

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: P401813

Luminaire Tested: **ENT-SA1F-730-U-SL4-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401813  
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-730-U-SL4-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 3000K, 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: 5818 lumens  
Efficiency: N/A  
Efficacy: 88.0 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

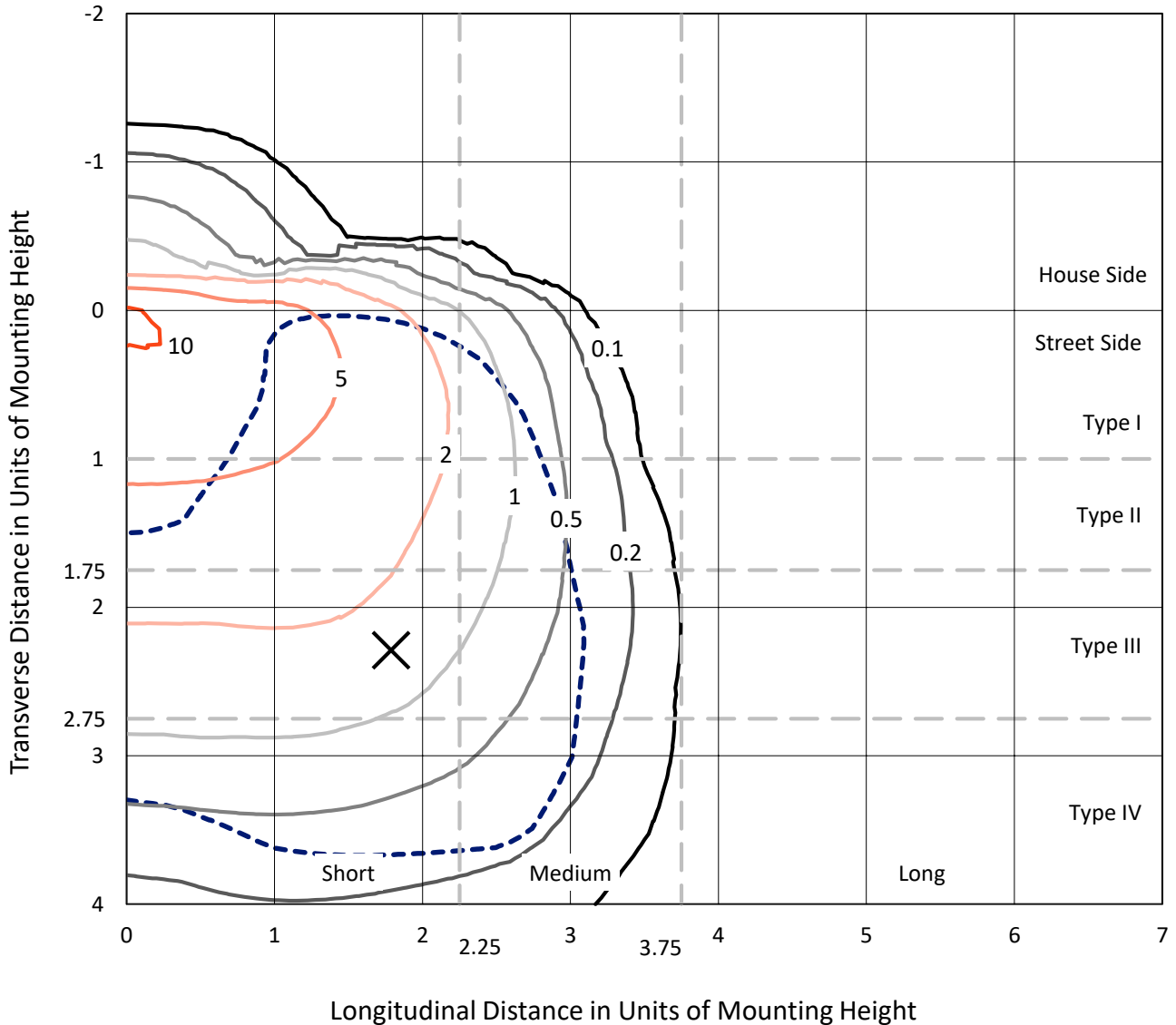


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

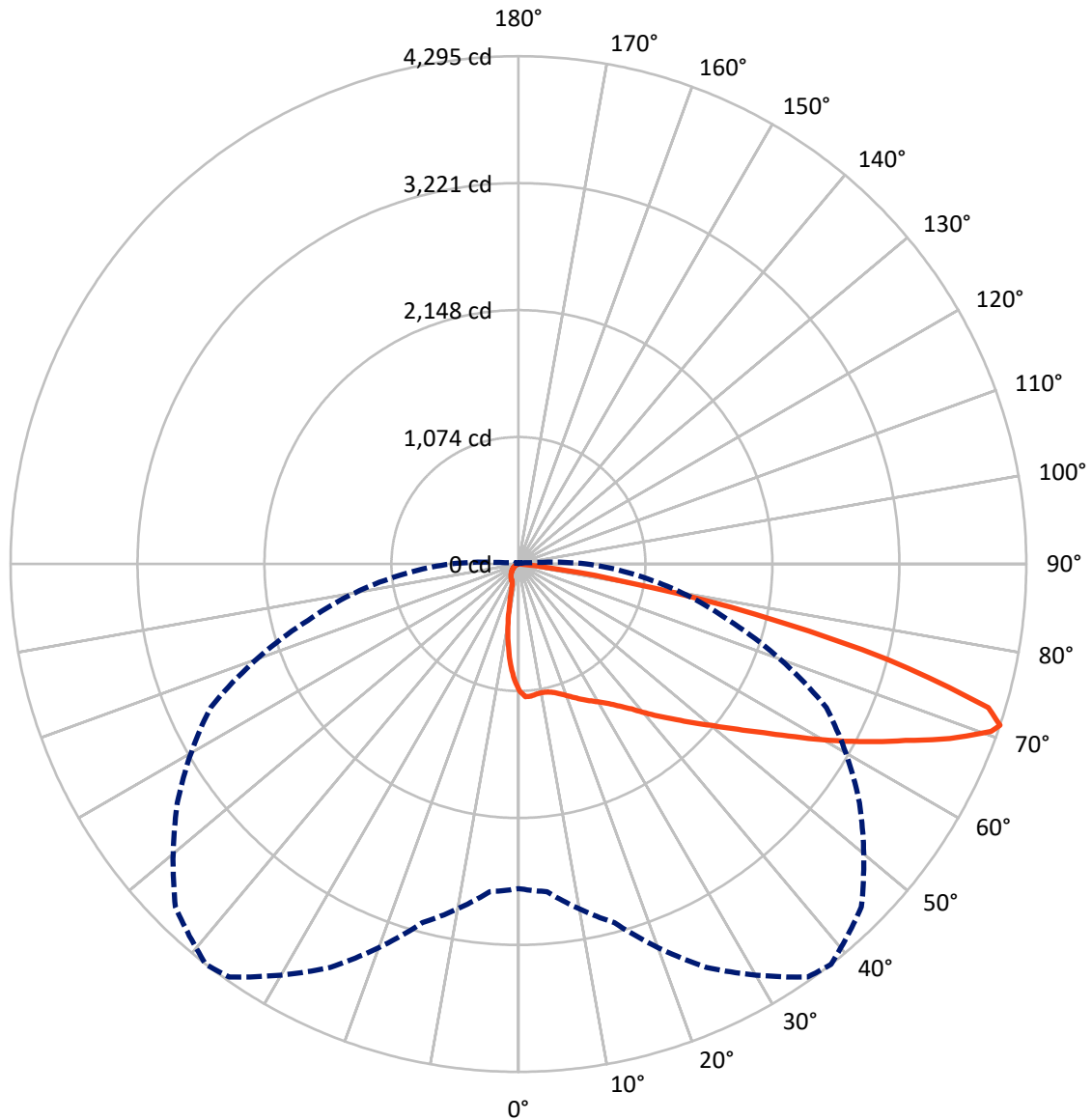


Based on 10 foot mounting height. Maximum calculated value = 11 fc  
 Type IV - Short - Semi-Cutoff

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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	497.0	0.0	497.0
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	5321.0	0.0	5321.0
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	5818.0	0.0	5818.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	90.6	1.6
10°-20°	219.3	3.8
20°-30°	351.7	6.0
30°-40°	535.0	9.2
40°-50°	833.9	14.3
50°-60°	1219.4	21.0
60°-70°	1564.0	26.9
70°-80°	956.0	16.4
80°-90°	48.0	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°	5818.0	100.0
0°-180°	5818.0	100.0



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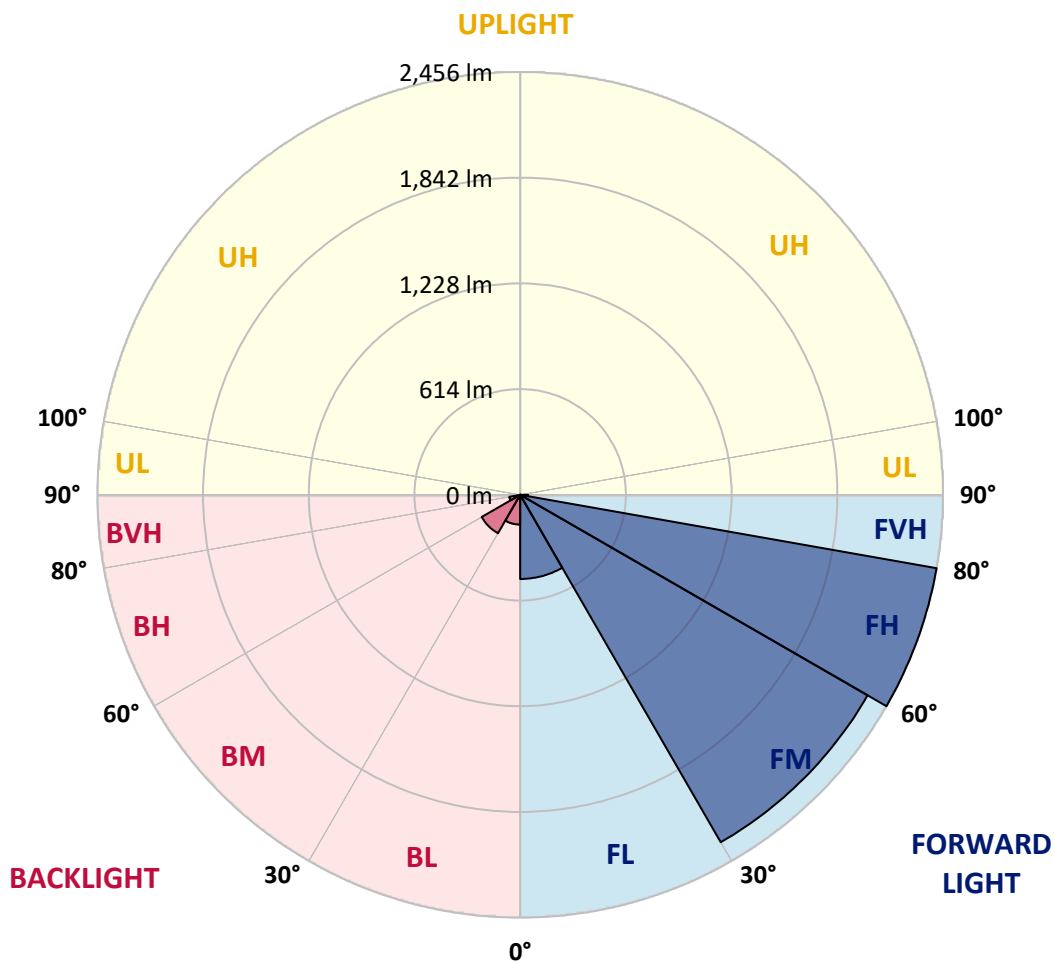
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	488.8	8.4			
