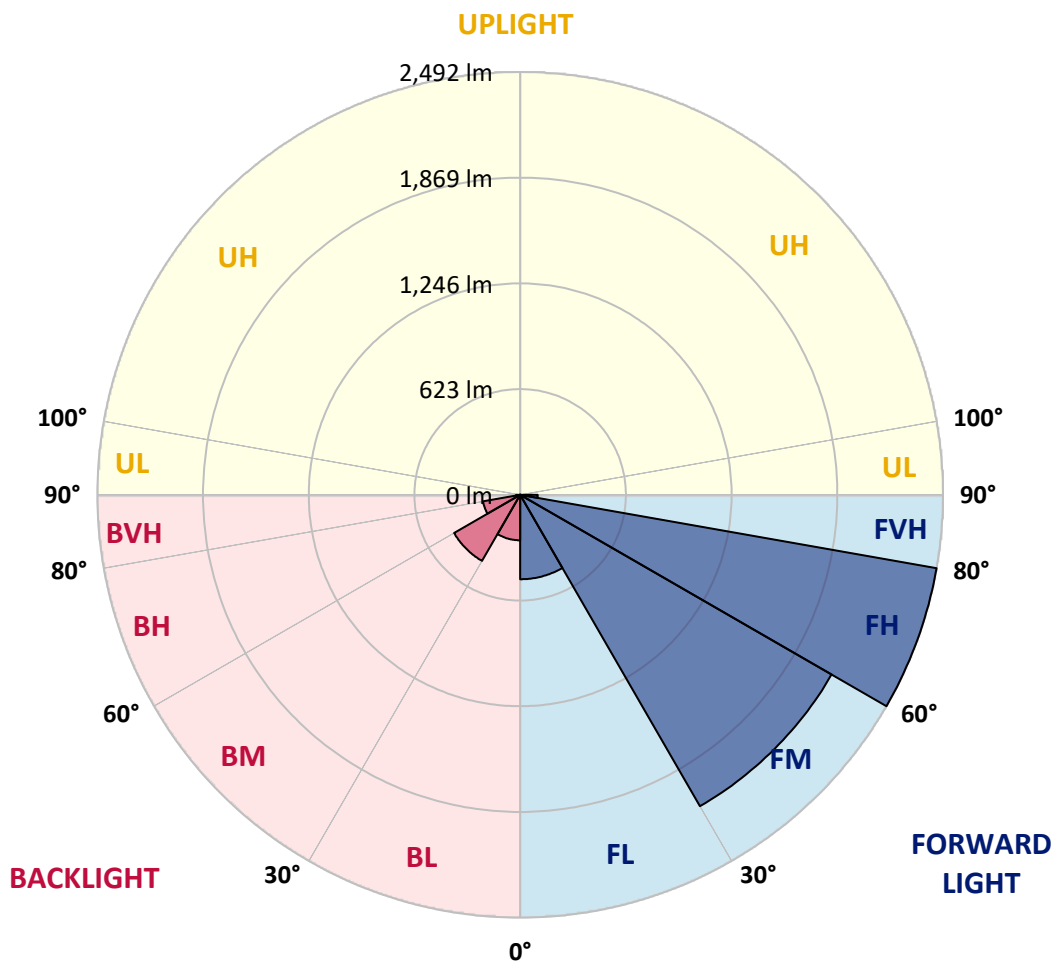
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	497.7	8.1			
FM (30°-60°)	2118.7	34.3			
FH (60°-80°)	2491.8	40.4			G2/5000
FVH (80°-90°)	103.2	1.7			G2/225
BL (0°-30°)	267.9	4.3	B1/500		
BM (30°-60°)	449.6	7.3	B1/1000		
BH (60°-80°)	222.2	3.6	B1/500		G1/500
BVH (80°-90°)	23.0	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5
2.5°	1167.3	1166.3	1169.1	1167.3	1164.5	1162.6	1161.7	1156.2	1154.3	1148.8	1141.3
5°	1162.6	1162.6	1162.6	1160.8	1155.2	1153.4	1151.5	1143.2	1137.6	1128.4	1114.5
7.5°	1146.9	1149.7	1148.8	1147.8	1143.2	1141.3	1138.6	1128.4	1121.0	1107.1	1089.5
10°	1132.1	1132.1	1133.0	1136.7	1134.9	1135.8	1134.9	1123.8	1113.6	1096.0	1073.8
12.5°	1110.8	1114.5	1120.1	1130.2	1134.9	1138.6	1138.6	1130.2	1119.1	1097.8	1071.9
15°	1097.8	1102.5	1116.4	1134.9	1146.0	1152.5	1154.3	1144.1	1130.2	1109.0	1080.3
17.5°	1092.3	1097.8	1123.8	1149.7	1169.1	1174.7	1175.6	1164.5	1149.7	1123.8	1090.4
20°	1097.8	1104.3	1138.6	1173.7	1196.9	1201.5	1203.4	1187.6	1169.1	1144.1	1100.6
22.5°	1119.1	1128.4	1166.3	1204.3	1228.4	1234.8	1233.0	1210.8	1192.3	1165.4	1113.6
25°	1165.4	1171.0	1205.2	1245.9	1264.5	1271.9	1267.2	1242.2	1218.2	1191.3	1132.1
27.5°	1219.1	1226.5	1262.6	1293.2	1305.2	1307.0	1302.4	1276.5	1249.7	1227.4	1160.8
30°	1283.9	1290.4	1320.0	1343.1	1344.1	1345.0	1342.2	1312.6	1290.4	1272.8	1202.4
32.5°	1352.4	1353.3	1383.9	1395.0	1387.6	1390.4	1387.6	1355.2	1339.4	1333.9	1257.1
35°	1415.3	1416.3	1447.7	1451.4	1439.4	1440.3	1445.9	1407.9	1407.9	1420.9	1338.5
37.5°	1475.5	1478.3	1506.1	1502.4	1497.7	1506.1	1513.5	1481.1	1499.6	1536.6	1437.6
40°	1520.9	1527.4	1564.4	1562.5	1572.7	1581.0	1587.5	1570.9	1600.5	1672.7	1559.8
42.5°	1550.5	1563.5	1616.2	1629.2	1646.8	1661.6	1672.7	1671.8	1723.6	1823.6	1689.3
45°	1581.0	1594.0	1664.4	1695.8	1725.4	1748.6	1769.9	1781.0	1863.4	1982.8	1840.2
47.5°	1618.1	1629.2	1707.9	1769.9	1807.8	1839.3	1877.3	1901.3	2005.9	2144.8	1980.0
