

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: P401854

Luminaire Tested: **ENT-SA1F-740-U-SL4-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401854  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1F-740-U-SL4-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 4000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL  
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 6389 lumens  
Efficiency: N/A  
Efficacy: 96.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Semi-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

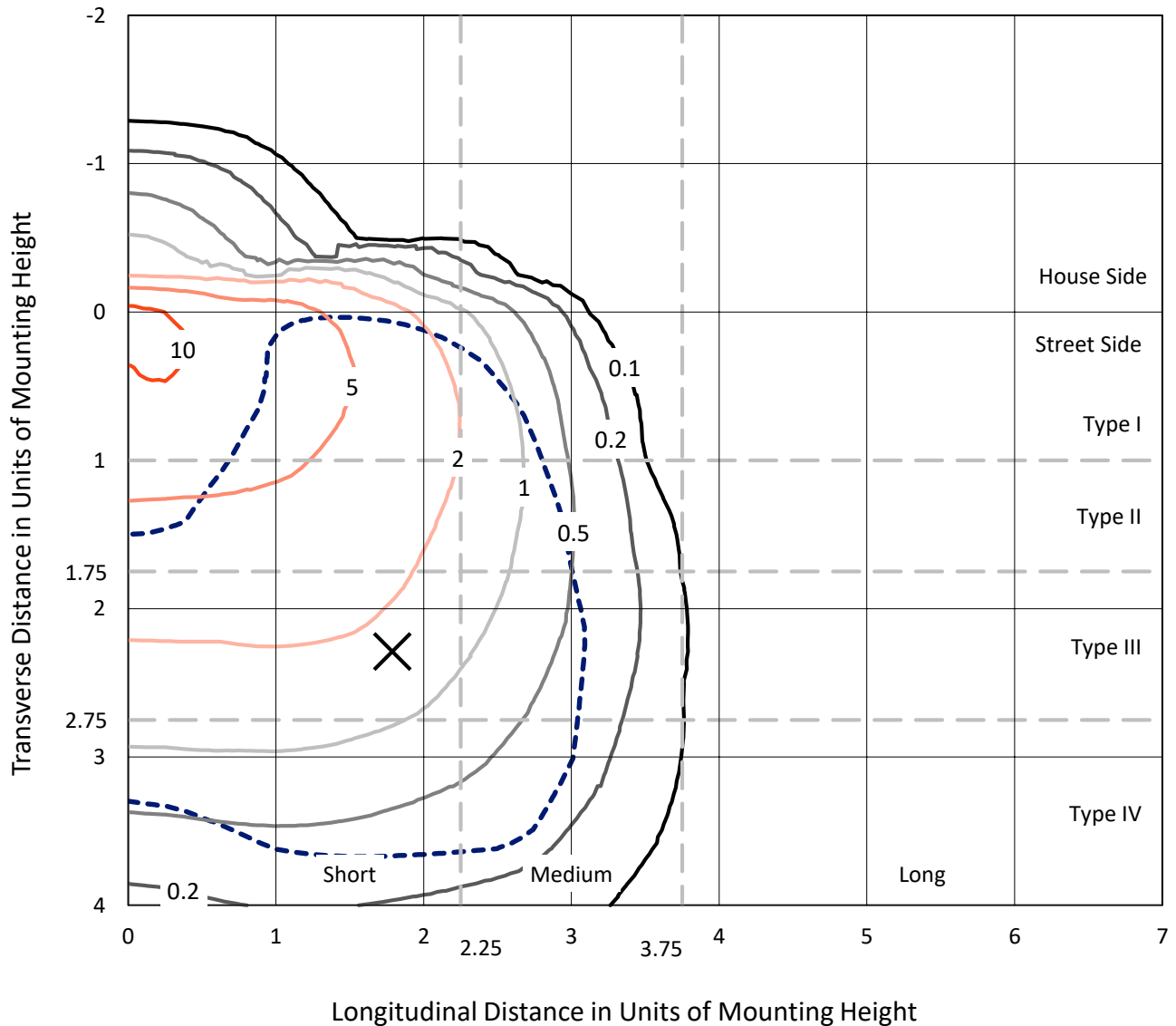


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

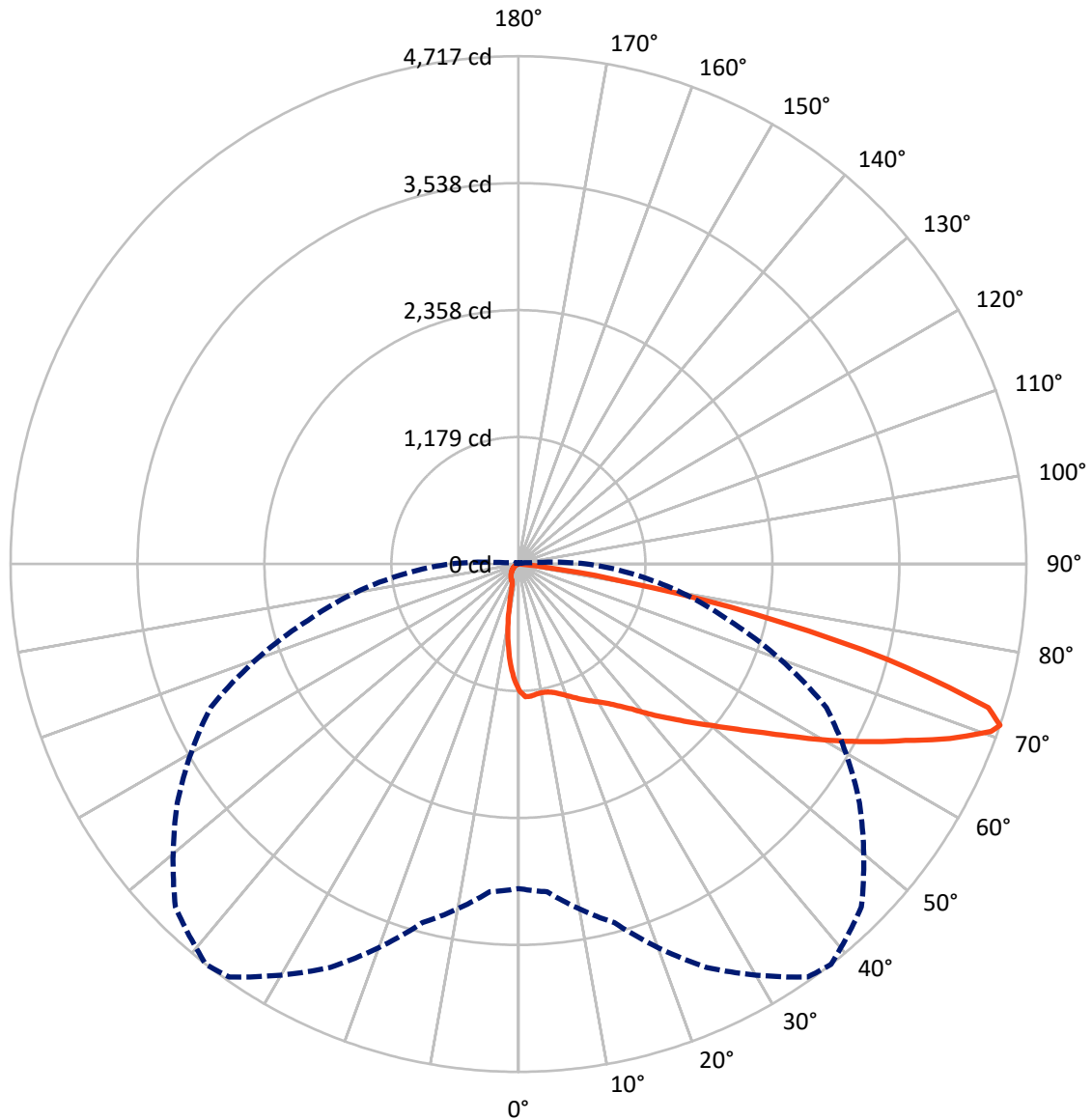


Based on 10 foot mounting height. Maximum calculated value = 12.1 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	545.7	0.0	545.7
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	5843.3	0.0	5843.3
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	6389.0	0.0	6389.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.5	1.6
10°-20°	240.9	3.8
20°-30°	386.2	6.0
30°-40°	587.6	9.2
40°-50°	915.7	14.3
50°-60°	1339.1	21.0
60°-70°	1717.5	26.9
70°-80°	1049.8	16.4
80°-90°	52.7	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°	6389.0	100.0
0°-180°	6389.0	100.0



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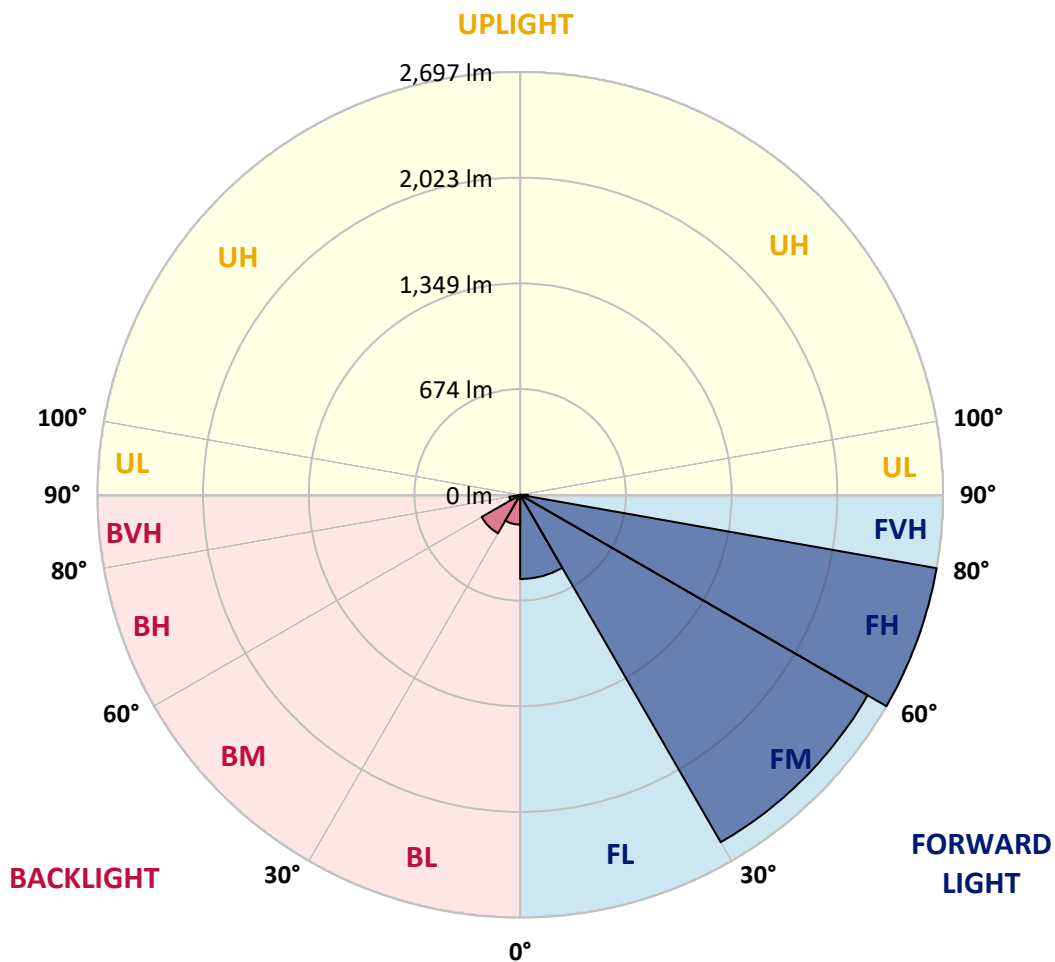
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	536.8	8.4			
