

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: P401490

Luminaire Tested: **ENT-SA1D-740-U-SL3-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401490  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-4)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1D-740-U-SL3-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 4000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4731 lumens  
Efficiency: N/A  
Efficacy: 109.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Semi-Cutoff  
BUG Rating: B1 - U0 - G1

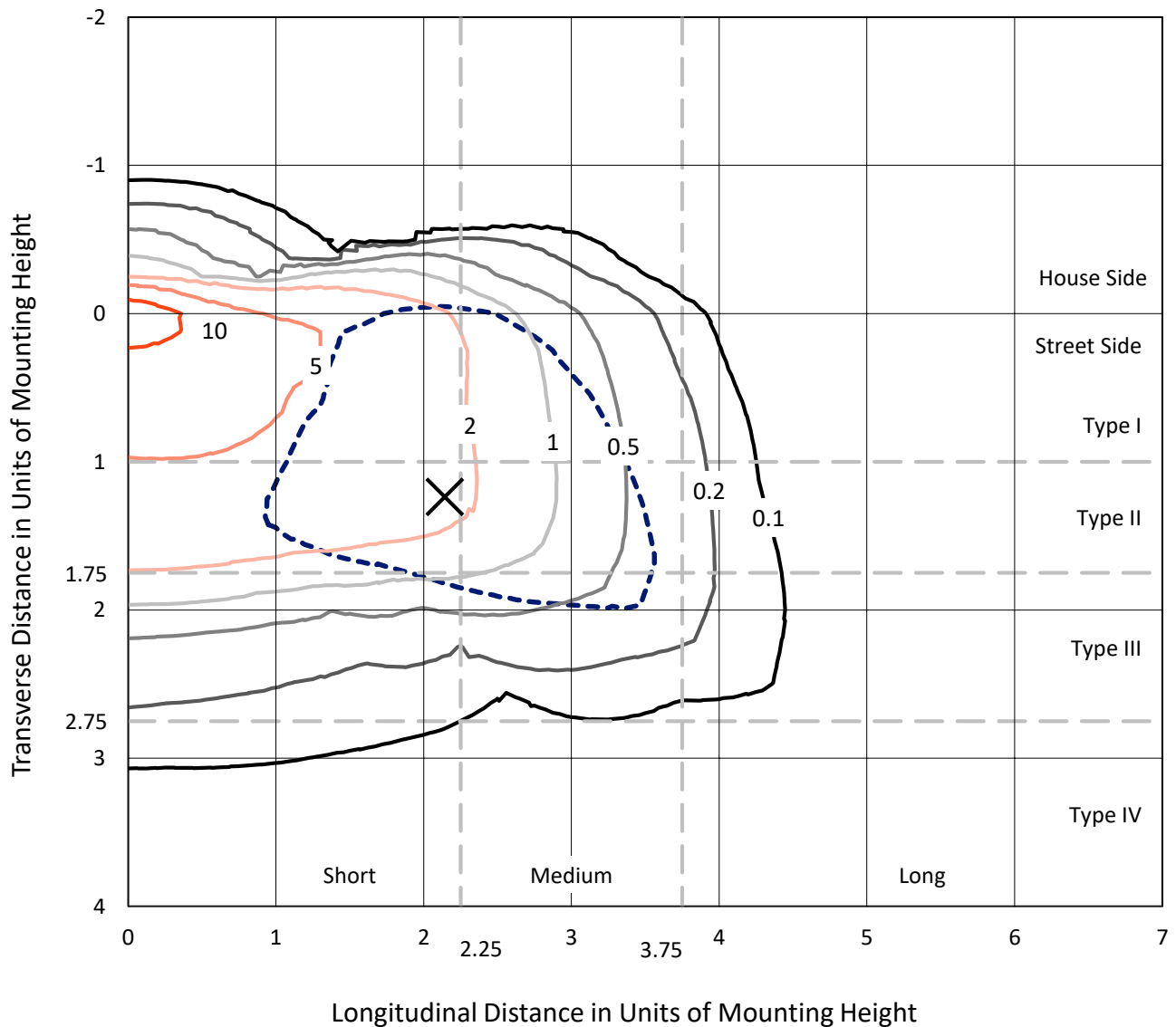
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

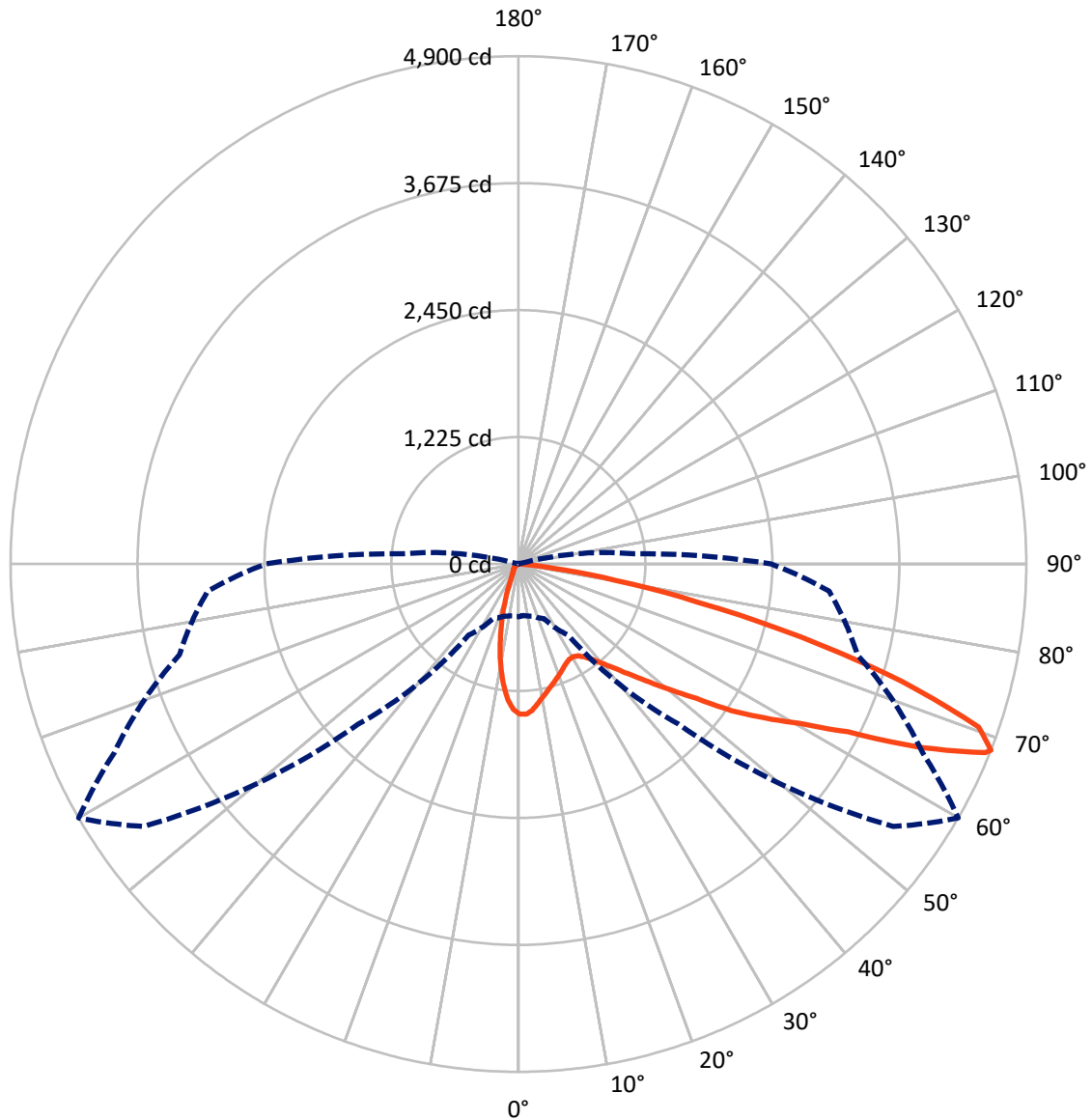
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 14.5 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral      - - - Horizontal Cone Through 68-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	528.9	0.0	528.9
	% Fixture	11.2	0.0	11.2
<b>Street Side</b>	Lumens	4202.1	0.0	4202.1
	% Fixture	88.8	0.0	88.8
<b>Total</b>	Lumens	4731.0	0.0	4731.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	117.5	2.5
10°-20°	239.7	5.1
20°-30°	315.6	6.7
30°-40°	435.5	9.2
40°-50°	660.1	14.0
50°-60°	1065.2	22.5
60°-70°	1265.4	26.7
70°-80°	596.5	12.6
80°-90°	35.6	0.8
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°	4731.0	100.0
0°-180°	4731.0	100.0



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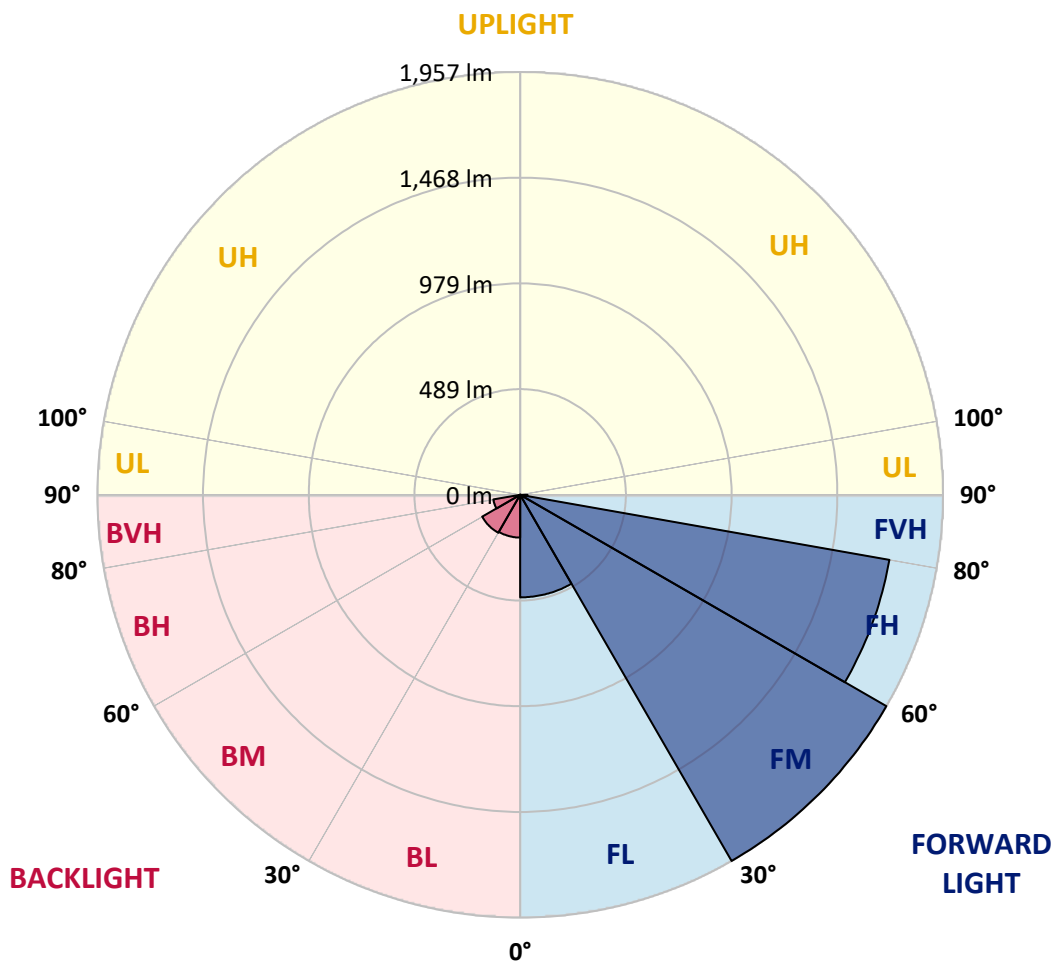