FM	(30°-60°)	2330.2	40.1			
FH	(60°-80°)	2456.1	42.2			G2/5000
FVH	(80°-90°)	45.9	0.8			G1/100
BL	(0°-30°)	172.8	3.0	B1/500		
BM	(30°-60°)	258.1	4.4	B1/1000		
BH	(60°-80°)	63.9	1.1	B0/110		G0/110
BVH	(80°-90°)	2.1	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°	1072.6	1072.6	1072.6	1072.6	1072.6	1072.6	1072.6	1072.6	1072.6	1072.6	1072.6
2.5°	1136.1	1133.0	1136.1	1133.0	1127.0	1124.0	1119.9	1108.8	1098.8	1086.7	1068.5
5°	1138.1	1136.1	1136.1	1132.0	1125.0	1122.0	1117.9	1106.8	1093.7	1075.6	1048.4
7.5°	1127.0	1126.0	1124.0	1119.9	1111.9	1109.9	1106.8	1093.7	1080.6	1061.5	1028.2
10°	1108.8	1110.9	1109.9	1109.9	1106.8	1104.8	1102.8	1087.7	1073.6	1051.4	1016.1
12.5°	1091.7	1093.7	1098.8	1106.8	1109.9	1110.9	1110.9	1095.7	1078.6	1054.4	1018.1
15°	1080.6	1084.7	1098.8	1114.9	1124.0	1127.0	1130.0	1113.9	1093.7	1067.5	1029.2
17.5°	1077.6	1083.6	1110.9	1136.1	1153.2	1155.2	1155.2	1135.1	1113.9	1083.6	1042.3
20°	1087.7	1095.7	1131.0	1166.3	1187.5	1189.5	1185.5	1159.3	1134.1	1100.8	1053.4
22.5°	1117.9	1125.0	1165.3	1206.6	1226.8	1228.8	1219.7	1183.4	1156.2	1129.0	1068.5
25°	1170.3	1174.4	1217.7	1257.0	1268.1	1271.1	1256.0	1212.7	1181.4	1156.2	1089.7
27.5°	1239.9	1241.9	1281.2	1310.5	1312.5	1311.5	1295.3	1250.0	1218.7	1197.6	1122.0
30°	1312.5	1315.5	1347.8	1366.9	1358.8	1354.8	1340.7	1292.3	1264.1	1248.0	1168.3
32.5°	1380.0	1383.0	1418.3	1428.4	1410.3	1407.2	1397.2	1345.7	1321.5	1329.6	1234.9
