

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: P401447

Luminaire Tested: **ENT-SA1D-727-U-T4W-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401447  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-18)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1D-727-U-T4W-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3521 lumens  
Efficiency: N/A  
Efficacy: 81.7 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Full Cutoff  
BUG Rating: B0 - U0 - G1

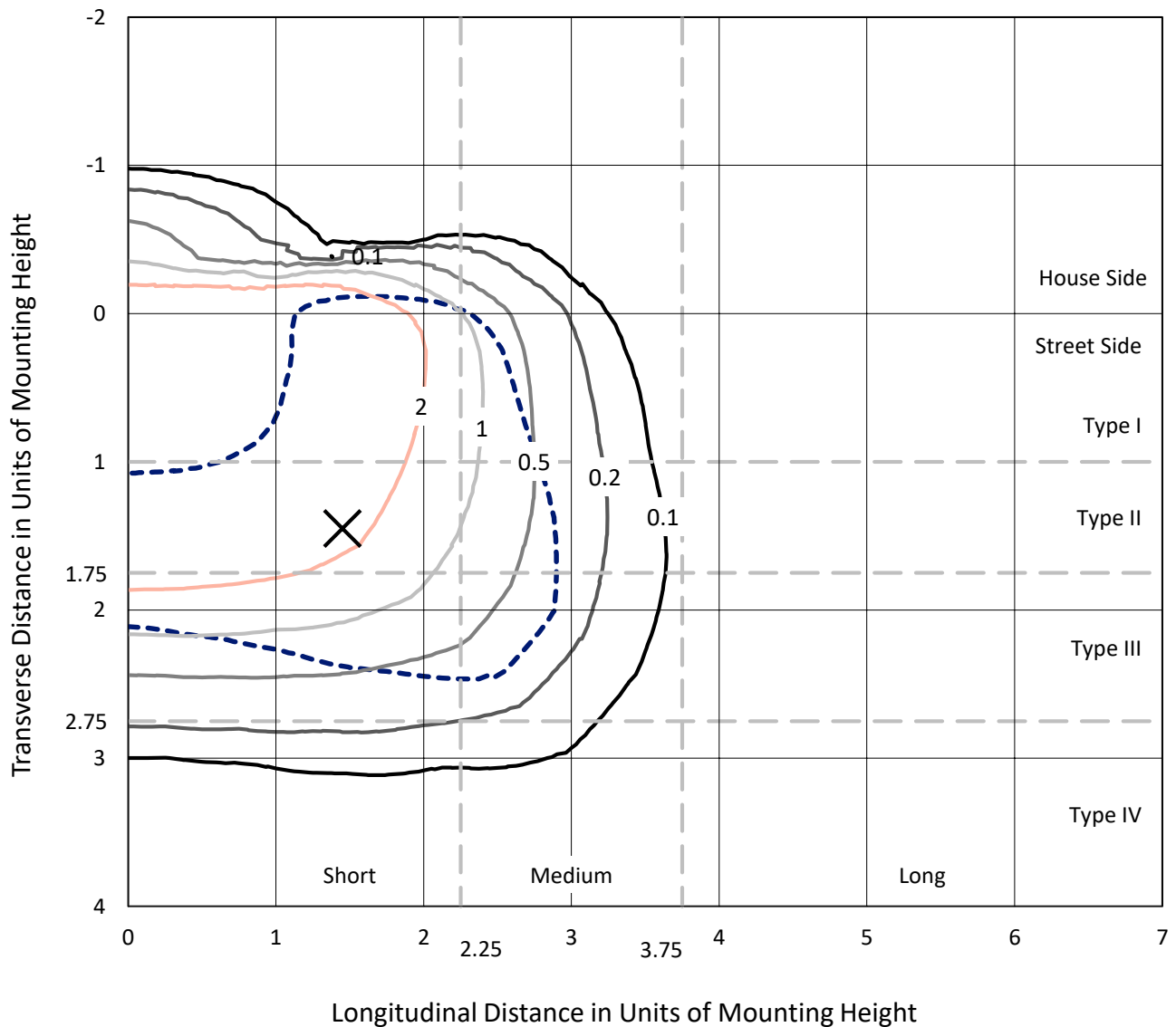
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

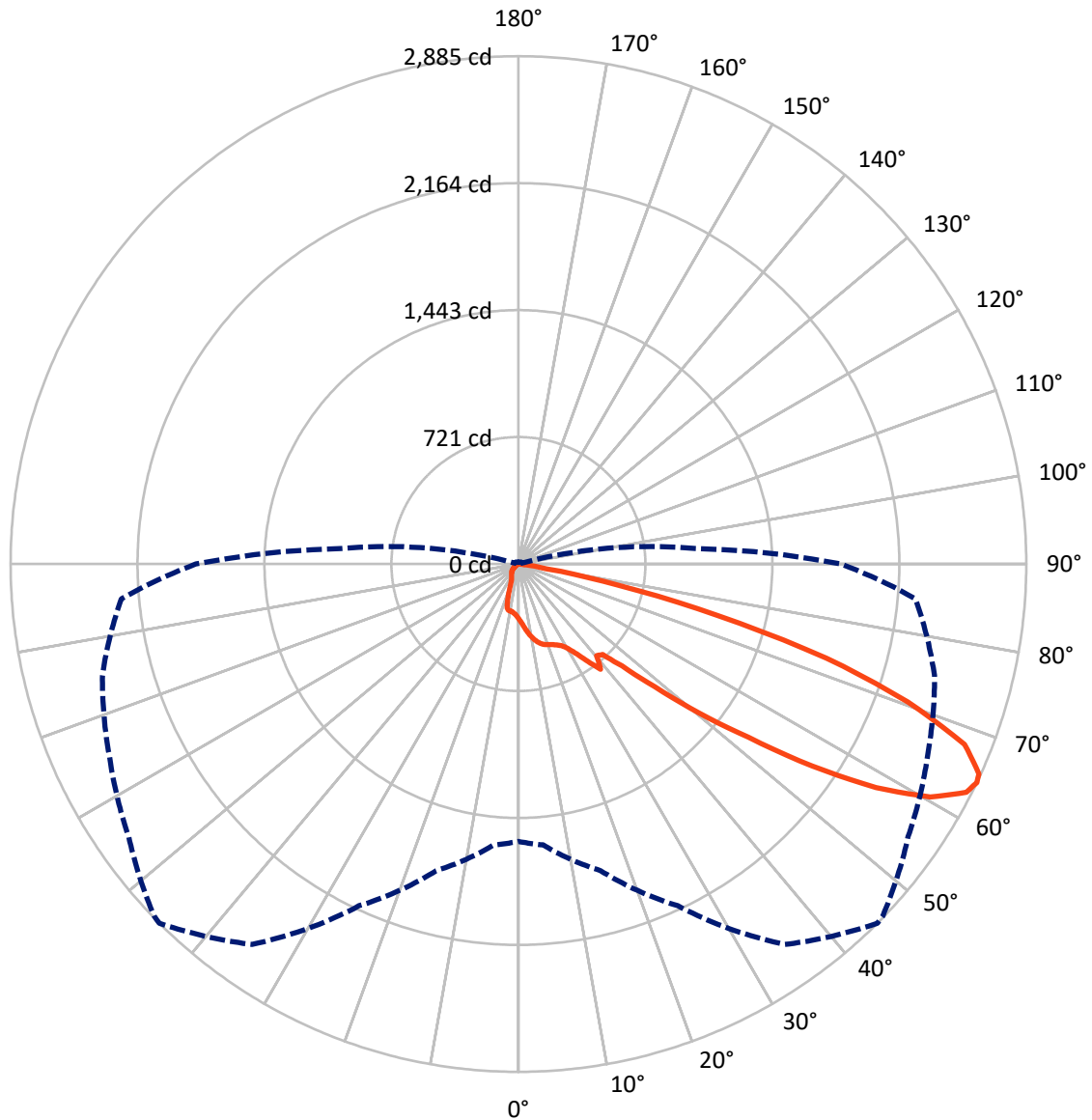
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.6 fc  
 Type III - Short - Full Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 64-Deg Vertical

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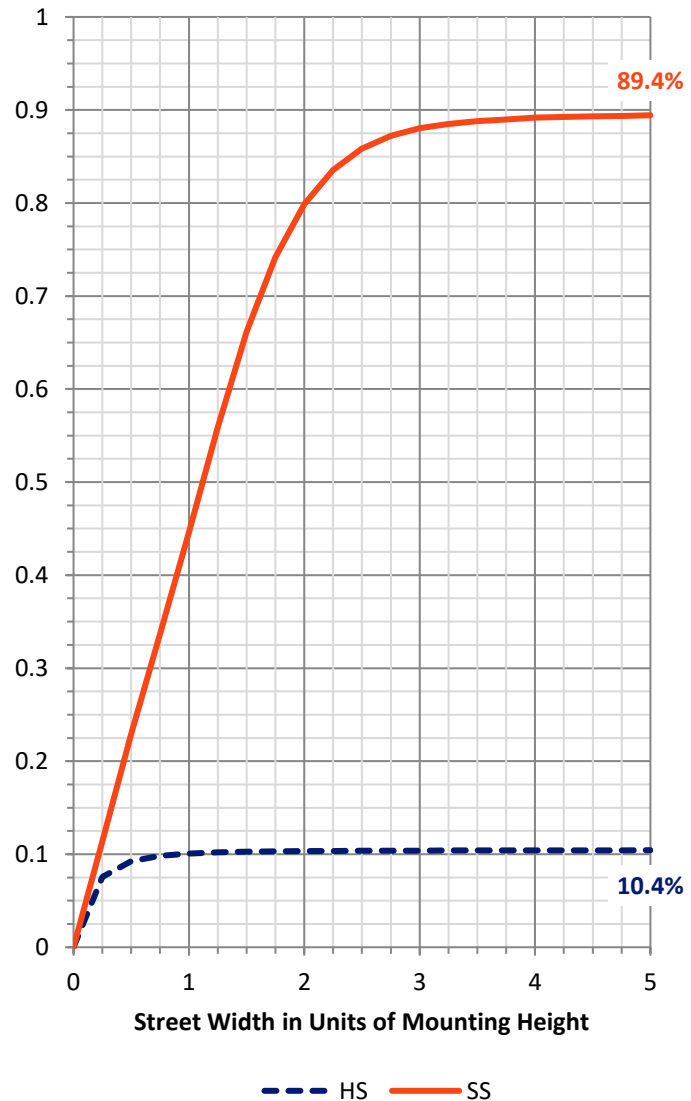
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	371.5	0.0	371.5
	% Fixture	10.6	0.0	10.6
<b>Street Side</b>	Lumens	3149.5	0.0	3149.5
	% Fixture	89.4	0.0	89.4
<b>Total</b>	Lumens	3521.0	0.0	3521.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	31.6	0.9
10°-20°	98.7	2.8
