

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: P401920

Luminaire Tested: **ENT-SA1F-827-U-SL3**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401920
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-3)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1F-827-U-SL3
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 2700K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5615 lumens
Efficiency: N/A
Efficacy: 84.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

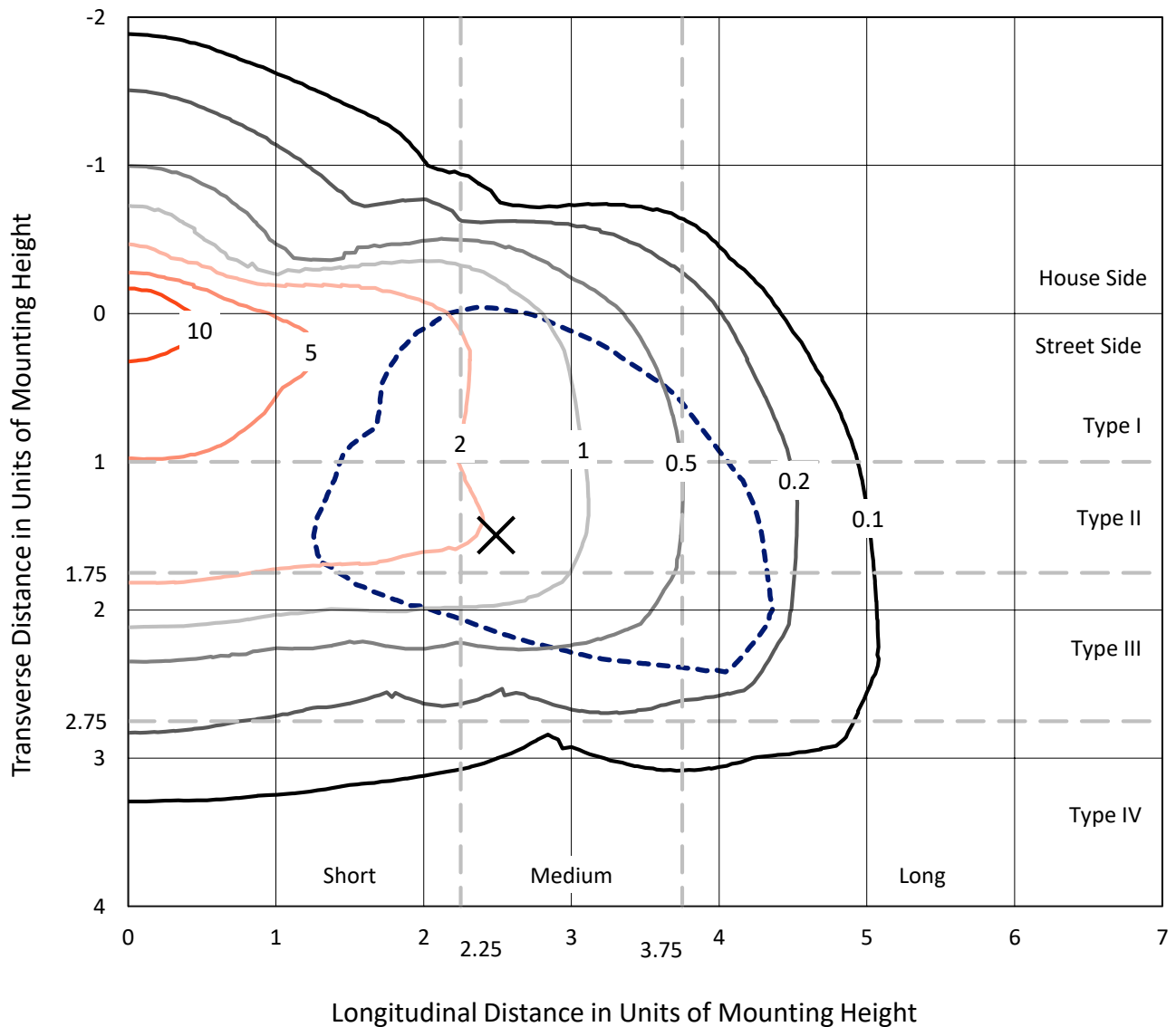
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

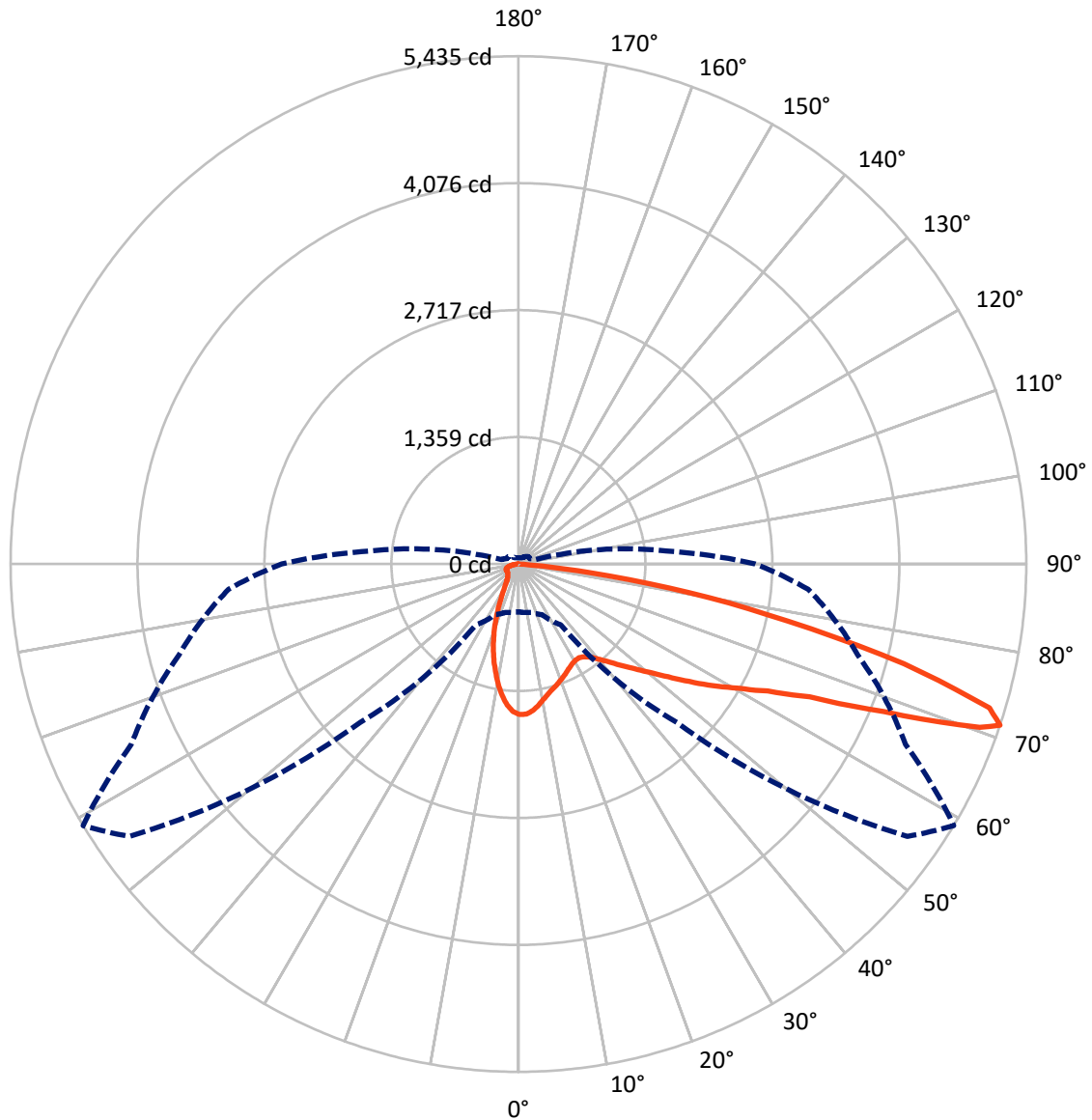
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.1 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	953.0	0.0	953.0
	% Fixture	17.0	0.0	17.0
Street Side	Lumens	4662.0	0.0	4662.0
	% Fixture	83.0	0.0	83.0
Total	Lumens	5615.0	0.0	5615.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	139.2	2.5
10°-20°	312.7	5.6
20°-30°	397.4	7.1
30°-40°	508.1	9.0
40°-50°	705.1	12.6
50°-60°	1043.9	18.6
60°-70°	1411.0	25.1
70°-80°	1000.6	17.8
80°-90°	97.2	1.7
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°	5615.0	100.0
0°-180°	5615.0	100.0



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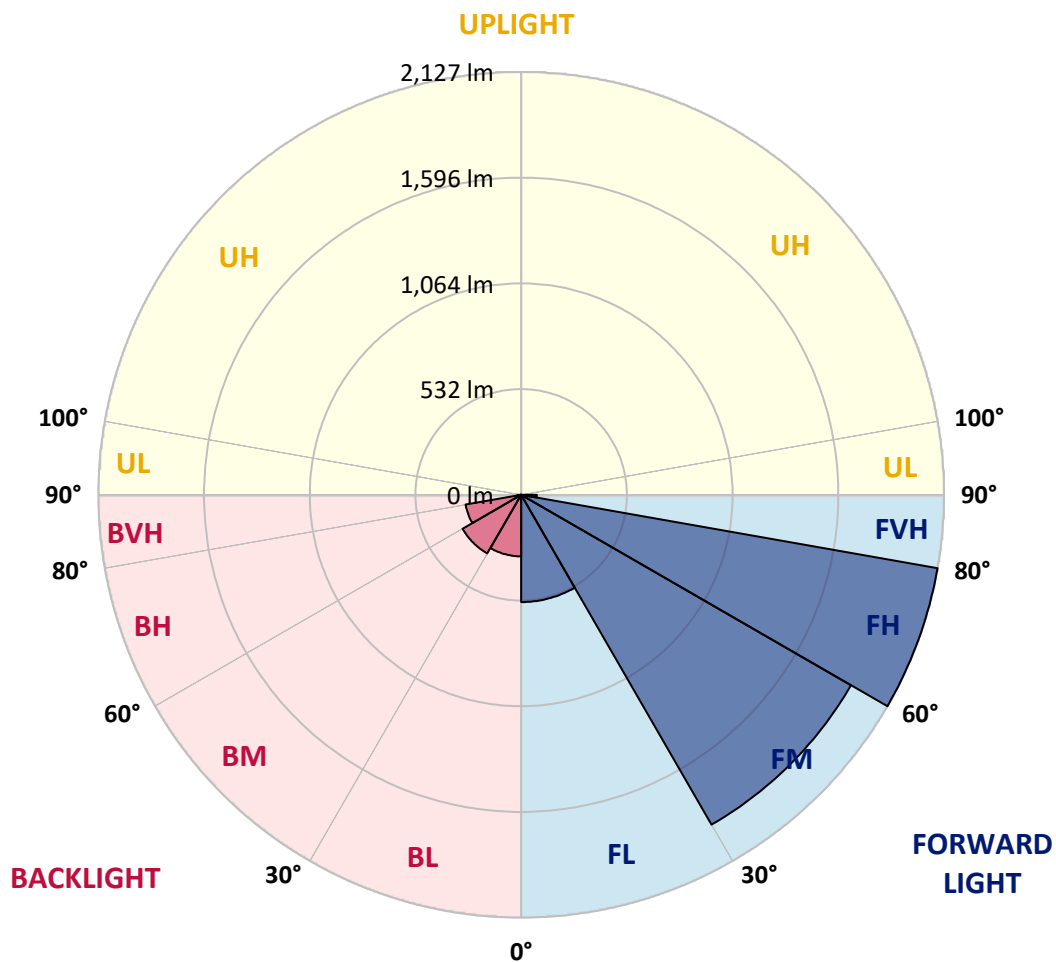
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	539.7	9.6			
FM (30°-60°)	1916.2	34.1			
FH (60°-80°)	2127.5	37.9			G2/5000
FVH (80°-90°)	78.7	1.4			G1/100
BL (0°-30°)	309.6	5.5	B1/500		