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	474.8	10.0			
FM	(30°-60°)	1957.5	41.4			
FH	(60°-80°)	1735.6	36.7			G1/1800
FVH	(80°-90°)	34.1	0.7			G1/100
BL	(0°-30°)	197.9	4.2	B1/500		
BM	(30°-60°)	203.3	4.3	B0/220		
BH	(60°-80°)	126.2	2.7	B1/500		G1/500
BVH	(80°-90°)	1.5	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1
2.5°	1435.3	1432.1	1440.9	1443.3	1445.7	1450.5	1449.7	1450.5	1451.3	1449.7	1440.1
5°	1337.3	1342.9	1351.0	1361.4	1371.8	1395.9	1405.6	1415.2	1421.6	1426.4	1417.6
7.5°	1241.0	1252.2	1258.7	1277.9	1294.0	1318.9	1339.7	1356.6	1372.7	1390.3	1381.5
10°	1163.9	1168.0	1173.6	1191.2	1215.3	1253.0	1280.3	1301.2	1320.5	1350.2	1342.9
12.5°	1088.5	1090.9	1102.1	1121.4	1146.3	1192.8	1229.0	1253.0	1274.7	1311.6	1312.4
15°	1033.1	1033.9	1041.1	1058.8	1087.7	1137.5	1184.0	1210.5	1241.0	1286.0	1288.4
17.5°	997.0	996.2	997.8	1009.0	1036.3	1083.7	1139.9	1171.2	1207.3	1265.1	1267.5
20°	985.7	984.1	980.9	978.5	995.4	1036.3	1099.7	1134.2	1176.8	1249.8	1250.6
22.5°	995.4	992.2	984.9	971.3	976.1	1002.6	1055.6	1097.3	1149.5	1241.8	1236.2
25°	1018.7	1018.7	1009.0	987.3	976.1	981.7	1024.3	1064.4	1122.2	1237.8	1225.8
27.5°	1057.2	1055.6	1042.7	1020.3	999.4	984.1	1005.0	1042.7	1102.1	1242.6	1220.9
30°	1103.7	1098.9	1085.3	1069.2	1043.5	1010.6	1009.0	1037.1	1092.5	1257.9	1224.1
32.5°	1147.9	1147.9	1142.3	1127.0	1102.1	1058.8	1033.9	1056.4	1104.5	1282.7	1234.6
