

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: P401559

Luminaire Tested: **ENV-SA1D-827-U-SL3-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401559  
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: ENV-SA1D-827-U-SL3-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 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: 3478 lumens  
Efficiency: N/A  
Efficacy: 80.7 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

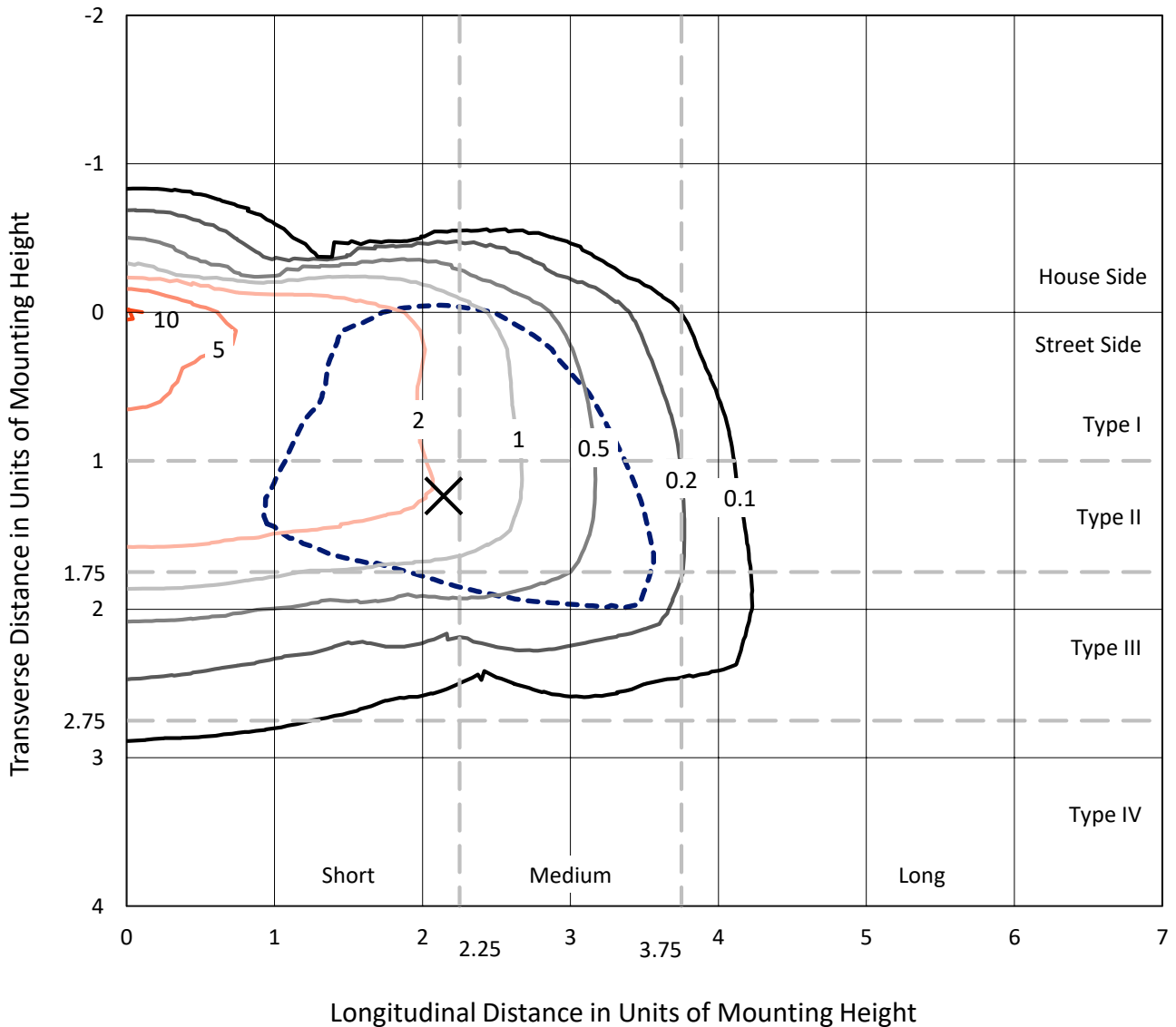


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

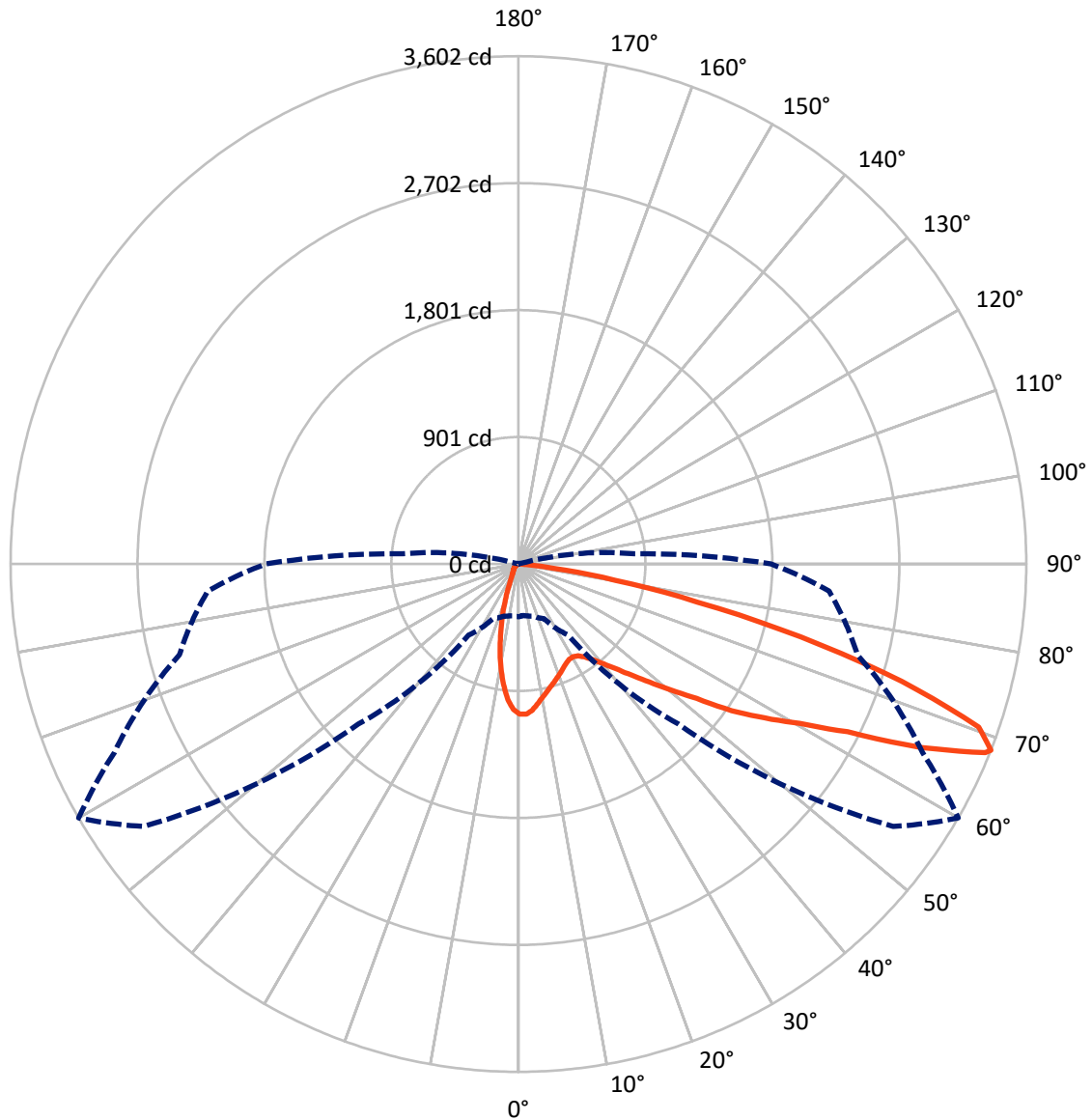


Based on 10 foot mounting height. Maximum calculated value = 10.6 fc  
 Type III - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



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

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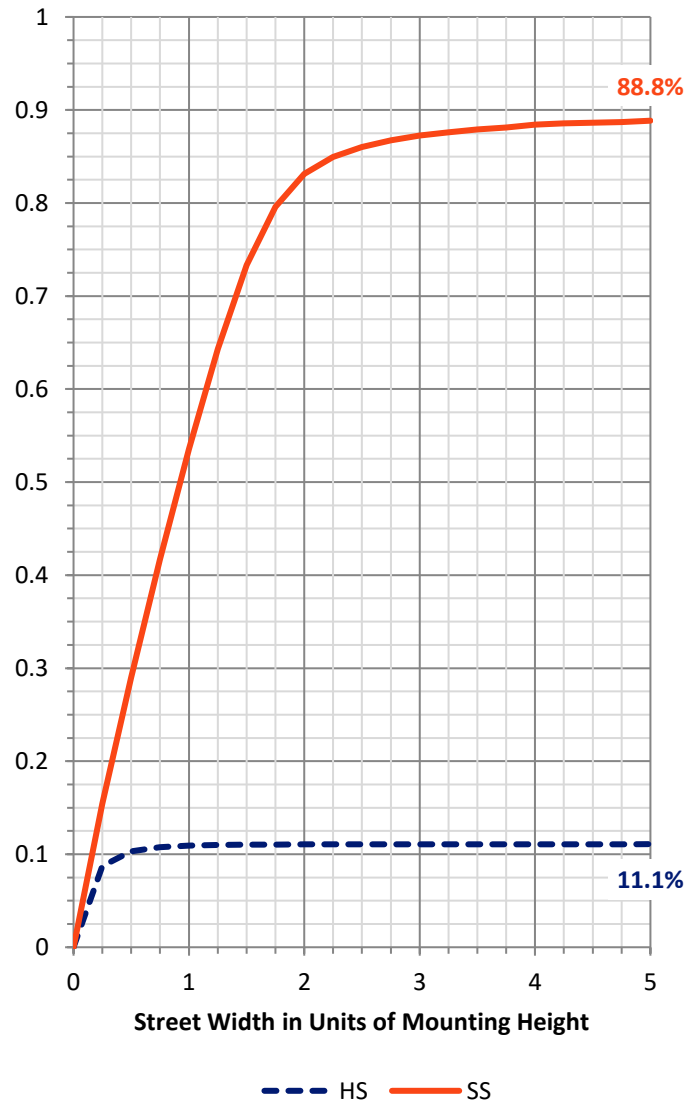
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	388.9	0.0	388.9
	% Fixture	11.2	0.0	11.2
<b>Street Side</b>	Lumens	3089.1	0.0	3089.1
	% Fixture	88.8	0.0	88.8
<b>Total</b>	Lumens	3478.0	0.0	3478.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	86.4	2.5
10°-20°	176.2	5.1