FM	(30°-60°)	2558.9	40.1			
FH	(60°-80°)	2697.2	42.2			G2/5000
FVH	(80°-90°)	50.4	0.8			G1/100
BL	(0°-30°)	189.8	3.0	B1/500		
BM	(30°-60°)	283.5	4.4	B1/1000		
BH	(60°-80°)	70.2	1.1	B0/110		G0/110
BVH	(80°-90°)	2.3	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-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8
2.5°	1247.6	1244.2	1247.6	1244.2	1237.6	1234.3	1229.9	1217.7	1206.6	1193.3	1173.4
5°	1249.8	1247.6	1247.6	1243.1	1235.4	1232.1	1227.6	1215.5	1201.1	1181.1	1151.3
7.5°	1237.6	1236.5	1234.3	1229.9	1221.0	1218.8	1215.5	1201.1	1186.7	1165.6	1129.1
10°	1217.7	1219.9	1218.8	1218.8	1215.5	1213.2	1211.0	1194.4	1178.9	1154.6	1115.8
12.5°	1198.9	1201.1	1206.6	1215.5	1218.8	1219.9	1219.9	1203.3	1184.5	1157.9	1118.0
15°	1186.7	1191.1	1206.6	1224.3	1234.3	1237.6	1240.9	1223.2	1201.1	1172.3	1130.2
17.5°	1183.4	1190.0	1219.9	1247.6	1266.4	1268.6	1268.6	1246.5	1223.2	1190.0	1144.6
20°	1194.4	1203.3	1242.0	1280.8	1304.0	1306.2	1301.8	1273.0	1245.4	1208.8	1156.8
22.5°	1227.6	1235.4	1279.7	1325.1	1347.2	1349.4	1339.4	1299.6	1269.7	1239.8	1173.4
25°	1285.2	1289.6	1337.2	1380.4	1392.6	1395.9	1379.3	1331.7	1297.4	1269.7	1196.6
27.5°	1361.6	1363.8	1407.0	1439.1	1441.3	1440.2	1422.5	1372.7	1338.3	1315.1	1232.1
30°	1441.3	1444.6	1480.0	1501.1	1492.2	1487.8	1472.3	1419.1	1388.2	1370.4	1283.0
32.5°	1515.5	1518.8	1557.5	1568.6	1548.7	1545.3	1534.3	1477.8	1451.2	1460.1	1356.0