35°	1446.5	1446.5	1486.9	1491.9	1475.8	1475.8	1475.8	1414.3	1410.3	1437.5	1327.6
37.5°	1506.0	1516.1	1558.4	1556.4	1553.4	1555.4	1561.5	1515.1	1529.2	1575.6	1449.6
40°	1556.4	1569.5	1626.0	1631.0	1644.1	1655.2	1664.3	1640.1	1673.4	1749.0	1605.8
42.5°	1601.8	1616.9	1689.5	1712.7	1749.0	1764.1	1781.2	1775.2	1848.8	1986.9	1805.4
45°	1660.2	1676.4	1751.0	1806.4	1856.8	1877.0	1915.3	1941.5	2063.5	2220.7	2021.1
47.5°	1737.9	1749.0	1817.5	1905.2	1973.8	2010.0	2069.5	2137.1	2285.2	2468.7	2213.7
50°	1843.7	1844.7	1896.1	2010.0	2111.9	2151.2	2254.0	2341.7	2527.2	2687.4	2352.8
52.5°	1960.6	1954.6	1994.9	2139.1	2268.1	2321.5	2442.5	2564.5	2751.0	2845.7	2415.3
55°	2071.5	2074.6	2099.8	2276.2	2464.7	2516.1	2669.3	2793.3	2955.6	2942.5	2449.5
57.5°	2199.6	2198.5	2230.8	2426.4	2694.5	2754.0	2914.3	3016.1	3079.6	3012.0	2455.6
60°	2320.5	2317.5	2366.9	2605.8	2939.5	3027.2	3171.3	3167.3	3203.6	3056.4	2450.6
62.5°	2428.4	2435.4	2522.1	2814.5	3213.6	3308.4	3381.0	3330.6	3340.7	3107.8	2388.1
65°	2559.4	2572.5	2712.6	3067.5	3552.4	3597.7	3625.9	3544.3	3443.5	3066.5	2198.5
67.5°	2724.7	2764.1	2961.6	3440.5	3905.2	3936.4	3937.4	3673.3	3439.4	2857.8	1848.8
70°	2790.3	2831.6	3146.1	3735.8	4202.5	4241.9	4118.9	3653.2	3168.3	2237.9	1248.0
71°	2744.9	2782.2	3141.1	3764.0	4264.0	4295.3	4102.7	3521.1	2872.9	1843.7	966.7
72.5°	2417.3	2514.1	2947.5	3586.6	4154.2	4155.2	3841.7	3209.6	2285.2	1151.2	485.9
75°	1305.4	1422.4	2160.2	2729.8	3204.6	3229.8	2955.6	2228.8	1105.8	298.4	117.9