BM (30°-60°)	340.9	6.1	B1/1000		
BH (60°-80°)	284.0	5.1	B1/500		G1/500
BVH (80°-90°)	18.5	0.3			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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1610.9	1610.9	1610.9	1610.9	1610.9	1610.9	1610.9	1610.9	1610.9	1610.9	1610.9
2.5°	1597.1	1602.8	1605.2	1609.3	1609.3	1610.9	1609.3	1608.5	1611.7	1608.5	1599.5
5°	1526.3	1528.8	1536.1	1544.2	1552.4	1569.4	1574.3	1577.6	1584.9	1586.5	1577.6
7.5°	1430.3	1439.3	1449.0	1459.6	1476.7	1500.3	1520.6	1528.8	1542.6	1550.7	1537.7
10°	1349.0	1353.8	1358.7	1377.4	1404.3	1436.8	1458.0	1473.4	1495.4	1506.0	1493.8
12.5°	1267.6	1271.7	1281.4	1306.6	1334.3	1373.4	1411.6	1423.8	1449.8	1471.0	1461.2
15°	1204.9	1204.9	1212.3	1239.9	1269.2	1321.3	1366.0	1384.7	1417.3	1447.4	1435.2
17.5°	1149.6	1152.1	1156.9	1174.8	1215.5	1270.0	1327.0	1350.6	1391.3	1430.3	1414.0
20°	1118.7	1117.1	1120.3	1129.3	1161.8	1219.6	1287.9	1315.6	1366.0	1419.7	1393.7
22.5°	1108.1	1106.5	1104.1	1103.2	1124.4	1173.2	1246.4	1280.6	1343.3	1414.0	1375.0
25°	1116.3	1116.3	1108.9	1095.1	1104.9	1138.2	1209.0	1245.6	1318.0	1410.0	1357.9
27.5°	1138.2	1138.2	1127.7	1109.8	1105.7	1120.3	1176.5	1215.5	1296.9	1412.4	1344.1
30°	1168.3	1167.5	1156.9	1141.5	1129.3	1124.4	1161.0	1196.8	1282.2	1423.0	1337.6
32.5°	1202.5	1200.9	1196.0	1185.4	1170.8	1149.6	1162.6	1194.4	1279.0	1441.7	1338.4
35°	1243.2	1240.7	1243.2	1237.5	1223.7	1200.9	1192.7	1218.0	1295.3	1476.7	1352.2
37.5°	1279.0	1277.4	1289.6	1292.8	1289.6	1259.5	1248.9	1265.1	1333.5	1532.0	1380.7