20°-30°	232.0	6.7
30°-40°	320.1	9.2
40°-50°	485.3	14.0
50°-60°	783.1	22.5
60°-70°	930.2	26.7
70°-80°	438.5	12.6
80°-90°	26.2	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°	3478.0	100.0
0°-180°	3478.0	100.0



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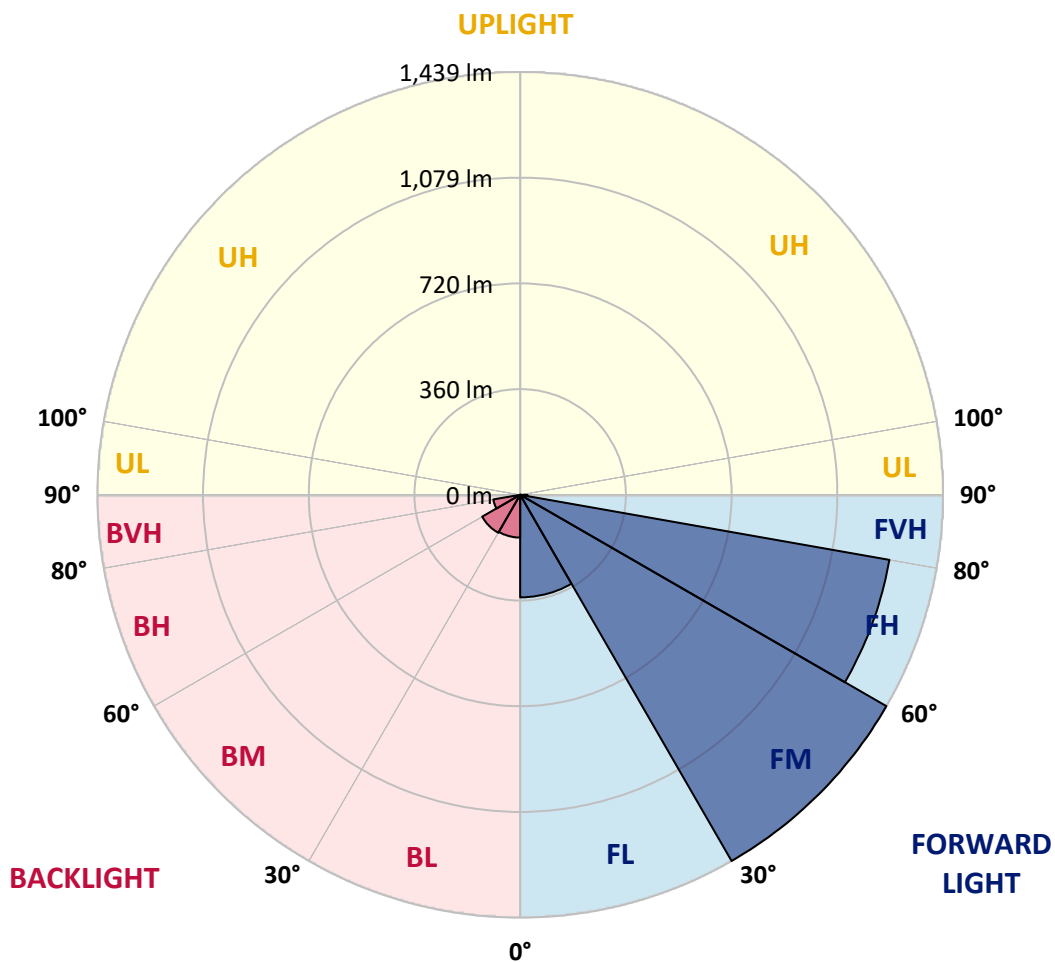
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	349.1	10.0			
FM	(30°-60°)	1439.0	41.4			
FH	(60°-80°)	1276.0	36.7			G1/1800
FVH	(80°-90°)	25.1	0.7			G1/100
BL	(0°-30°)	145.5	4.2	B1/500		
BM	(30°-60°)	149.5	4.3	B0/220		
BH	(60°-80°)	92.8	2.7	B0/110		G0/110
BVH	(80°-90°)	1.1	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-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	1064.6	1064.6	1064.6	1064.6	1064.6	1064.6	1064.6	1064.6	1064.6	1064.6	1064.6
2.5°	1055.1	1052.8	1059.3	1061.0	1062.8	1066.3	1065.8	1066.3	1066.9	1065.8	1058.7
5°	983.1	987.3	993.2	1000.8	1008.5	1026.2	1033.3	1040.4	1045.1	1048.6	1042.2
7.5°	912.3	920.6	925.3	939.5	951.3	969.6	984.9	997.3	1009.1	1022.1	1015.6
10°	855.7	858.6	862.8	875.7	893.4	921.2	941.2	956.6	970.7	992.6	987.3
12.5°	800.2	802.0	810.2	824.4	842.7	876.9	903.5	921.2	937.1	964.3	964.8
