

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: P401922

Luminaire Tested: **ENT-SA1F-827-U-SL4**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401922
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-827-U-SL4
Description: ENTRI LED LUMINAIRE
(1) 80 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: 5427 lumens
Efficiency: N/A
Efficacy: 82.1 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

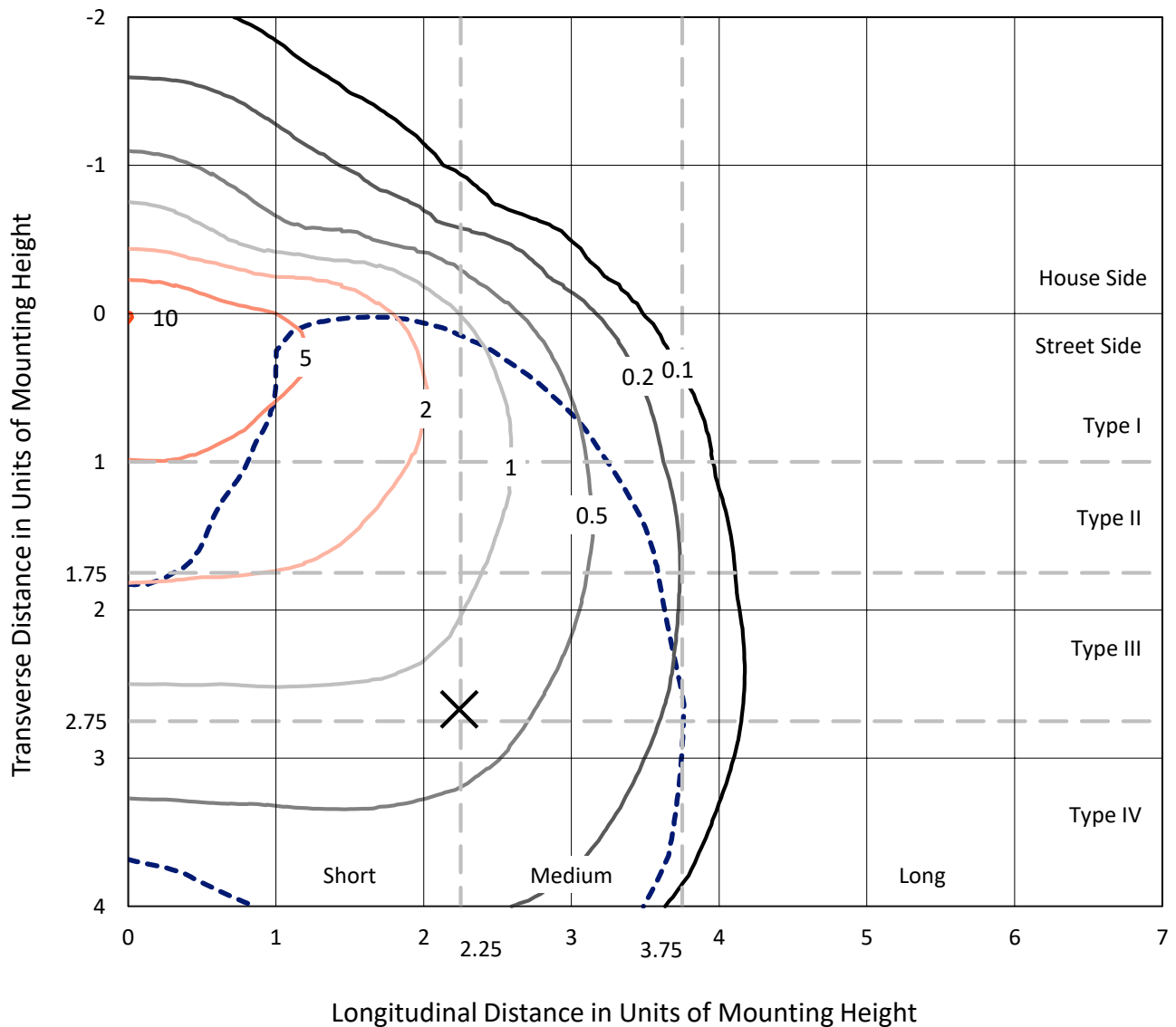
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

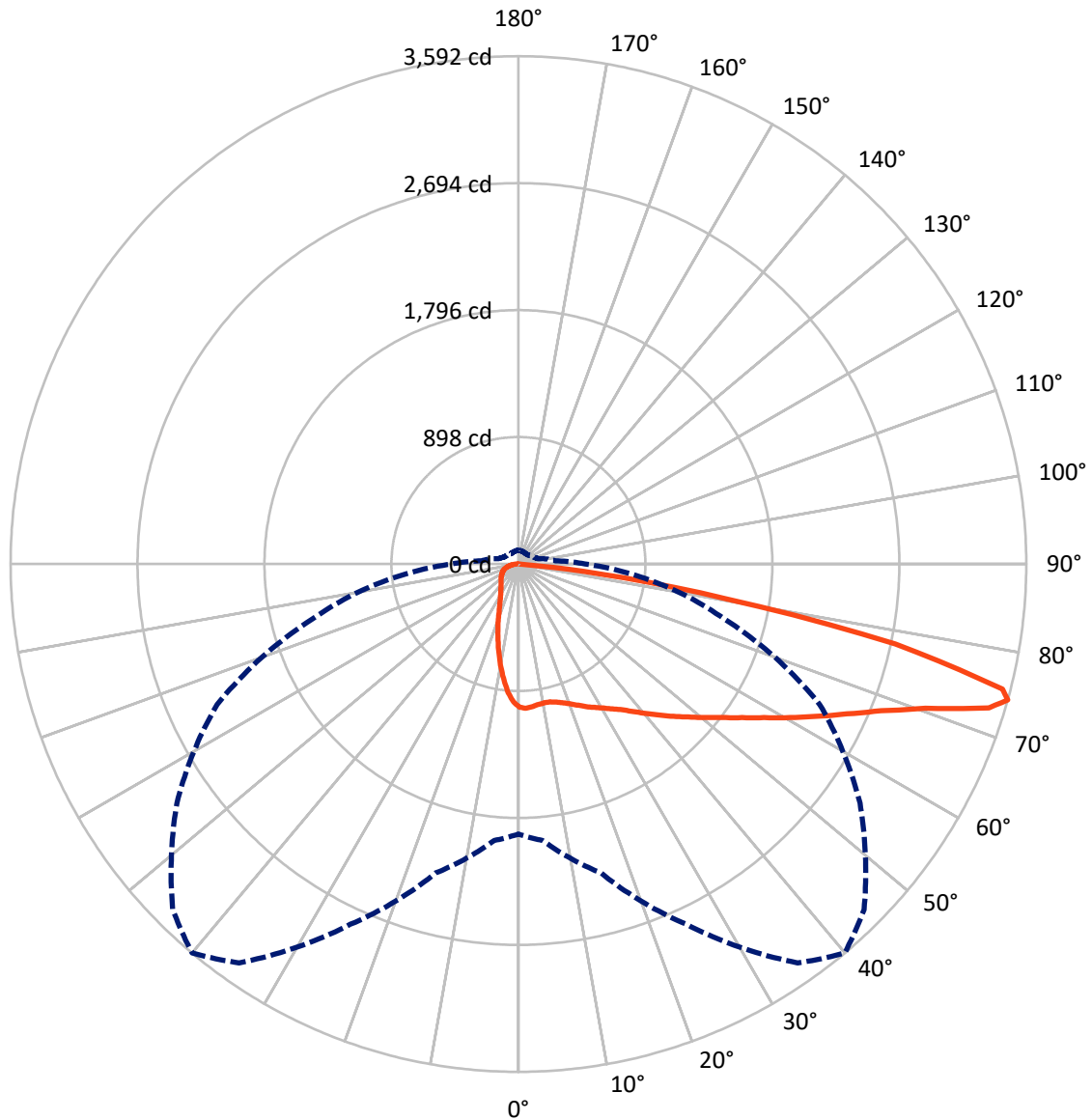
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.1 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
House Side	Lumens	846.2	0.0	846.2
	% Fixture	15.6	0.0	15.6
Street Side	Lumens	4580.8	0.0	4580.8
	% Fixture	84.4	0.0	84.4
Total	Lumens	5427.0	0.0	5427.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.4	1.6
10°-20°	230.3	4.2
20°-30°	353.2	6.5
30°-40°	510.1	9.4
40°-50°	734.0	13.5
50°-60°	1013.4	18.7
60°-70°	1277.7	23.5
70°-80°	1107.9	20.4
80°-90°	110.9	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°	5427.0	100.0
0°-180°	5427.0	100.0



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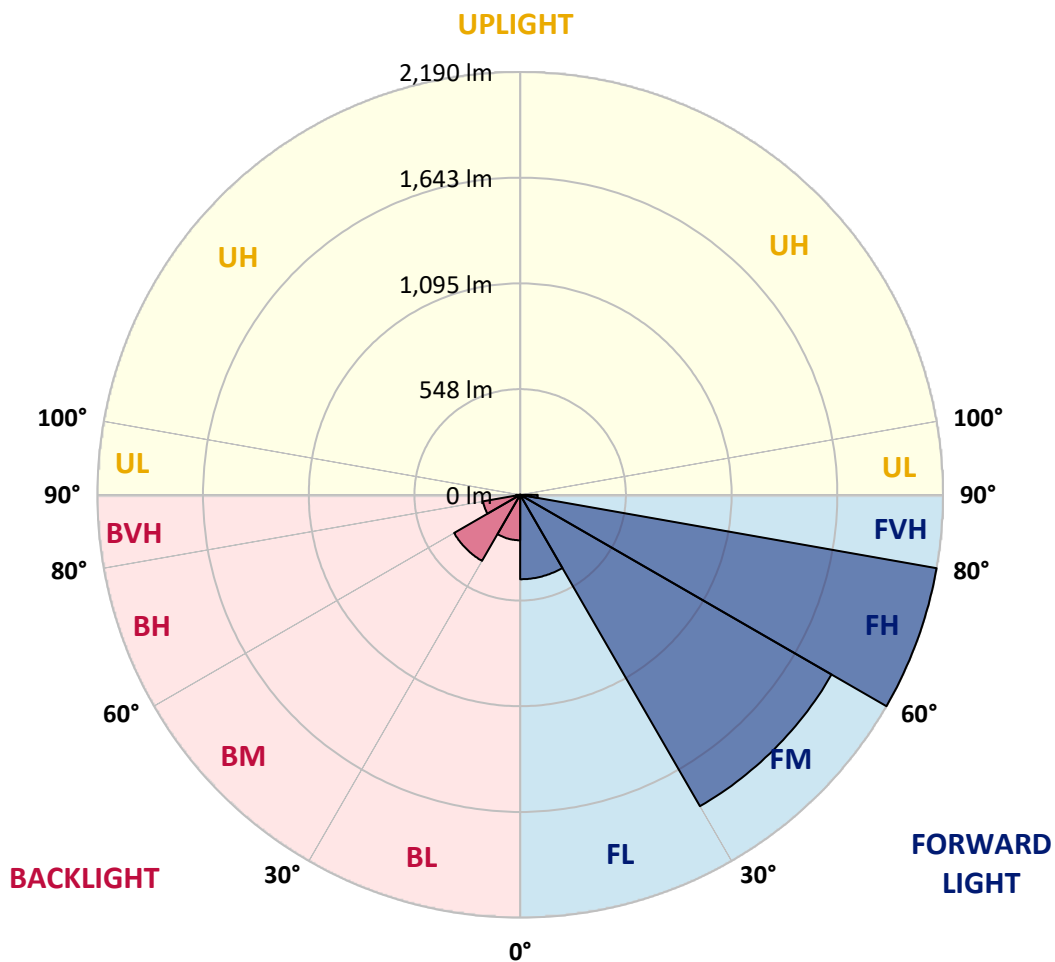
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	437.5	8.1			
FM (30°-60°)	1862.3	34.3			
FH (60°-80°)	2190.3	40.4			G2/5000
FVH (80°-90°)	90.7	1.7			G1/100
BL (0°-30°)	235.5	4.3	B1/500		
BM (30°-60°)	395.2	7.3	B1/1000		