40°	1309.1	1310.7	1332.7	1356.3	1361.2	1335.1	1327.8	1341.6	1395.3	1599.5	1431.9
42.5°	1342.4	1347.3	1379.9	1422.2	1438.4	1421.4	1425.4	1435.2	1473.4	1691.5	1506.0
45°	1375.0	1385.6	1430.3	1484.8	1526.3	1526.3	1540.1	1549.9	1574.3	1807.0	1614.2
47.5°	1431.9	1439.3	1488.1	1554.0	1617.4	1637.8	1676.0	1672.8	1691.5	1933.9	1741.1
50°	1506.0	1518.2	1567.8	1636.2	1716.7	1774.5	1818.4	1824.9	1832.2	2064.1	1891.6
52.5°	1608.5	1623.1	1663.8	1727.3	1822.5	1916.8	2009.6	2005.5	1995.8	2205.7	2064.1
55°	1711.8	1727.3	1765.5	1816.8	1929.0	2073.9	2225.2	2219.5	2174.8	2350.5	2223.6
57.5°	1816.8	1829.8	1869.7	1914.4	2047.0	2259.4	2453.0	2457.1	2365.1	2511.6	2381.4
60°	1860.7	1880.2	1978.7	2064.9	2230.9	2465.2	2685.7	2696.3	2562.8	2674.3	2555.5
62.5°	1662.2	1685.8	1848.5	2081.2	2483.1	2862.2	2988.4	2994.9	2801.2	2854.1	2745.9
65°	1230.2	1229.4	1397.8	1746.0	2432.7	3395.2	3527.8	3425.3	3097.4	3092.5	2997.3
67.5°	704.6	725.7	779.4	1041.4	1853.4	3493.6	4487.8	4220.1	3622.2	3463.5	3332.5
70°	567.9	563.0	579.3	649.3	1010.5	2872.8	5113.5	5235.5	4367.4	3766.2	3256.8
71°	511.8	519.1	535.3	598.8	797.3	2396.9	5082.6	5434.9	4570.8	3758.0	3112.8
72.5°	440.2	441.8	479.2	554.1	654.9	1690.7	4699.4	5270.5	4784.0	3651.4	2901.3
75°	299.4	303.5	362.1	445.9	598.0	803.0	3362.6	4263.3	4354.4	3412.2	2396.1
77.5°	171.7	174.9	217.2	326.3	509.3	566.3	2064.1	2946.1	3130.7	2495.3	1284.7
80°	88.7	92.8	120.4	205.8	388.9	458.1	1183.8	1852.6	1781.0	862.4	297.8
