

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: P401436

Luminaire Tested: **ENT-SA1D-727-U-SL4**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401436
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-SA1D-727-U-SL4
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2700K, 800mA 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: 4477 lumens
Efficiency: N/A
Efficacy: 103.9 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

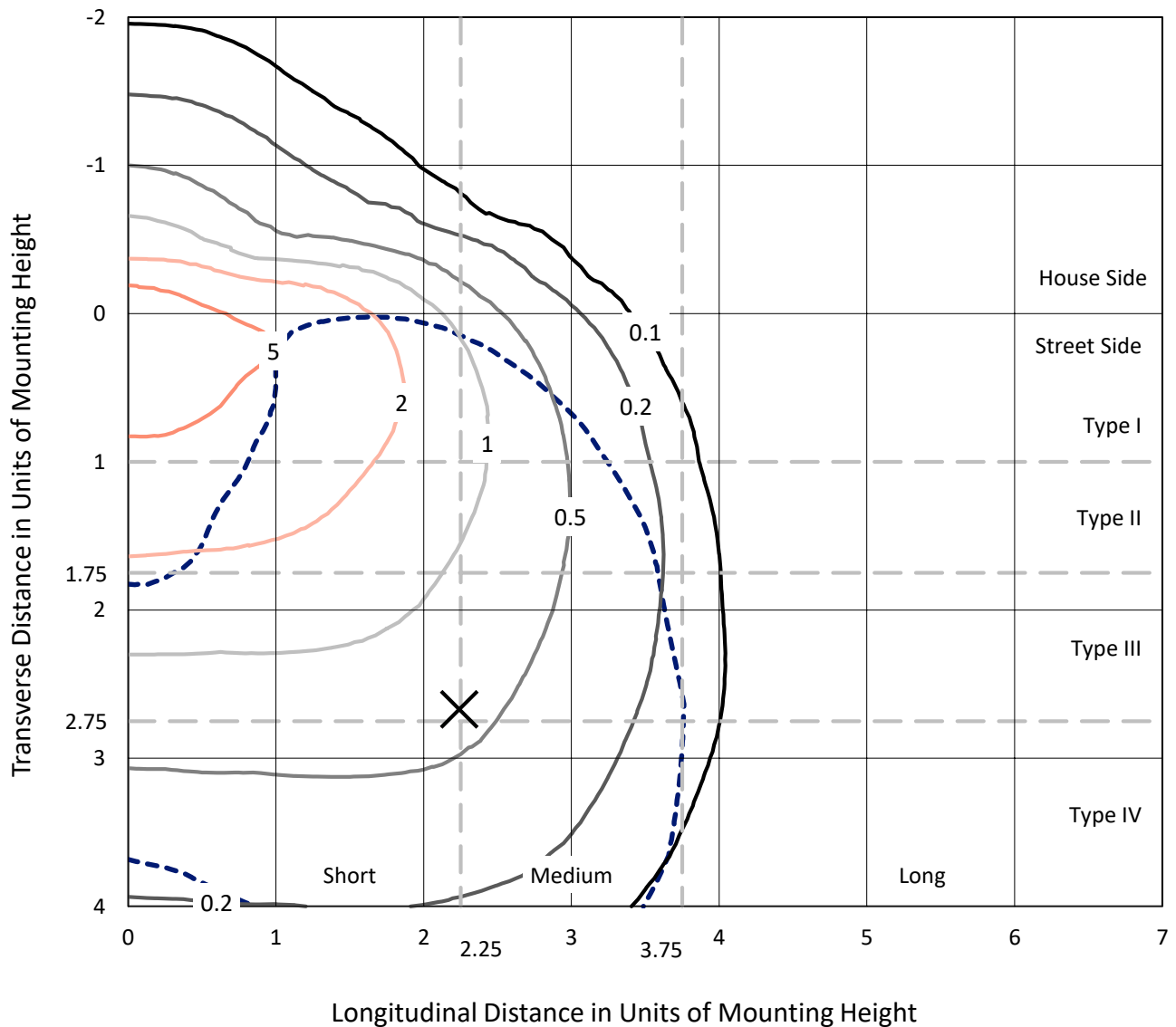
Input Watts (W): 43.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

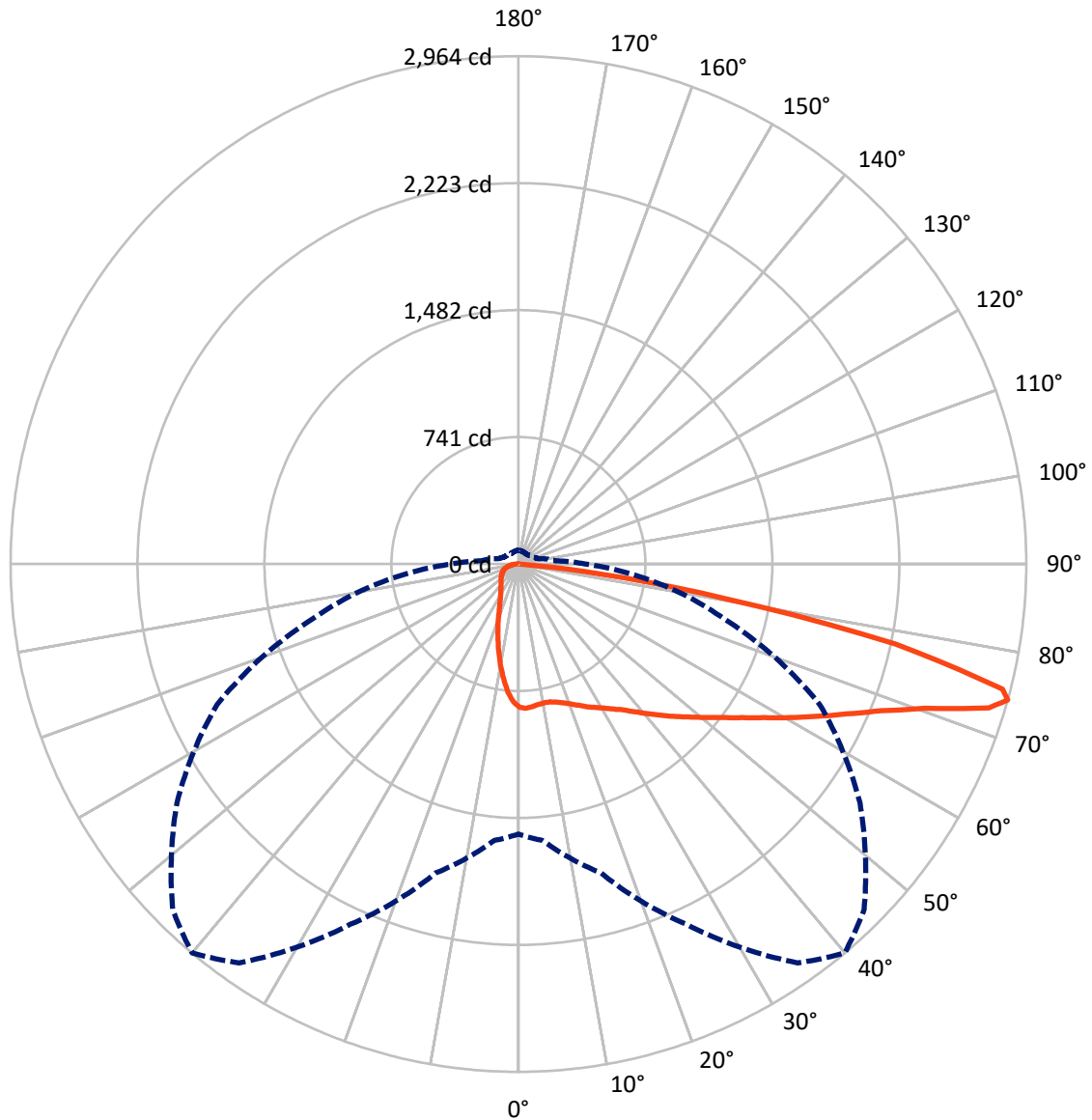
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.4 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	698.1	0.0	698.1
	% Fixture	15.6	0.0	15.6
Street Side	Lumens	3779.0	0.0	3779.0
	% Fixture	84.4	0.0	84.4
Total	Lumens	4477.0	0.0	4477.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.8	1.6
10°-20°	190.0	4.2
20°-30°	291.4	6.5
30°-40°	420.9	9.4
40°-50°	605.5	13.5
50°-60°	836.0	18.7
60°-70°	1054.0	23.5
70°-80°	914.0	20.4
80°-90°	91.5	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°	4477.0	100.0
0°-180°	4477.0	100.0



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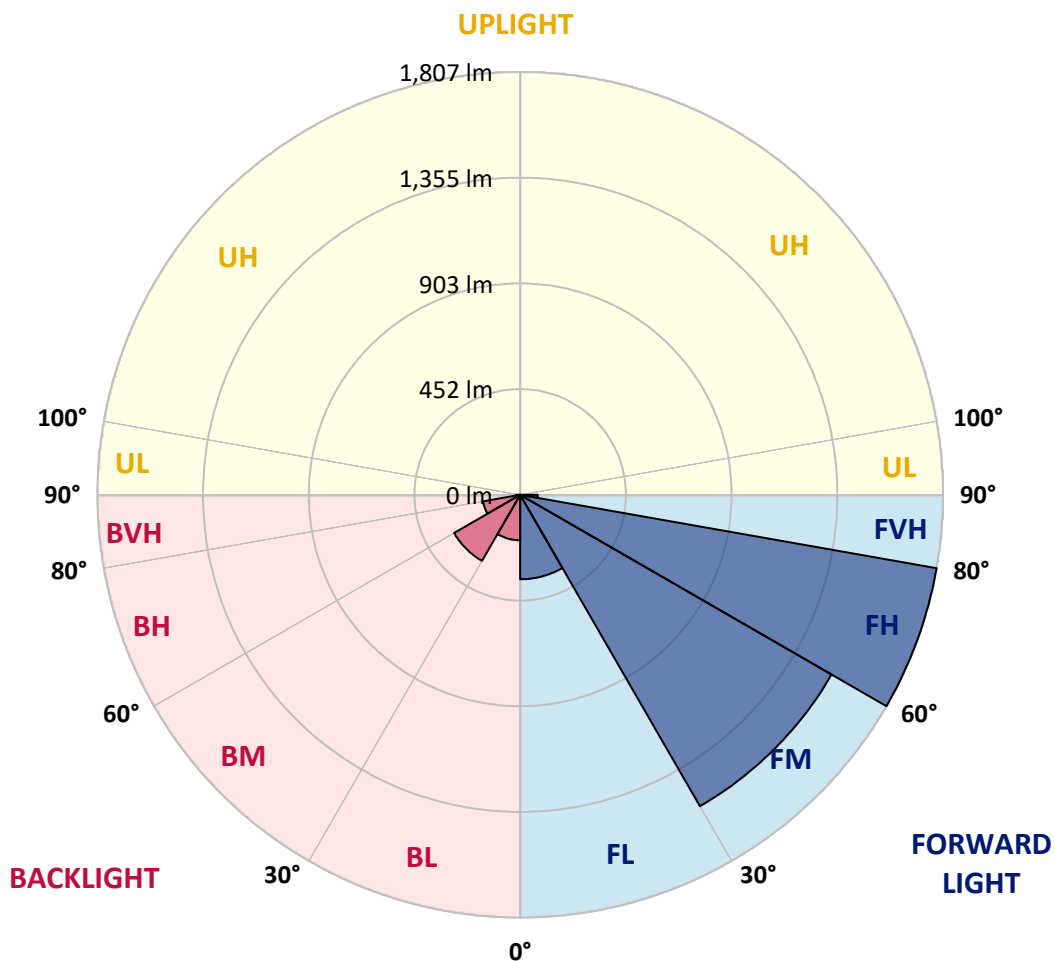
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	360.9	8.1			
FM	(30°-60°)	1536.3	34.3			
FH	(60°-80°)	1806.9	40.4			G2/5000
FVH	(80°-90°)	74.8	1.7			G1/100