20°-30°	160.7	4.6
30°-40°	255.2	7.2
40°-50°	486.2	13.8
50°-60°	1001.9	28.5
60°-70°	1118.9	31.8
70°-80°	353.4	10.0
80°-90°	14.4	0.4
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°	3521.0	100.0
0°-180°	3521.0	100.0



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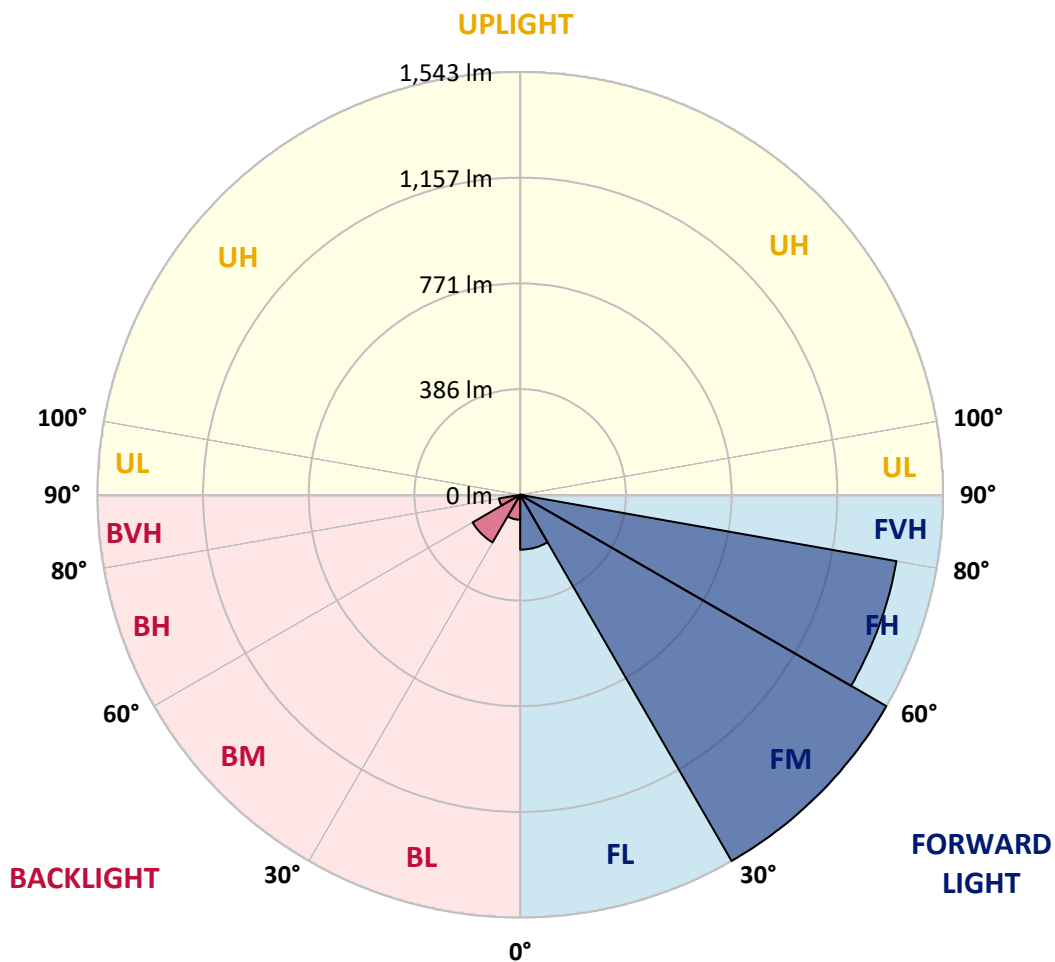
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	200.0	5.7			
FM	(30°-60°)	1542.8	43.8			
FH	(60°-80°)	1394.0	39.6			G1/1800
FVH	(80°-90°)	12.7	0.4			G1/100
BL	(0°-30°)	91.0	2.6	B0/110		
BM	(30°-60°)	200.5	5.7	B0/220		
BH	(60°-80°)	78.3	2.2	B0/110		G0/110
BVH	(80°-90°)	1.7	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1
2.5°	344.3	345.6	343.6	341.0	338.3	333.6	334.2	328.2	323.5	320.1	314.8
5°	387.9	387.3	383.2	377.2	371.2	362.4	361.1	351.7	341.6	330.9	320.8
7.5°	432.2	430.2	426.2	418.1	406.7	395.3	392.0	378.5	363.8	347.7	330.2
10°	468.5	467.1	462.4	453.7	440.3	422.8	422.8	404.0	384.6	365.1	344.3
12.5°	498.0	496.7	491.3	480.6	464.4	449.0	447.0	430.2	408.7	385.9	360.4
15°	516.1	514.8	508.7	496.7	482.6	468.5	466.5	450.4	430.9	404.7	375.2
17.5°	520.8	519.5	514.8	504.0	493.3	481.2	478.5	464.4	447.7	420.8	390.6