77.5°	430.4	484.9	968.7	1417.3	2010.0	2049.4	1807.4	989.9	348.8	100.8	61.5
80°	270.2	276.2	327.6	595.8	894.1	927.4	743.9	401.2	157.3	55.4	42.3
82.5°	45.4	54.4	154.2	175.4	315.5	250.0	169.4	204.6	73.6	25.2	36.3
85°	0.0	0.0	1.0	1.0	5.0	1.0	1.0	41.3	4.0	4.0	19.2
87.5°	0.0	0.0	1.0	1.0	1.0	1.0	1.0	1.0	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°	1072.6	1072.6	1072.6	1072.6	1072.6	1072.6	1072.6	1072.6	1072.6	1072.6	1072.6
2.5°	1060.5	1052.4	1036.3	1019.1	998.0	979.8	973.8	960.7	954.6	949.6	949.6
5°	1031.2	1017.1	982.8	947.6	913.3	877.0	843.7	812.5	797.4	776.2	786.3
7.5°	1007.0	982.8	934.5	879.0	808.5	736.9	681.4	633.1	592.7	579.6	570.6
10°	989.9	959.7	889.1	804.4	701.6	599.8	514.1	434.5	388.1	359.9	359.9
12.5°	987.9	949.6	857.8	727.8	579.6	441.5	335.7	260.1	222.8	205.6	204.6
15°	994.9	948.6	829.6	658.3	467.7	306.4	209.7	176.4	167.3	165.3	165.3
17.5°	1001.0	947.6	796.4	579.6	344.8	201.6	166.3	160.3	158.3	157.3	157.3
20°	1007.0	942.5	758.0	490.9	243.9	164.3	155.2	152.2	151.2	150.2	150.2
22.5°	1015.1	937.5	718.7	390.1	180.4	153.2	148.2	145.2	144.2	144.2	144.2
25°	1026.2	934.5	670.3	295.4	155.2	145.2	140.1	138.1	138.1	137.1	137.1
27.5°	1047.4	937.5	617.9	211.7	145.2	137.1	134.1	132.1	132.1	131.0	131.0
30°	1076.6	946.6	552.4	165.3	137.1	129.0	126.0	125.0	124.0	124.0	124.0
32.5°	1117.9	960.7	480.8	141.1	127.0	121.0	117.9	116.9	116.9	116.9	115.9