BL	(0°-30°)	194.3	4.3	B1/500		
BM	(30°-60°)	326.0	7.3	B1/1000		
BH	(60°-80°)	161.1	3.6	B1/500		G1/500
BVH	(80°-90°)	16.7	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°	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7
2.5°	846.4	845.8	847.8	846.4	844.4	843.1	842.4	838.4	837.0	833.0	827.6
5°	843.1	843.1	843.1	841.7	837.7	836.4	835.0	829.0	825.0	818.2	808.2
7.5°	831.7	833.7	833.0	832.3	829.0	827.6	825.6	818.2	812.9	802.8	790.0
10°	820.9	820.9	821.6	824.3	822.9	823.6	822.9	814.9	807.5	794.7	778.6
12.5°	805.5	808.2	812.2	819.6	822.9	825.6	825.6	819.6	811.5	796.1	777.3
15°	796.1	799.4	809.5	822.9	831.0	835.7	837.0	829.6	819.6	804.1	783.3
17.5°	792.1	796.1	814.9	833.7	847.8	851.8	852.5	844.4	833.7	814.9	790.7
20°	796.1	800.8	825.6	851.1	867.9	871.3	872.6	861.2	847.8	829.6	798.1
22.5°	811.5	818.2	845.8	873.3	890.7	895.4	894.1	878.0	864.6	845.1	807.5
25°	845.1	849.1	874.0	903.5	916.9	922.3	918.9	900.8	883.3	863.9	820.9
27.5°	884.0	889.4	915.6	937.7	946.4	947.8	944.4	925.6	906.2	890.1	841.7
30°	931.0	935.7	957.2	974.0	974.6	975.3	973.3	951.8	935.7	923.0	871.9
32.5°	980.7	981.3	1003.5	1011.6	1006.2	1008.2	1006.2	982.7	971.3	967.3	911.5
35°	1026.3	1027.0	1049.8	1052.5	1043.8	1044.4	1048.5	1021.0	1021.0	1030.3	970.6
37.5°	1070.0	1072.0	1092.1	1089.4	1086.1	1092.1	1097.5	1074.0	1087.4	1114.3	1042.4
40°	1102.8	1107.5	1134.4	1133.0	1140.4	1146.5	1151.2	1139.1	1160.6	1212.9	1131.0