BH (60°-80°)	195.3	3.6	B1/500		G1/500
BVH (80°-90°)	20.2	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°	1013.0	1013.0	1013.0	1013.0	1013.0	1013.0	1013.0	1013.0	1013.0	1013.0	1013.0
2.5°	1026.0	1025.2	1027.7	1026.0	1023.6	1022.0	1021.2	1016.3	1014.6	1009.8	1003.3
5°	1022.0	1022.0	1022.0	1020.3	1015.5	1013.8	1012.2	1004.9	1000.0	991.9	979.7
7.5°	1008.1	1010.6	1009.8	1009.0	1004.9	1003.3	1000.8	991.9	985.4	973.1	957.7
10°	995.1	995.1	995.9	999.2	997.6	998.4	997.6	987.8	978.8	963.4	943.9
12.5°	976.4	979.7	984.5	993.5	997.6	1000.8	1000.8	993.5	983.7	965.0	942.2
15°	965.0	969.1	981.3	997.6	1007.3	1013.0	1014.6	1005.7	993.5	974.8	949.6
17.5°	960.1	965.0	987.8	1010.6	1027.7	1032.5	1033.4	1023.6	1010.6	987.8	958.5
20°	965.0	970.7	1000.8	1031.7	1052.1	1056.1	1057.8	1043.9	1027.7	1005.7	967.5
22.5°	983.7	991.9	1025.2	1058.6	1079.7	1085.4	1083.8	1064.3	1048.0	1024.4	978.8
25°	1024.4	1029.3	1059.4	1095.2	1111.5	1118.0	1113.9	1091.9	1070.8	1047.2	995.1
27.5°	1071.6	1078.1	1109.8	1136.7	1147.3	1148.9	1144.8	1122.1	1098.5	1078.9	1020.3
30°	1128.6	1134.3	1160.3	1180.6	1181.4	1182.3	1179.8	1153.8	1134.3	1118.8	1057.0
32.5°	1188.8	1189.6	1216.4	1226.2	1219.7	1222.1	1219.7	1191.2	1177.4	1172.5	1105.0
35°	1244.1	1244.9	1272.6	1275.8	1265.3	1266.1	1271.0	1237.6	1237.6	1249.0	1176.6
37.5°	1297.0	1299.4	1323.8	1320.6	1316.5	1323.8	1330.4	1301.9	1318.1	1350.7	1263.6
40°	1336.9	1342.6	1375.1	1373.5	1382.4	1389.7	1395.4	1380.8	1406.8	1470.3	1371.0