82.5°	23.6	26.8	35.0	74.0	187.9	298.6	524.8	766.4	547.6	179.0	108.2
85°	0.0	0.0	0.0	0.8	1.6	41.5	110.6	137.5	76.5	35.0	29.3
87.5°	0.0	0.0	0.0	0.0	0.8	1.6	1.6	1.6	1.6	2.4	3.3
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°	1610.9	1610.9	1610.9	1610.9	1610.9	1610.9	1610.9	1610.9	1610.9	1610.9	1610.9
2.5°	1597.9	1597.9	1593.0	1585.7	1577.6	1558.9	1562.1	1547.5	1549.1	1547.5	1547.5
5°	1570.3	1565.4	1553.2	1530.4	1505.2	1471.8	1466.9	1440.1	1424.6	1419.7	1425.4
7.5°	1532.0	1518.2	1487.3	1447.4	1399.4	1356.3	1316.4	1280.6	1253.8	1242.4	1237.5
10°	1481.6	1464.5	1414.0	1344.1	1278.2	1210.6	1148.0	1107.3	1053.6	1037.3	1032.5
12.5°	1440.1	1410.8	1335.1	1237.5	1135.0	1045.5	960.9	875.4	824.2	787.6	781.9
15°	1404.3	1362.8	1254.6	1128.5	1000.7	877.1	762.3	647.6	575.2	544.3	522.3
17.5°	1372.5	1318.8	1174.0	1010.5	852.7	689.1	549.2	439.3	393.8	370.2	371.0
20°	1340.0	1271.7	1090.2	892.5	706.2	524.8	388.1	336.8	314.1	309.2	306.7
22.5°	1309.1	1218.0	1001.5	776.2	556.5	385.6	312.4	287.2	281.5	281.5	281.5
25°	1274.1	1163.4	912.0	657.4	421.4	304.3	268.5	259.5	261.2	264.4	265.2
27.5°	1245.6	1116.3	823.4	519.9	327.1	258.7	240.0	238.4	244.9	252.2	252.2
30°	1220.4	1073.1	727.4	406.0	260.4	227.0	220.5	222.9	229.4	235.9	238.4
32.5°	1203.3	1034.1	641.1	315.7	222.1	205.0	203.4	206.7	213.2	216.4	218.9
35°	1196.0	1005.6	548.4	254.7	197.7	188.8	187.9	190.4	193.6	194.5	193.6
37.5°	1204.1	986.1	453.2	215.6	182.2	177.4	176.6	176.6	176.6	177.4	176.6