42.5°	1124.3	1133.7	1172.0	1181.4	1194.1	1204.9	1212.9	1212.3	1249.8	1322.3	1225.0
45°	1146.5	1155.9	1206.9	1229.7	1251.2	1268.0	1283.4	1291.5	1351.2	1437.8	1334.4
47.5°	1173.3	1181.4	1238.4	1283.4	1310.9	1333.7	1361.3	1378.7	1454.6	1555.3	1435.8
50°	1214.3	1219.6	1270.7	1340.5	1375.4	1406.9	1441.1	1476.7	1566.0	1675.4	1524.4
52.5°	1267.3	1270.7	1308.2	1398.2	1453.9	1487.5	1538.5	1585.5	1679.4	1784.1	1596.9
55°	1327.7	1325.0	1353.9	1467.3	1532.4	1582.8	1645.9	1693.5	1798.9	1878.8	1654.6
57.5°	1388.1	1386.1	1408.9	1533.8	1631.8	1690.8	1756.0	1806.3	1908.3	1967.4	1696.2
60°	1445.8	1438.5	1470.7	1611.6	1751.9	1819.7	1878.1	1924.4	2011.7	2031.2	1718.4
62.5°	1496.9	1496.9	1543.8	1707.6	1895.6	1956.7	2003.0	2033.8	2110.4	2078.1	1709.6
65°	1543.8	1549.9	1617.0	1815.0	2044.6	2107.0	2147.3	2159.4	2208.4	2080.2	1635.8
67.5°	1596.9	1606.3	1700.9	1940.5	2216.4	2282.9	2317.8	2313.8	2278.2	2049.3	1477.4
70°	1648.6	1664.0	1805.0	2102.3	2428.5	2518.5	2556.7	2477.5	2314.4	1878.1	1227.0
72.5°	1686.1	1712.3	1890.2	2264.1	2732.6	2870.9	2855.4	2522.5	2144.6	1547.9	928.3
74°	1576.1	1619.7	1866.7	2319.8	2842.0	2963.5	2852.8	2433.2	1939.9	1246.5	657.8
75°	1447.9	1490.1	1747.9	2297.6	2862.8	2917.2	2714.5	2276.2	1739.8	965.9	429.6
77.5°	1072.0	1104.9	1342.5	1811.7	2264.1	2248.0	2021.1	1542.5	857.2	291.3	181.2
80°	473.2	498.1	662.5	911.5	1226.3	1221.7	1137.7	708.8	276.5	152.4	110.8