42.5°	1362.9	1374.3	1420.7	1432.1	1447.5	1460.5	1470.3	1469.5	1515.1	1602.9	1484.9
45°	1389.7	1401.1	1463.0	1490.6	1516.7	1537.0	1555.7	1565.5	1637.9	1742.9	1617.6
47.5°	1422.3	1432.1	1501.2	1555.7	1589.1	1616.8	1650.1	1671.3	1763.2	1885.3	1740.4
50°	1471.9	1478.4	1540.3	1624.9	1667.2	1705.5	1747.0	1790.1	1898.3	2030.9	1847.8
52.5°	1536.2	1540.3	1585.8	1694.9	1762.4	1803.1	1864.9	1921.9	2035.8	2162.7	1935.7
55°	1609.4	1606.2	1641.2	1778.7	1857.6	1918.6	1995.1	2052.9	2180.6	2277.5	2005.7
57.5°	1682.7	1680.2	1707.9	1859.2	1978.0	2049.6	2128.6	2189.6	2313.3	2384.9	2056.1
60°	1752.6	1743.7	1782.8	1953.6	2123.7	2205.9	2276.6	2332.8	2438.6	2462.2	2083.0
62.5°	1814.5	1814.5	1871.4	2070.0	2297.8	2371.8	2428.0	2465.4	2558.2	2519.1	2072.4
65°	1871.4	1878.8	1960.1	2200.2	2478.4	2554.1	2602.9	2617.6	2677.0	2521.6	1982.9
67.5°	1935.7	1947.1	2061.8	2352.3	2686.7	2767.3	2809.6	2804.7	2761.6	2484.1	1790.9
70°	1998.4	2017.1	2188.0	2548.4	2943.9	3052.9	3099.3	3003.3	2805.5	2276.6	1487.4
72.5°	2043.9	2075.7	2291.3	2744.5	3312.5	3480.1	3461.4	3057.8	2599.7	1876.3	1125.3
74°	1910.5	1963.4	2262.8	2812.0	3445.1	3592.4	3458.1	2949.6	2351.5	1511.0	797.4
75°	1755.1	1806.3	2118.8	2785.2	3470.3	3536.2	3290.5	2759.2	2109.0	1170.9	520.7
77.5°	1299.4	1339.3	1627.3	2196.1	2744.5	2725.0	2450.0	1869.8	1039.1	353.1	219.7
80°	573.6	603.7	803.1	1105.0	1486.6	1480.9	1379.2	859.2	335.2	184.7	134.3