35°	1202.5	1201.7	1203.3	1197.7	1176.0	1130.2	1090.1	1101.3	1141.5	1324.5	1259.5
37.5°	1245.8	1246.6	1260.3	1269.9	1260.3	1212.1	1170.4	1170.4	1204.1	1387.1	1302.0
40°	1288.4	1290.0	1315.7	1343.8	1346.2	1307.6	1267.5	1266.7	1286.0	1464.2	1367.8
42.5°	1326.9	1333.3	1370.2	1418.4	1446.5	1420.8	1391.1	1381.5	1391.1	1580.6	1474.6
45°	1367.8	1380.7	1432.1	1501.9	1547.6	1548.4	1537.2	1526.0	1530.8	1711.4	1617.5
47.5°	1420.8	1435.3	1499.5	1585.4	1672.1	1694.5	1705.0	1701.0	1688.1	1876.8	1802.1
50°	1506.7	1520.4	1580.6	1676.9	1795.7	1876.8	1904.9	1909.7	1892.8	2059.8	2011.6
52.5°	1652.8	1660.8	1717.0	1793.3	1926.5	2078.2	2152.1	2152.9	2115.2	2274.1	2238.0
55°	1809.3	1830.2	1896.0	1984.3	2121.6	2291.8	2476.4	2496.5	2380.1	2461.9	2403.3
57.5°	1811.7	1831.8	1941.0	2110.3	2397.7	2623.3	2787.8	2802.3	2673.1	2612.9	2559.1
60°	1620.7	1631.1	1782.8	2030.9	2496.5	3070.4	3142.6	3121.0	2878.6	2768.6	2754.1
62.5°	1143.9	1148.7	1328.5	1655.2	2278.1	3283.9	3682.9	3566.5	3170.7	2998.2	3046.3
65°	720.0	717.6	792.3	1053.2	1694.5	3073.6	4350.7	4265.7	3707.8	3285.5	3274.3
67.5°	531.4	518.6	538.6	619.7	968.1	2413.0	4473.6	4857.3	4219.1	3405.1	3076.8
68°	509.7	498.5	519.4	582.0	837.2	2184.2	4414.2	4899.8	4300.2	3385.9	3009.4
70°	432.7	422.2	439.9	487.3	582.8	1417.6	3894.8	4711.2	4374.0	3222.1	2652.2
72.5°	307.4	313.1	359.6	418.2	493.7	727.3	2868.1	3869.1	3762.3	2865.7	2018.0
75°	182.2	192.7	253.7	337.1	453.5	480.0	1850.3	2812.7	2760.6	1984.3	1093.3