15°	759.5	760.1	765.4	778.4	799.6	836.2	870.4	889.9	912.3	945.4	947.1
17.5°	732.9	732.3	733.5	741.8	761.8	796.7	838.0	861.0	887.5	930.0	931.8
20°	724.7	723.5	721.1	719.4	731.7	761.8	808.5	833.8	865.1	918.8	919.4
22.5°	731.7	729.4	724.1	714.0	717.6	737.1	776.0	806.7	845.1	912.9	908.8
25°	748.9	748.9	741.8	725.8	717.6	721.7	753.0	782.5	825.0	910.0	901.1
27.5°	777.2	776.0	766.6	750.0	734.7	723.5	738.8	766.6	810.2	913.5	897.6
30°	811.4	807.9	797.8	786.0	767.2	743.0	741.8	762.4	803.2	924.7	899.9
32.5°	843.9	843.9	839.7	828.5	810.2	778.4	760.1	776.6	812.0	943.0	907.6
35°	884.0	883.4	884.6	880.5	864.5	830.9	801.4	809.6	839.2	973.7	925.9
37.5°	915.9	916.5	926.5	933.6	926.5	891.1	860.4	860.4	885.2	1019.7	957.2
40°	947.1	948.3	967.2	987.9	989.6	961.3	931.8	931.2	945.4	1076.4	1005.6
42.5°	975.5	980.2	1007.3	1042.7	1063.4	1044.5	1022.7	1015.6	1022.7	1161.9	1084.1
45°	1005.6	1015.0	1052.8	1104.1	1137.8	1138.3	1130.1	1121.8	1125.4	1258.1	1189.1
47.5°	1044.5	1055.1	1102.3	1165.5	1229.2	1245.7	1253.4	1250.5	1241.0	1379.7	1324.8
50°	1107.7	1117.7	1161.9	1232.8	1320.1	1379.7	1400.4	1403.9	1391.5	1514.2	1478.8
52.5°	1215.1	1221.0	1262.3	1318.3	1416.3	1527.8	1582.1	1582.7	1555.0	1671.8	1645.3
