

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: P401807

Luminaire Tested: **ENT-SA1F-727-U-T4W-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401807  
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-SA1F-727-U-T4W-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 70 CRI, 2700K, 1200mA 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: 4856 lumens  
Efficiency: N/A  
Efficacy: 73.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type III - Short - Full Cutoff  
BUG Rating: B1 - U0 - G2

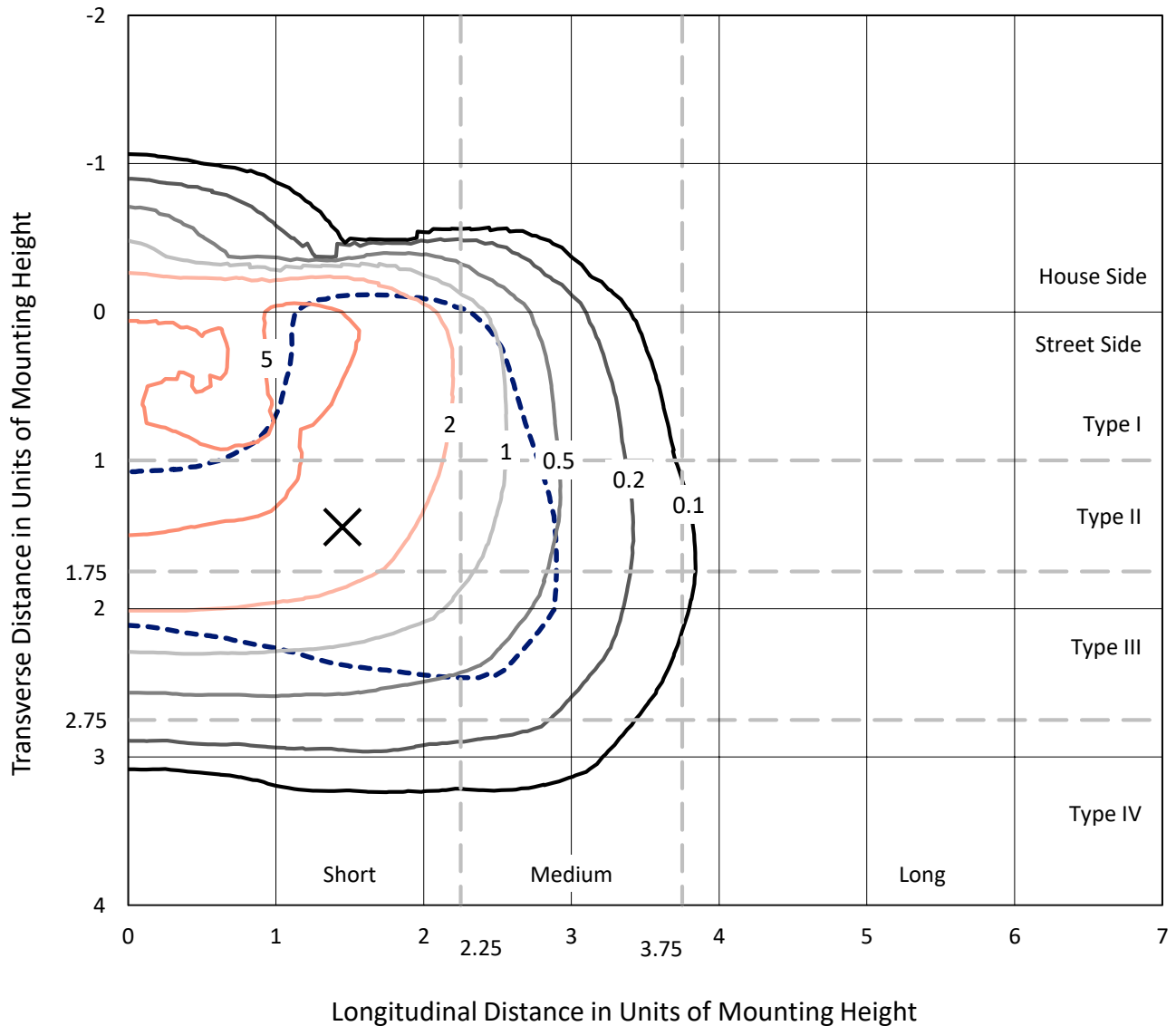
Input Watts (W): 66.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

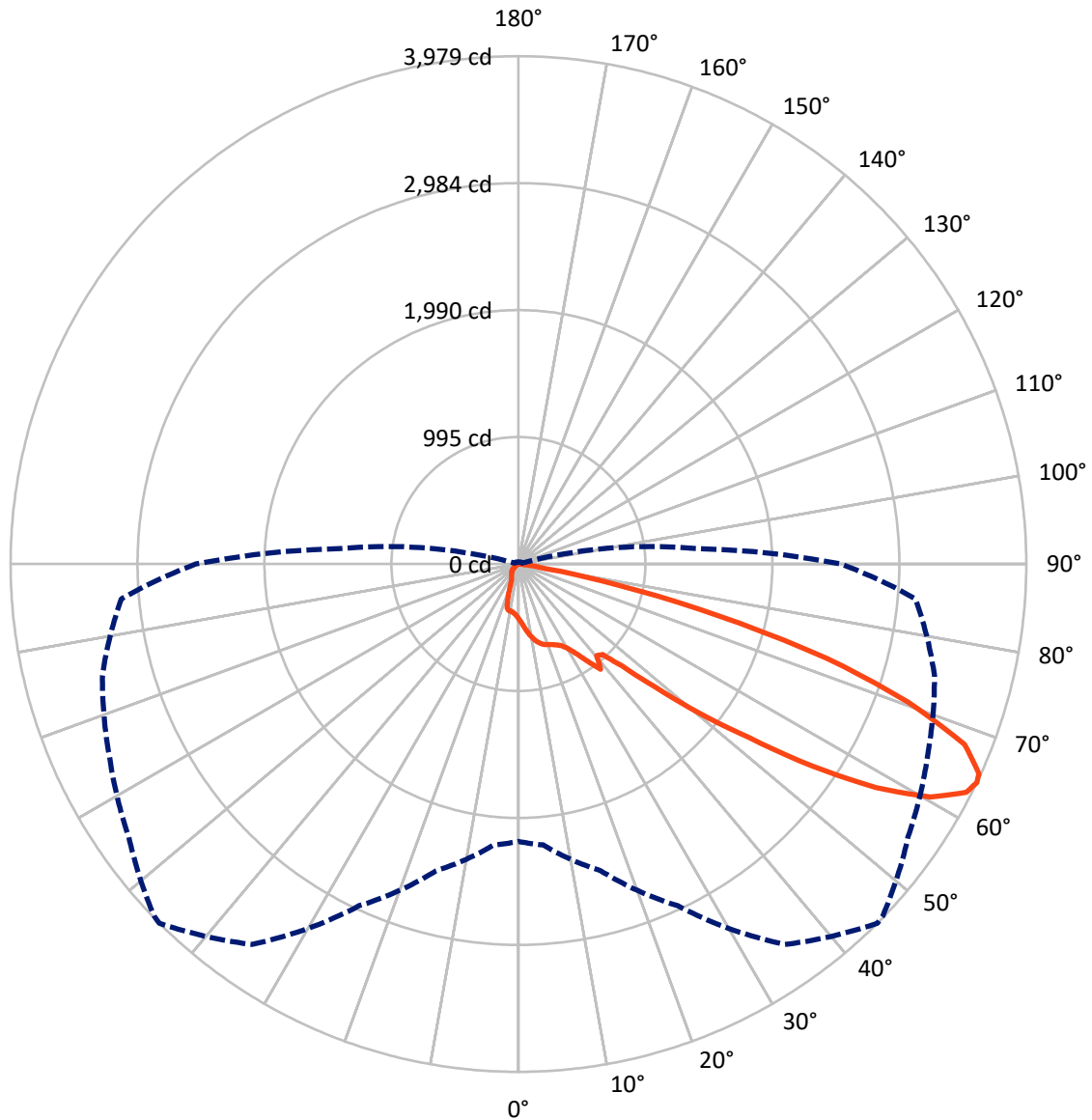