77.5°	64.2	68.2	126.0	224.8	374.1	380.5	1030.7	1768.4	1644.8	810.7	322.7
80°	23.3	23.3	46.6	125.2	241.6	290.6	547.5	944.0	649.4	210.3	89.1
82.5°	4.0	4.0	10.4	42.5	106.8	154.9	254.5	335.5	192.7	46.6	44.1
85°	0.0	0.0	0.0	0.0	1.6	1.6	74.7	75.5	35.3	6.4	19.3
87.5°	0.0	0.0	0.0	0.0	0.0	0.8	1.6	1.6	1.6	1.6	2.4
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°	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1	1448.1
2.5°	1436.1	1434.5	1425.6	1409.6	1395.9	1373.5	1369.4	1347.8	1339.7	1333.3	1339.7
5°	1411.2	1402.4	1372.7	1336.5	1287.6	1229.8	1196.1	1149.5	1139.9	1114.2	1129.4
7.5°	1370.2	1350.2	1294.8	1216.9	1127.0	1038.7	971.3	906.3	850.9	831.6	826.0
10°	1326.9	1298.8	1205.7	1085.3	955.2	819.6	719.2	625.3	573.1	524.2	522.6
12.5°	1286.0	1243.4	1108.6	940.8	759.4	598.0	468.0	369.3	307.4	273.7	282.6
15°	1253.0	1196.1	1010.6	796.3	566.7	385.3	264.9	201.5	179.8	169.4	171.0
17.5°	1220.9	1145.5	915.9	645.4	403.8	237.6	171.8	150.1	143.7	141.3	139.7
20°	1192.0	1096.5	816.4	508.9	266.5	164.6	141.3	134.1	131.6	130.0	130.0
22.5°	1163.1	1045.1	716.8	377.3	182.2	134.9	126.8	123.6	122.0	119.6	119.6
25°	1136.7	995.4	617.3	264.1	139.7	120.4	114.8	111.6	108.4	106.0	106.0
27.5°	1116.6	957.6	525.0	187.0	117.2	108.4	102.7	97.1	93.1	89.9	89.9
30°	1103.7	920.7	435.9	141.3	104.4	96.3	89.1	81.9	75.5	71.4	70.6
32.5°	1096.5	890.2	353.2	115.6	93.1	84.3	75.5	67.4	60.2	55.4	55.4