35°	1588.5	1588.5	1632.8	1638.3	1620.6	1620.6	1620.6	1553.1	1548.7	1578.6	1457.9
37.5°	1653.8	1664.9	1711.4	1709.2	1705.9	1708.1	1714.7	1663.8	1679.3	1730.2	1591.8
40°	1709.2	1723.6	1785.6	1791.1	1805.5	1817.7	1827.6	1801.1	1837.6	1920.6	1763.4
42.5°	1759.0	1775.6	1855.3	1880.8	1920.6	1937.2	1956.0	1949.4	2030.2	2181.9	1982.6
45°	1823.2	1840.9	1922.8	1983.7	2039.1	2061.2	2103.3	2132.0	2266.0	2438.7	2219.5
47.5°	1908.4	1920.6	1995.9	2092.2	2167.5	2207.3	2272.6	2346.8	2509.5	2711.0	2430.9
50°	2024.7	2025.8	2082.2	2207.3	2319.1	2362.3	2475.2	2571.5	2775.2	2951.2	2583.7
52.5°	2153.1	2146.4	2190.7	2349.0	2490.7	2549.4	2682.2	2816.2	3020.9	3125.0	2652.3
55°	2274.8	2278.2	2305.8	2499.6	2706.6	2763.0	2931.3	3067.4	3245.7	3231.3	2690.0
57.5°	2415.4	2414.3	2449.7	2664.5	2959.0	3024.3	3200.3	3312.1	3381.8	3307.7	2696.6
60°	2548.3	2544.9	2599.2	2861.5	3227.9	3324.3	3482.6	3478.1	3518.0	3356.4	2691.1
62.5°	2666.7	2674.5	2769.7	3090.7	3529.0	3633.1	3712.8	3657.5	3668.5	3412.8	2622.4
65°	2810.6	2825.0	2978.9	3368.5	3901.0	3950.8	3981.8	3892.1	3781.4	3367.4	2414.3
67.5°	2992.2	3035.3	3252.3	3778.1	4288.4	4322.7	4323.9	4033.8	3777.0	3138.3	2030.2
70°	3064.1	3109.5	3454.9	4102.5	4615.0	4658.2	4523.1	4011.7	3479.2	2457.5	1370.4
71°	3014.3	3055.3	3449.3	4133.5	4682.5	4716.8	4505.4	3866.7	3154.9	2024.7	1061.6
72.5°	2654.5	2760.8	3236.8	3938.6	4561.9	4563.0	4218.7	3524.6	2509.5	1264.2	533.6
75°	1433.5	1561.9	2372.3	2997.7	3519.1	3546.8	3245.7	2447.5	1214.4	327.7	129.5