35°	1181.4	989.9	393.1	129.0	117.9	111.9	108.9	108.9	108.9	107.9	108.9
37.5°	1278.2	1037.3	304.4	118.9	107.9	102.8	100.8	99.8	99.8	99.8	99.8
40°	1400.2	1113.9	221.8	109.9	98.8	93.7	91.7	90.7	89.7	89.7	89.7
42.5°	1557.4	1198.6	161.3	99.8	90.7	85.7	83.7	81.7	79.6	78.6	78.6
45°	1720.7	1299.4	126.0	91.7	82.7	78.6	76.6	73.6	70.6	67.5	67.5
47.5°	1879.0	1377.0	107.9	82.7	75.6	71.6	69.6	65.5	60.5	57.5	57.5
50°	1978.8	1401.2	96.8	74.6	68.5	65.5	62.5	57.5	50.4	47.4	47.4
52.5°	2010.0	1356.8	86.7	67.5	62.5	59.5	55.4	48.4	41.3	37.3	37.3
55°	2022.1	1271.1	76.6	62.5	56.5	52.4	47.4	40.3	33.3	29.2	29.2
57.5°	2007.0	1150.2	68.5	56.5	50.4	46.4	40.3	32.3	25.2	22.2	22.2
60°	1955.6	974.8	61.5	50.4	44.4	39.3	33.3	25.2	19.2	15.1	16.1
62.5°	1816.5	754.0	53.4	42.3	38.3	33.3	26.2	19.2	12.1	10.1	10.1
65°	1594.7	522.2	45.4	35.3	32.3	27.2	20.2	13.1	7.1	6.0	6.0
67.5°	1295.3	337.7	35.3	29.2	27.2	22.2	15.1	8.1	4.0	4.0	3.0
70°	813.5	167.3	28.2	22.2	22.2	17.1	11.1	5.0	3.0	3.0	3.0
71°	575.6	113.9	25.2	20.2	20.2	16.1	10.1	4.0	3.0	3.0	3.0
72.5°	260.1	71.6	21.2	18.1	17.1	13.1	9.1	4.0	4.0	4.0	4.0
75°	81.7	39.3	15.1	14.1	14.1	11.1	8.1	5.0	5.0	5.0	5.0
77.5°	54.4	30.2	10.1	9.1	11.1	11.1	8.1	6.0	6.0	6.0	6.0
80°	44.4	16.1	6.0	6.0	8.1	10.1	8.1	6.0	7.1	6.0	6.0
82.5°	43.3	8.1	2.0	3.0	5.0	6.0	6.0	5.0	6.0	6.0	6.0
85°	18.1	2.0	1.0	2.0	2.0	3.0	3.0	4.0	5.0	5.0	5.0
87.5°	0.0	0.0	0.0	0.0	1.0	1.0	2.0	2.0	3.0	4.0	4.0
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)