55°	1330.1	1345.5	1393.9	1458.8	1559.7	1684.8	1820.5	1835.3	1749.7	1809.9	1766.8
57.5°	1331.9	1346.7	1426.9	1551.4	1762.7	1928.5	2049.5	2060.1	1965.1	1920.8	1881.3
60°	1191.5	1199.1	1310.7	1493.0	1835.3	2257.2	2310.3	2294.4	2116.2	2035.3	2024.7
62.5°	840.9	844.5	976.6	1216.8	1674.8	2414.2	2707.5	2621.9	2331.0	2204.1	2239.5
65°	529.3	527.6	582.4	774.2	1245.7	2259.6	3198.5	3135.9	2725.8	2415.4	2407.1
67.5°	390.7	381.2	396.0	455.6	711.7	1773.9	3288.7	3570.8	3101.7	2503.3	2261.9
68°	374.7	366.5	381.8	427.8	615.5	1605.7	3245.1	3602.1	3161.3	2489.1	2212.4
70°	318.1	310.4	323.4	358.2	428.4	1042.2	2863.3	3463.4	3215.6	2368.7	1949.8
72.5°	226.0	230.1	264.4	307.5	362.9	534.6	2108.5	2844.4	2765.9	2106.7	1483.6
75°	134.0	141.6	186.5	247.9	333.4	352.9	1360.2	2067.8	2029.4	1458.8	803.7
77.5°	47.2	50.2	92.6	165.2	275.0	279.7	757.7	1300.0	1209.2	596.0	237.2
80°	17.1	17.1	34.2	92.1	177.6	213.6	402.5	694.0	477.4	154.6	65.5
82.5°	3.0	3.0	7.7	31.3	78.5	113.9	187.1	246.7	141.6	34.2	32.5
85°	0.0	0.0	0.0	0.0	1.2	1.2	54.9	55.5	26.0	4.7	14.2
87.5°	0.0	0.0	0.0	0.0	0.0	0.6	1.2	1.2	1.2	1.2	1.8
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°	1064.6	1064.6	1064.6	1064.6	1064.6	1064.6	1064.6	1064.6	1064.6	1064.6	1064.6