20°	518.8	516.1	513.4	504.7	496.0	487.9	486.6	476.5	461.8	438.9	406.7
22.5°	513.4	510.8	508.7	502.7	498.0	497.3	496.0	490.0	480.6	461.1	430.9
25°	511.4	509.4	507.4	503.4	502.7	509.4	508.7	508.1	504.0	487.3	455.7
27.5°	522.8	522.2	517.5	510.8	514.1	525.5	526.2	529.5	526.9	516.1	492.0
30°	563.1	559.8	549.0	534.2	543.0	557.7	560.4	571.2	571.8	573.2	540.3
32.5°	617.5	612.1	594.0	575.2	580.6	608.1	608.7	625.5	661.1	638.9	566.5
35°	655.1	648.3	620.8	610.8	637.6	681.2	687.3	721.5	724.2	643.6	564.4
37.5°	760.4	750.4	700.0	638.9	665.1	759.1	765.8	759.8	703.4	636.9	593.3
40°	901.4	892.0	847.0	744.3	670.5	684.6	687.9	706.1	716.8	683.9	685.9
42.5°	1084.6	1072.5	1026.2	900.7	754.4	702.7	709.4	746.3	816.8	832.2	911.4
45°	1271.9	1265.1	1218.2	1082.6	907.4	826.2	829.6	874.5	1000.7	1098.0	1165.1
47.5°	1455.1	1456.4	1416.2	1301.4	1130.2	1040.3	1036.3	1094.7	1254.4	1323.5	1392.0
50°	1713.5	1712.1	1640.3	1569.2	1435.6	1328.9	1322.2	1355.1	1508.8	1534.3	1640.3
52.5°	2007.5	2006.1	1898.1	1864.5	1808.1	1636.3	1654.4	1626.2	1737.0	1782.6	1933.0
55°	2147.1	2135.0	2089.3	2131.6	2198.7	2026.2	2023.6	1916.2	2002.8	2041.7	2182.0