50°	1674.5	1681.9	1752.3	1848.6	1896.7	1940.2	1987.4	2036.5	2159.6	2310.5	2102.2
52.5°	1747.7	1752.3	1804.1	1928.2	2005.0	2051.3	2121.6	2186.4	2316.0	2460.4	2202.2
55°	1831.0	1827.3	1867.1	2023.5	2113.3	2182.7	2269.7	2335.5	2480.8	2590.9	2281.8
57.5°	1914.3	1911.5	1943.0	2115.2	2250.3	2331.8	2421.5	2491.0	2631.7	2713.1	2339.2
60°	1993.9	1983.7	2028.1	2222.5	2416.0	2509.5	2590.0	2653.9	2774.2	2801.1	2369.7
62.5°	2064.2	2064.2	2129.0	2354.9	2614.1	2698.3	2762.2	2804.8	2910.3	2865.9	2357.7
65°	2129.0	2137.4	2229.9	2503.0	2819.6	2905.7	2961.2	2977.9	3045.4	2868.6	2255.9
67.5°	2202.2	2215.1	2345.6	2676.1	3056.6	3148.2	3196.3	3190.8	3141.7	2826.1	2037.4
70°	2273.4	2294.7	2489.1	2899.2	3349.1	3473.1	3525.9	3416.6	3191.7	2590.0	1692.1
72.5°	2325.3	2361.4	2606.7	3122.3	3768.4	3959.1	3937.8	3478.7	2957.5	2134.6	1280.2
74°	2173.5	2233.6	2574.3	3199.1	3919.3	4086.8	3934.1	3355.5	2675.2	1719.0	907.2
75°	1996.7	2055.0	2410.4	3168.6	3948.0	4023.0	3743.4	3138.9	2399.3	1332.0	592.4
77.5°	1478.3	1523.6	1851.3	2498.4	3122.3	3100.1	2787.2	2127.2	1182.1	401.7	249.9
80°	652.6	686.8	913.6	1257.1	1691.2	1684.7	1569.0	977.5	381.4	210.1	152.7
82.5°	197.2	196.2	262.9	366.6	642.4	654.4	556.3	336.9	182.4	87.0	74.1
85°	0.9	0.9	0.9	0.9	2.8	24.1	20.4	64.8	33.3	15.7	26.8
87.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5	1152.5
2.5°	1136.7	1135.8	1133.0	1126.5	1121.9	1108.0	1112.7	1103.4	1102.5	1100.6	1099.7
5°	1108.0	1104.3	1093.2	1080.3	1065.4	1042.3	1034.9	1021.0	1012.7	1009.9	1011.8
7.5°	1078.4	1070.1	1048.8	1021.0	991.4	957.1	932.1	912.7	898.8	894.2	887.7
10°	1059.9	1046.0	1009.9	963.6	915.5	867.4	825.7	797.0	775.7	759.0	759.0
12.5°	1053.4	1034.9	982.1	914.6	845.1	776.6	716.5	678.5	642.4	624.8	622.0
15°	1057.1	1031.2	959.0	870.1	777.6	688.7	614.6	560.0	525.8	504.5	511.9
17.5°	1060.8	1028.4	934.9	822.9	711.8	609.1	523.0	461.0	419.3	408.2	403.6
20°	1065.4	1022.9	904.4	772.0	644.3	532.3	441.5	378.6	347.1	333.2	333.2
22.5°	1071.9	1015.5	872.9	715.5	574.8	457.3	373.0	325.8	300.8	292.5	292.5