2.5°	1055.7	1054.5	1048.1	1036.3	1026.2	1009.7	1006.7	990.8	984.9	980.2	984.9
5°	1037.4	1030.9	1009.1	982.6	946.6	904.1	879.3	845.1	838.0	819.1	830.3
7.5°	1007.3	992.6	951.9	894.6	828.5	763.6	714.0	666.2	625.5	611.4	607.2
10°	975.5	954.8	886.4	797.8	702.2	602.5	528.7	459.7	421.3	385.3	384.2
12.5°	945.4	914.1	815.0	691.6	558.3	439.6	344.0	271.5	226.0	201.2	207.7
15°	921.2	879.3	743.0	585.4	416.6	283.3	194.7	148.1	132.2	124.5	125.7
17.5°	897.6	842.1	673.3	474.5	296.8	174.7	126.3	110.4	105.6	103.9	102.7
20°	876.3	806.1	600.2	374.1	195.9	121.0	103.9	98.6	96.8	95.6	95.6
22.5°	855.1	768.3	527.0	277.4	134.0	99.1	93.2	90.9	89.7	87.9	87.9
25°	835.6	731.7	453.8	194.1	102.7	88.5	84.4	82.0	79.7	77.9	77.9
27.5°	820.9	704.0	385.9	137.5	86.2	79.7	75.5	71.4	68.5	66.1	66.1
30°	811.4	676.9	320.4	103.9	76.7	70.8	65.5	60.2	55.5	52.5	51.9
32.5°	806.1	654.4	259.7	85.0	68.5	62.0	55.5	49.6	44.3	40.7	40.7
35°	808.5	636.7	198.9	72.0	62.0	54.3	47.2	40.1	35.4	32.5	31.9
37.5°	823.8	626.7	148.1	63.7	55.5	47.2	40.1	33.0	28.3	26.0	25.4
40°	852.7	629.1	112.7	57.8	50.8	41.3	33.0	27.1	23.0	20.7	20.7
42.5°	911.1	646.2	89.1	53.1	45.4	35.4	27.7	22.4	18.9	17.1	16.5