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.4 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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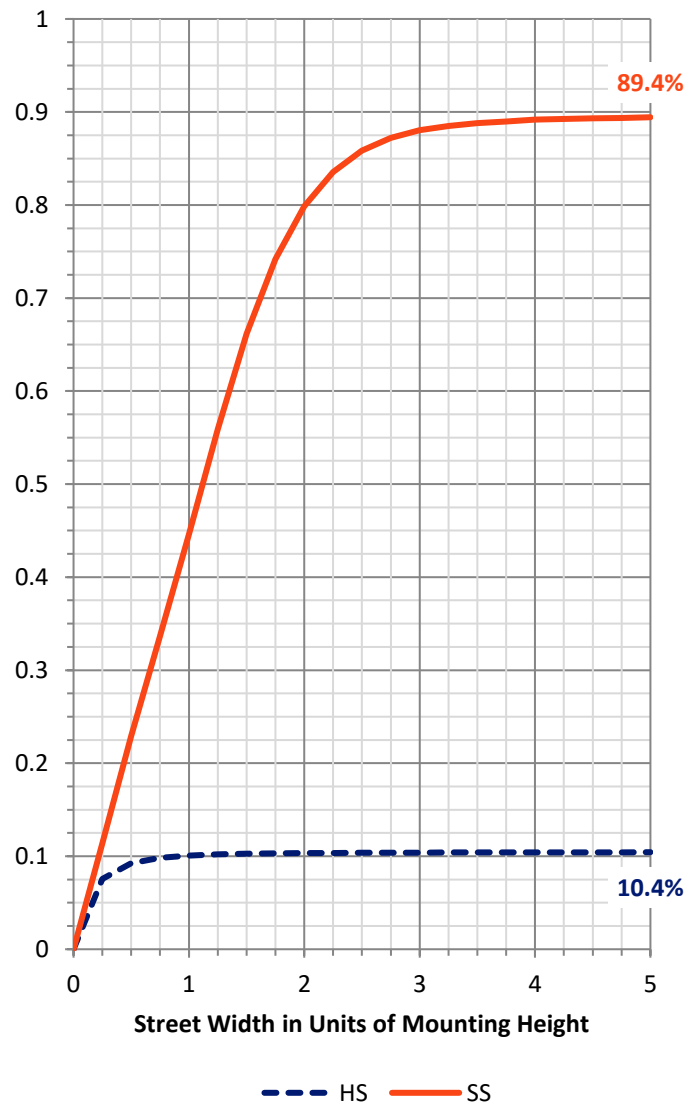
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	512.4	0.0	512.4
	% Fixture	10.6	0.0	10.6
<b>Street Side</b>	Lumens	4343.6	0.0	4343.6
	% Fixture	89.4	0.0	89.4
<b>Total</b>	Lumens	4856.0	0.0	4856.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	43.6	0.9
10°-20°	136.1	2.8
20°-30°	221.6	4.6
30°-40°	352.0	7.2
40°-50°	670.5	13.8
50°-60°	1381.7	28.5
60°-70°	1543.2	31.8
70°-80°	487.4	10.0
80°-90°	19.8	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°	4856.0	100.0