25°	1081.2	1010.8	840.5	659.1	509.1	398.0	327.7	290.7	277.7	272.1	271.2
27.5°	1098.8	1011.8	809.0	601.7	444.3	348.1	295.3	271.2	261.0	258.3	257.3
30°	1125.6	1021.0	775.7	540.6	386.9	310.1	273.1	256.4	249.9	248.1	248.1
32.5°	1162.6	1037.7	747.9	486.0	344.3	279.6	254.6	243.5	239.7	237.9	238.8
35°	1220.0	1066.4	714.6	436.0	304.5	258.3	239.7	231.4	228.6	228.6	229.6
37.5°	1295.0	1110.8	682.2	389.7	277.7	239.7	225.9	221.2	218.5	220.3	221.2
40°	1389.4	1163.6	651.7	348.1	255.5	224.9	213.8	210.1	209.2	211.1	212.9
42.5°	1491.3	1227.4	623.9	313.8	237.9	212.9	203.6	201.8	200.9	201.8	204.6
45°	1609.7	1300.6	600.8	287.9	224.9	202.7	194.4	192.5	191.6	193.5	195.3
47.5°	1719.0	1366.3	582.2	270.3	213.8	195.3	187.0	184.2	184.2	184.2	186.1
50°	1807.8	1418.1	571.1	258.3	204.6	187.0	179.6	176.8	175.9	175.0	175.9
52.5°	1884.7	1457.0	567.4	250.9	197.2	179.6	172.2	170.3	168.5	166.6	167.5
55°	1935.6	1476.4	560.0	244.4	190.7	171.2	164.8	162.9	161.1	158.3	158.3
57.5°	1965.2	1474.6	543.4	240.7	187.0	163.8	157.4	157.4	155.5	150.9	151.8
60°	1968.0	1442.2	502.6	236.0	184.2	156.4	149.0	150.9	150.9	147.2	147.2
62.5°	1920.8	1357.0	424.0	224.0	180.5	150.9	142.6	147.2	149.0	145.3	145.3
65°	1775.4	1156.2	340.6	206.4	171.2	144.4	135.1	144.4	150.0	147.2	146.3
67.5°	1496.8	915.5	281.4	187.0	161.1	136.1	127.7	139.8	147.2	147.2	146.3
70°	1201.5	695.2	231.4	165.7	145.3	125.9	119.4	129.6	136.1	137.9	137.9
72.5°	827.5	424.9	187.9	142.6	127.7	113.9	108.3	114.8	118.5	122.2	121.3
74°	534.1	298.1	164.8	129.6	116.6	104.6	101.8	104.6	106.5	110.2	111.1
75°	357.3	243.5	153.7	120.3	110.2	98.1	96.3	99.0	100.9	103.7	103.7
77.5°	205.5	174.0	124.0	100.0	91.6	84.2	83.3	84.2	87.0	89.8	88.9
80°	142.6	132.4	98.1	77.8	72.2	68.5	69.4	70.4	75.0	75.9	75.0
82.5°	86.1	95.3	69.4	58.3	54.6	53.7	56.5	58.3	62.0	62.9	62.0
85°	34.2	45.4	34.2	32.4	36.1	39.8	44.4	47.2	49.1	49.1	49.1
87.5°	0.0	6.5	8.3	13.0	20.4	24.1	31.5	34.2	36.1	35.2	34.2
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)