45°	988.5	678.6	73.2	49.0	40.1	30.1	23.6	18.9	15.3	13.6	13.6
47.5°	1105.3	730.6	63.1	44.8	34.8	25.4	19.5	15.3	11.8	10.6	10.0
50°	1240.4	803.2	55.5	40.1	30.7	21.2	16.5	11.8	9.4	7.7	7.7
52.5°	1378.5	884.0	50.2	36.0	26.6	18.3	13.0	8.9	6.5	5.3	5.3
55°	1505.4	951.9	44.8	32.5	22.4	15.3	10.6	7.1	4.7	3.5	3.5
57.5°	1628.1	1013.8	38.9	28.3	18.3	12.4	8.3	5.3	3.5	2.4	2.4
60°	1782.2	1094.1	33.6	24.2	14.8	10.0	6.5	4.1	2.4	1.8	1.2
62.5°	1968.1	1152.5	28.3	19.5	11.8	7.7	4.7	3.0	1.8	0.6	0.6
65°	2036.5	1075.2	23.6	15.9	9.4	5.9	3.5	2.4	1.2	0.6	0.6
67.5°	1845.3	866.3	18.9	12.4	7.1	4.1	3.0	1.8	1.2	0.6	0.6
68°	1792.2	823.8	18.3	11.8	6.5	4.1	2.4	1.8	0.6	0.6	0.0
70°	1513.1	661.5	14.8	8.9	5.3	3.5	2.4	1.2	0.6	0.6	0.0
72.5°	1121.8	456.2	10.6	5.9	3.5	2.4	1.8	1.2	0.6	0.6	0.0
75°	591.9	177.6	8.3	4.7	3.0	2.4	1.8	1.8	1.2	0.6	0.6
77.5°	170.0	56.1	6.5	3.5	3.0	3.0	3.0	2.4	2.4	1.8	1.2
80°	49.6	18.3	4.1	2.4	3.0	3.0	3.5	3.0	3.0	2.4	2.4
82.5°	26.6	7.1	2.4	1.8	1.8	2.4	3.0	2.4	1.8	1.2	0.6
85°	11.2	2.4	1.8	1.2	1.2	1.2	1.2	1.2	1.2	0.6	0.6
87.5°	0.6	1.2	1.2	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6
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)