40°	1227.7	978.8	367.7	190.4	172.5	168.4	166.0	163.5	161.9	161.9	161.1
42.5°	1277.4	990.2	295.3	175.7	165.2	160.3	155.4	152.1	149.7	148.9	148.9
45°	1357.1	1021.9	245.7	166.0	158.7	151.3	145.6	142.4	139.9	140.8	139.9
47.5°	1466.9	1074.8	217.2	159.5	152.1	142.4	136.7	133.4	132.6	135.1	135.9
50°	1591.4	1149.6	200.1	154.6	147.3	135.1	128.5	126.1	126.9	131.8	132.6
52.5°	1737.9	1246.4	192.8	151.3	143.2	128.5	122.9	120.4	122.0	127.7	128.5
55°	1895.7	1357.1	203.4	153.0	139.1	124.5	118.0	114.7	117.2	122.0	122.9
57.5°	2056.0	1493.8	239.2	153.8	134.2	121.2	113.1	108.2	109.8	113.9	114.7
60°	2217.9	1629.6	301.0	154.6	132.6	118.0	109.0	101.7	102.5	105.0	105.8
62.5°	2408.3	1802.1	382.4	157.8	134.2	115.5	101.7	93.6	93.6	95.2	95.2
65°	2697.1	2059.2	436.1	156.2	138.3	113.1	94.4	86.2	85.4	86.2	86.2
67.5°	2904.6	2093.4	304.3	147.3	140.8	113.9	90.3	79.7	78.1	77.3	77.3
70°	2684.9	1761.4	201.0	139.1	136.7	115.5	87.1	75.7	72.4	70.0	69.2
71°	2532.7	1587.3	186.3	135.9	133.4	113.9	85.4	73.2	70.0	68.3	67.5
72.5°	2307.4	1416.5	171.7	131.0	126.1	110.6	83.0	70.8	66.7	64.3	63.5
75°	1823.3	1086.2	150.5	120.4	109.0	91.1	76.5	65.9	61.8	58.6	57.8
77.5°	824.2	432.0	115.5	104.1	88.7	72.4	66.7	61.0	56.1	53.7	52.9
80°	230.2	164.3	84.6	82.2	66.7	56.1	53.7	52.1	50.4	47.2	47.2
82.5°	106.6	96.0	60.2	57.8	45.6	39.9	42.3	43.1	43.1	39.9	39.1
85°	29.3	31.7	27.7	30.9	29.3	26.8	30.9	33.4	35.0	31.7	29.3
87.5°	2.4	5.7	7.3	12.2	14.6	15.5	19.5	23.6	24.4	19.5	20.3
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)