82.5°	143.0	142.3	190.6	265.8	465.8	474.6	403.4	244.3	132.2	63.1	53.7
85°	0.7	0.7	0.7	0.7	2.0	17.5	14.8	47.0	24.2	11.4	19.5
87.5°	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	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°	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7	835.7
2.5°	824.3	823.6	821.6	816.9	813.5	803.5	806.8	800.1	799.4	798.1	797.4
5°	803.5	800.8	792.7	783.3	772.6	755.8	750.4	740.4	734.3	732.3	733.7
7.5°	782.0	775.9	760.5	740.4	718.9	694.1	675.9	661.8	651.8	648.4	643.7
10°	768.6	758.5	732.3	698.8	663.9	628.9	598.7	577.9	562.5	550.4	550.4
12.5°	763.9	750.4	712.2	663.2	612.8	563.2	519.5	492.0	465.8	453.1	451.1
15°	766.6	747.8	695.4	631.0	563.8	499.4	445.7	406.1	381.3	365.8	371.2
17.5°	769.2	745.7	677.9	596.7	516.2	441.7	379.2	334.3	304.1	296.0	292.7
20°	772.6	741.7	655.8	559.8	467.2	386.0	320.2	274.5	251.7	241.6	241.6
22.5°	777.3	736.3	633.0	518.9	416.8	331.6	270.5	236.3	218.2	212.1	212.1
25°	784.0	733.0	609.5	477.9	369.2	288.6	237.6	210.8	201.4	197.3	196.7
27.5°	796.8	733.7	586.7	436.3	322.2	252.4	214.1	196.7	189.3	187.3	186.6
30°	816.2	740.4	562.5	392.0	280.6	224.9	198.0	185.9	181.2	179.9	179.9
32.5°	843.1	752.5	542.4	352.4	249.7	202.7	184.6	176.5	173.9	172.5	173.2
35°	884.7	773.3	518.2	316.2	220.8	187.3	173.9	167.8	165.8	165.8	166.5
37.5°	939.1	805.5	494.7	282.6	201.4	173.9	163.8	160.4	158.4	159.8	160.4
40°	1007.5	843.7	472.6	252.4	185.3	163.1	155.1	152.4	151.7	153.0	154.4