57.5°	2133.0	2137.7	2181.3	2321.6	2541.7	2397.4	2401.4	2202.1	2252.4	2276.6	2379.3
60°	2053.1	2056.4	2157.8	2391.4	2712.8	2688.0	2673.9	2469.2	2436.3	2426.3	2475.3
62.5°	1824.9	1826.2	1990.7	2290.7	2711.5	2855.8	2842.4	2657.1	2554.5	2490.0	2400.8
64°	1576.6	1602.1	1803.4	2142.4	2638.3	2885.3	2878.0	2702.8	2565.2	2447.1	2263.8
65°	1372.5	1410.8	1654.4	2010.8	2555.8	2875.3	2866.5	2694.7	2550.4	2366.5	2122.2
67.5°	936.3	956.4	1175.2	1582.6	2241.0	2733.7	2731.0	2591.4	2390.0	2044.4	1665.2
70°	552.4	567.1	728.9	1104.7	1722.2	2348.4	2384.0	2333.6	1984.0	1468.5	1060.4
72.5°	171.8	180.5	321.5	613.4	1128.9	1829.6	1875.9	1839.7	1444.3	917.5	587.9
75°	64.4	67.1	106.0	266.5	561.8	1169.8	1183.9	1226.2	879.9	484.6	257.1
77.5°	35.6	36.2	52.4	100.0	247.0	574.5	587.9	582.6	467.8	228.9	81.9
80°	17.5	18.1	25.5	44.3	96.0	162.4	192.6	254.4	165.1	112.8	26.2
82.5°	6.0	5.4	11.4	20.1	32.2	43.6	49.0	70.5	69.1	61.7	9.4
85°	0.0	0.0	0.7	0.7	0.7	1.3	1.3	8.7	17.5	20.1	2.7
87.5°	0.0	0.0	0.0	0.7	0.7	0.7	0.7	0.7	0.7	1.3	1.3
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°	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1	312.1