82.5°	173.3	172.5	231.1	322.2	564.7	575.3	489.0	296.2	160.3	76.5	65.1
85°	0.8	0.8	0.8	0.8	2.4	21.2	17.9	57.0	29.3	13.8	23.6
87.5°	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	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°	1013.0	1013.0	1013.0	1013.0	1013.0	1013.0	1013.0	1013.0	1013.0	1013.0	1013.0
2.5°	999.2	998.4	995.9	990.2	986.2	974.0	978.0	969.9	969.1	967.5	966.6
5°	974.0	970.7	960.9	949.6	936.5	916.2	909.7	897.5	890.2	887.7	889.3
7.5°	947.9	940.6	921.9	897.5	871.4	841.3	819.4	802.3	790.1	786.0	780.3
10°	931.7	919.4	887.7	847.0	804.7	762.4	725.8	700.6	681.9	667.2	667.2
12.5°	926.0	909.7	863.3	803.9	742.9	682.7	629.8	596.4	564.7	549.2	546.8
15°	929.2	906.4	843.0	764.9	683.5	605.4	540.3	492.3	462.2	443.5	450.0
17.5°	932.5	904.0	821.8	723.4	625.7	535.4	459.7	405.2	368.6	358.8	354.8
20°	936.5	899.1	795.0	678.6	566.3	467.9	388.1	332.8	305.1	292.9	292.9
22.5°	942.2	892.6	767.3	629.0	505.3	402.0	327.9	286.4	264.4	257.1	257.1
25°	950.4	888.5	738.8	579.3	447.5	349.9	288.0	255.5	244.1	239.2	238.4
27.5°	965.8	889.3	711.1	528.9	390.6	305.9	259.6	238.4	229.5	227.0	226.2
30°	989.4	897.5	681.9	475.2	340.1	272.6	240.0	225.4	219.7	218.1	218.1
32.5°	1022.0	912.1	657.4	427.2	302.7	245.7	223.8	214.0	210.7	209.1	209.9
35°	1072.4	937.3	628.2	383.2	267.7	227.0	210.7	203.4	201.0	201.0	201.8
37.5°	1138.3	976.4	599.7	342.6	244.1	210.7	198.5	194.5	192.0	193.7	194.5
40°	1221.3	1022.8	572.8	305.9	224.6	197.7	188.0	184.7	183.9	185.5	187.1