77.5°	472.7	532.5	1063.8	1556.4	2207.3	2250.5	1984.8	1087.1	383.0	110.7	67.5
80°	296.7	303.3	359.8	654.2	981.9	1018.4	816.9	440.6	172.7	60.9	46.5
82.5°	49.8	59.8	169.4	192.6	346.5	274.5	186.0	224.7	80.8	27.7	39.9
85°	0.0	0.0	1.1	1.1	5.5	1.1	1.1	45.4	4.4	4.4	21.0
87.5°	0.0	0.0	1.1	1.1	1.1	1.1	1.1	1.1	0.0	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°	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8	1177.8
2.5°	1164.5	1155.7	1138.0	1119.2	1095.9	1076.0	1069.3	1055.0	1048.3	1042.8	1042.8
5°	1132.4	1116.9	1079.3	1040.6	1002.9	963.1	926.5	892.2	875.6	852.4	863.4
7.5°	1105.9	1079.3	1026.2	965.3	887.8	809.2	748.3	695.2	650.9	636.5	626.5
10°	1087.1	1053.8	976.4	883.4	770.5	658.7	564.6	477.1	426.2	395.2	395.2
12.5°	1084.8	1042.8	942.0	799.2	636.5	484.9	368.6	285.6	244.6	225.8	224.7
15°	1092.6	1041.7	911.0	722.9	513.6	336.5	230.3	193.7	183.8	181.5	181.5
17.5°	1099.2	1040.6	874.5	636.5	378.6	221.4	182.7	176.0	173.8	172.7	172.7
20°	1105.9	1035.0	832.4	539.1	267.9	180.4	170.5	167.2	166.0	164.9	164.9
22.5°	1114.7	1029.5	789.3	428.4	198.1	168.3	162.7	159.4	158.3	158.3	158.3
25°	1126.9	1026.2	736.1	324.3	170.5	159.4	153.9	151.7	151.7	150.5	150.5
27.5°	1150.2	1029.5	678.6	232.5	159.4	150.5	147.2	145.0	145.0	143.9	143.9
30°	1182.3	1039.5	606.6	181.5	150.5	141.7	138.4	137.3	136.2	136.2	136.2
32.5°	1227.6	1055.0	528.0	155.0	139.5	132.8	129.5	128.4	128.4	128.4	127.3