2.5°	312.1	310.7	306.1	301.4	298.0	294.0	293.3	290.6	289.9	289.9	289.9
5°	315.4	311.4	302.7	295.3	288.6	282.6	279.9	277.2	275.2	274.5	274.5
7.5°	322.8	316.8	302.7	292.0	281.9	274.5	270.5	267.8	265.8	265.8	265.8
10°	333.6	324.2	306.7	292.0	279.9	270.5	264.4	260.4	257.7	257.1	257.7
12.5°	347.0	334.9	313.4	295.3	281.2	269.1	256.4	232.9	217.5	208.7	207.4
15°	359.7	345.6	320.8	300.0	283.2	256.4	210.1	173.8	149.7	142.3	140.9
17.5°	373.8	359.1	330.9	306.7	275.8	206.7	149.7	119.5	114.8	116.1	116.1
20°	391.3	373.8	341.6	313.4	237.6	147.0	109.4	105.4	106.7	109.4	109.4
22.5°	411.4	392.6	356.4	309.4	181.2	107.4	100.0	100.7	102.0	104.7	104.7
25°	437.6	418.1	372.5	279.2	126.2	94.0	94.6	95.3	97.3	100.0	100.7
27.5°	476.5	453.0	392.0	234.2	95.3	87.3	87.9	89.9	91.9	95.3	95.3
30°	518.1	489.3	409.4	180.5	83.2	79.9	80.5	82.6	85.9	88.6	89.9
32.5°	536.3	510.8	412.8	123.5	77.2	73.8	72.5	74.5	77.2	79.9	80.5
35°	546.3	535.6	396.7	89.3	72.5	68.5	65.8	65.1	65.8	67.8	67.8
37.5°	596.0	588.6	364.4	76.5	67.8	63.8	59.7	56.4	55.0	54.4	55.0
40°	691.3	675.2	322.2	70.5	63.8	59.1	53.7	48.3	43.6	41.6	41.6
42.5°	901.4	820.2	261.8	66.4	59.7	54.4	46.3	38.9	33.6	32.2	32.2