42.5°	1081.4	890.1	452.4	227.5	172.5	154.4	147.7	146.3	145.7	146.3	148.3
45°	1167.3	943.1	435.6	208.8	163.1	147.0	141.0	139.6	138.9	140.3	141.6
47.5°	1246.5	990.7	422.2	196.0	155.1	141.6	135.6	133.6	133.6	133.6	134.9
50°	1310.9	1028.3	414.2	187.3	148.3	135.6	130.2	128.2	127.5	126.9	127.5
52.5°	1366.6	1056.5	411.5	181.9	143.0	130.2	124.9	123.5	122.2	120.8	121.5
55°	1403.6	1070.6	406.1	177.2	138.3	124.2	119.5	118.1	116.8	114.8	114.8
57.5°	1425.0	1069.3	394.0	174.5	135.6	118.8	114.1	114.1	112.8	109.4	110.1
60°	1427.0	1045.8	364.5	171.2	133.6	113.4	108.1	109.4	109.4	106.7	106.7
62.5°	1392.8	984.0	307.4	162.4	130.9	109.4	103.4	106.7	108.1	105.4	105.4
65°	1287.4	838.4	247.0	149.7	124.2	104.7	98.0	104.7	108.7	106.7	106.1
67.5°	1085.4	663.9	204.1	135.6	116.8	98.7	92.6	101.4	106.7	106.7	106.1
70°	871.3	504.1	167.8	120.2	105.4	91.3	86.6	94.0	98.7	100.0	100.0
72.5°	600.1	308.1	136.3	103.4	92.6	82.6	78.5	83.2	85.9	88.6	87.9
74°	387.3	216.1	119.5	94.0	84.6	75.8	73.8	75.8	77.2	79.9	80.5
75°	259.1	176.5	111.4	87.3	79.9	71.2	69.8	71.8	73.2	75.2	75.2
77.5°	149.0	126.2	89.9	72.5	66.5	61.1	60.4	61.1	63.1	65.1	64.4
80°	103.4	96.0	71.2	56.4	52.4	49.7	50.3	51.0	54.4	55.0	54.4
82.5°	62.4	69.1	50.3	42.3	39.6	38.9	40.9	42.3	45.0	45.6	45.0
85°	24.8	32.9	24.8	23.5	26.2	28.9	32.2	34.2	35.6	35.6	35.6
87.5°	0.0	4.7	6.0	9.4	14.8	17.5	22.8	24.8	26.2	25.5	24.8
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)