35°	1297.4	1087.1	431.7	141.7	129.5	122.9	119.6	119.6	119.6	118.4	119.6
37.5°	1403.6	1139.1	334.3	130.6	118.4	112.9	110.7	109.6	109.6	109.6	109.6
40°	1537.6	1223.2	243.5	120.7	108.5	102.9	100.7	99.6	98.5	98.5	98.5
42.5°	1710.3	1316.2	177.1	109.6	99.6	94.1	91.9	89.7	87.5	86.3	86.3
45°	1889.6	1426.9	138.4	100.7	90.8	86.3	84.1	80.8	77.5	74.2	74.2
47.5°	2063.4	1512.1	118.4	90.8	83.0	78.6	76.4	72.0	66.4	63.1	63.1
50°	2173.0	1538.7	106.3	81.9	75.3	72.0	68.6	63.1	55.3	52.0	52.0
52.5°	2207.3	1490.0	95.2	74.2	68.6	65.3	60.9	53.1	45.4	41.0	41.0
55°	2220.6	1395.9	84.1	68.6	62.0	57.6	52.0	44.3	36.5	32.1	32.1
57.5°	2204.0	1263.1	75.3	62.0	55.3	50.9	44.3	35.4	27.7	24.4	24.4
60°	2147.5	1070.4	67.5	55.3	48.7	43.2	36.5	27.7	21.0	16.6	17.7
62.5°	1994.8	828.0	58.7	46.5	42.1	36.5	28.8	21.0	13.3	11.1	11.1
65°	1751.2	573.4	49.8	38.7	35.4	29.9	22.1	14.4	7.7	6.6	6.6
67.5°	1422.5	370.8	38.7	32.1	29.9	24.4	16.6	8.9	4.4	4.4	3.3
70°	893.3	183.8	31.0	24.4	24.4	18.8	12.2	5.5	3.3	3.3	3.3
71°	632.1	125.1	27.7	22.1	22.1	17.7	11.1	4.4	3.3	3.3	3.3
72.5°	285.6	78.6	23.2	19.9	18.8	14.4	10.0	4.4	4.4	4.4	4.4
75°	89.7	43.2	16.6	15.5	15.5	12.2	8.9	5.5	5.5	5.5	5.5
77.5°	59.8	33.2	11.1	10.0	12.2	12.2	8.9	6.6	6.6	6.6	6.6
80°	48.7	17.7	6.6	6.6	8.9	11.1	8.9	6.6	7.7	6.6	6.6
82.5°	47.6	8.9	2.2	3.3	5.5	6.6	6.6	5.5	6.6	6.6	6.6
85°	19.9	2.2	1.1	2.2	2.2	3.3	3.3	4.4	5.5	5.5	5.5
87.5°	0.0	0.0	0.0	0.0	1.1	1.1	2.2	2.2	3.3	4.4	4.4
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)