42.5°	1310.8	1078.9	548.4	275.8	209.1	187.1	179.0	177.4	176.6	177.4	179.8
45°	1415.0	1143.2	528.1	253.1	197.7	178.2	170.9	169.2	168.4	170.1	171.7
47.5°	1511.0	1201.0	511.8	237.6	188.0	171.7	164.4	161.9	161.9	161.9	163.5
50°	1589.1	1246.5	502.0	227.0	179.8	164.4	157.9	155.4	154.6	153.8	154.6
52.5°	1656.6	1280.7	498.8	220.5	173.3	157.9	151.3	149.7	148.1	146.5	147.3
55°	1701.4	1297.8	492.3	214.8	167.6	150.5	144.8	143.2	141.6	139.1	139.1
57.5°	1727.4	1296.2	477.6	211.6	164.4	144.0	138.3	138.3	136.7	132.6	133.4
60°	1729.9	1267.7	441.8	207.5	161.9	137.5	131.0	132.6	132.6	129.4	129.4
62.5°	1688.4	1192.8	372.7	196.9	158.7	132.6	125.3	129.4	131.0	127.7	127.7
65°	1560.6	1016.3	299.4	181.4	150.5	126.9	118.8	126.9	131.8	129.4	128.6
67.5°	1315.7	804.7	247.4	164.4	141.6	119.6	112.3	122.9	129.4	129.4	128.6
70°	1056.1	611.1	203.4	145.6	127.7	110.7	105.0	113.9	119.6	121.2	121.2
72.5°	727.4	373.5	165.2	125.3	112.3	100.1	95.2	100.9	104.1	107.4	106.6
74°	469.5	262.0	144.8	113.9	102.5	91.9	89.5	91.9	93.6	96.8	97.6
75°	314.1	214.0	135.1	105.8	96.8	86.2	84.6	87.1	88.7	91.1	91.1
77.5°	180.6	153.0	109.0	87.9	80.6	74.0	73.2	74.0	76.5	78.9	78.1
80°	125.3	116.4	86.2	68.3	63.5	60.2	61.0	61.8	65.9	66.7	65.9
82.5°	75.7	83.8	61.0	51.3	48.0	47.2	49.6	51.3	54.5	55.3	54.5
85°	30.1	39.9	30.1	28.5	31.7	35.0	39.1	41.5	43.1	43.1	43.1
87.5°	0.0	5.7	7.3	11.4	17.9	21.2	27.7	30.1	31.7	30.9	30.1
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)