35°	1099.7	866.1	270.5	97.9	84.3	73.9	64.2	54.6	48.2	44.1	43.3
37.5°	1120.6	852.5	201.5	86.7	75.5	64.2	54.6	45.0	38.5	35.3	34.5
40°	1159.9	855.7	153.3	78.7	69.0	56.2	45.0	36.9	31.3	28.1	28.1
42.5°	1239.4	879.0	121.2	72.2	61.8	48.2	37.7	30.5	25.7	23.3	22.5
45°	1344.6	923.1	99.5	66.6	54.6	40.9	32.1	25.7	20.9	18.5	18.5
47.5°	1503.5	993.8	85.9	61.0	47.4	34.5	26.5	20.9	16.1	14.4	13.6
50°	1687.3	1092.5	75.5	54.6	41.7	28.9	22.5	16.1	12.8	10.4	10.4
52.5°	1875.2	1202.5	68.2	49.0	36.1	24.9	17.7	12.0	8.8	7.2	7.2
55°	2047.7	1294.8	61.0	44.1	30.5	20.9	14.4	9.6	6.4	4.8	4.8
57.5°	2214.7	1379.1	53.0	38.5	24.9	16.9	11.2	7.2	4.8	3.2	3.2
60°	2424.2	1488.2	45.8	32.9	20.1	13.6	8.8	5.6	3.2	2.4	1.6
62.5°	2677.1	1567.7	38.5	26.5	16.1	10.4	6.4	4.0	2.4	0.8	0.8
65°	2770.2	1462.6	32.1	21.7	12.8	8.0	4.8	3.2	1.6	0.8	0.8
67.5°	2510.1	1178.4	25.7	16.9	9.6	5.6	4.0	2.4	1.6	0.8	0.8
68°	2437.9	1120.6	24.9	16.1	8.8	5.6	3.2	2.4	0.8	0.8	0.0
70°	2058.2	899.8	20.1	12.0	7.2	4.8	3.2	1.6	0.8	0.8	0.0
72.5°	1526.0	620.5	14.4	8.0	4.8	3.2	2.4	1.6	0.8	0.8	0.0
75°	805.1	241.6	11.2	6.4	4.0	3.2	2.4	2.4	1.6	0.8	0.8
77.5°	231.2	76.3	8.8	4.8	4.0	4.0	4.0	3.2	3.2	2.4	1.6
80°	67.4	24.9	5.6	3.2	4.0	4.0	4.8	4.0	4.0	3.2	3.2
82.5°	36.1	9.6	3.2	2.4	2.4	3.2	4.0	3.2	2.4	1.6	0.8
85°	15.3	3.2	2.4	1.6	1.6	1.6	1.6	1.6	1.6	0.8	0.8
87.5°	0.8	1.6	1.6	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
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)