45°	1127.6	1000.0	196.7	63.1	55.7	49.0	38.9	30.9	26.2	24.8	24.8
47.5°	1345.0	1132.9	137.6	59.1	51.0	43.0	32.2	24.8	21.5	20.8	20.8
50°	1573.2	1248.4	96.0	54.4	46.3	36.9	26.2	20.1	18.1	18.1	18.1
52.5°	1795.4	1333.6	70.5	49.7	40.3	30.9	22.1	18.1	16.8	16.8	16.8
55°	1963.2	1366.5	53.7	43.6	34.2	26.2	20.1	17.5	16.1	15.4	15.4
57.5°	2075.2	1339.0	43.6	36.2	28.9	22.8	18.1	16.1	14.8	14.1	14.1
60°	2072.6	1247.7	34.9	29.5	23.5	19.5	16.8	14.8	13.4	12.8	12.8
62.5°	1951.1	1099.4	27.5	23.5	19.5	16.8	14.8	13.4	12.1	11.4	10.7
64°	1832.3	1007.4	23.5	20.1	17.5	15.4	13.4	12.1	10.7	9.4	9.4
65°	1703.4	920.2	21.5	18.1	15.4	14.1	12.8	11.4	9.4	8.1	8.1
67.5°	1295.3	681.2	17.5	14.1	12.1	11.4	10.1	8.7	6.7	5.4	5.4
70°	841.0	441.0	14.8	11.4	10.1	10.1	9.4	7.4	5.4	4.7	4.0
72.5°	430.9	219.5	12.1	9.4	8.7	8.7	8.1	6.0	4.7	4.0	3.4
75°	182.6	89.3	10.1	8.1	7.4	6.7	6.0	5.4	4.0	3.4	3.4
77.5°	63.8	33.6	9.4	8.1	6.0	5.4	5.4	5.4	5.4	4.7	4.0
80°	21.5	12.8	6.0	6.0	6.7	7.4	7.4	6.7	7.4	6.0	4.7
82.5°	8.7	4.7	2.0	2.7	4.7	5.4	6.0	6.0	6.0	4.7	4.0
85°	2.0	1.3	1.3	2.0	2.0	2.7	2.7	3.4	3.4	2.7	2.7
87.5°	1.3	1.3	1.3	1.3	1.3	1.3	2.0	1.3	2.0	2.0	2.0
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)