0°-180°	4856.0	100.0



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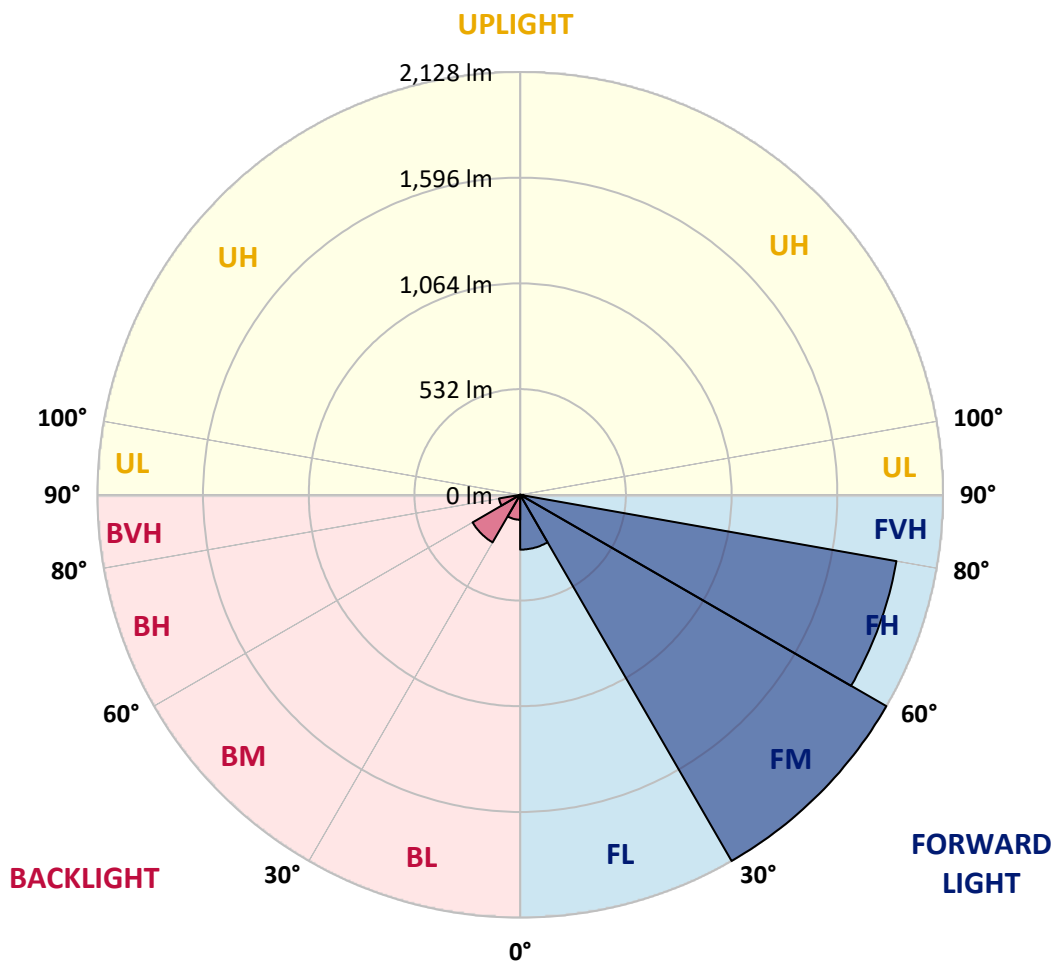
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	275.8	5.7			
FM	(30°-60°)	2127.7	43.8			
FH	(60°-80°)	1922.6	39.6			G2/5000
FVH	(80°-90°)	17.5	0.4			G1/100
BL	(0°-30°)	125.5	2.6	B1/500		
BM	(30°-60°)	276.5	5.7	B1/1000		
BH	(60°-80°)	108.0	2.2	B0/110		G0/110
BVH	(80°-90°)	2.4	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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4
2.5°	474.9	476.7	473.9	470.2	466.5	460.0	461.0	452.6	446.2	441.5	434.1
5°	535.0	534.1	528.5	520.2	511.9	499.8	498.0	485.0	471.2	456.3	442.5
7.5°	596.1	593.3	587.8	576.7	560.9	545.2	540.6	522.1	501.7	479.5	455.4
10°	646.1	644.2	637.8	625.7	607.2	583.2	583.2	557.2	530.4	503.5	474.9
12.5°	686.8	685.0	677.6	662.8	640.5	619.3	616.5	593.3	563.7	532.2	497.1
15°	711.8	710.0	701.6	685.0	665.5	646.1	643.3	621.1	594.3	558.2	517.4
17.5°	718.3	716.4	710.0	695.2	680.3	663.7	660.0	640.5	617.4	580.4	538.7
20°	715.5	711.8	708.1	696.1	684.0	672.9	671.1	657.2	636.8	605.4	560.9
22.5°	708.1	704.4	701.6	693.3	686.8	685.9	684.0	675.7	662.8	635.9	594.3
25°	705.3	702.6	699.8	694.2	693.3	702.6	701.6	700.7	695.2	672.0	628.5
27.5°	721.1	720.1	713.7	704.4	709.0	724.8	725.7	730.3	726.6	711.8	678.5
30°	776.6	772.0	757.2	736.8	748.8	769.2	772.9	787.7	788.6	790.5	745.1
32.5°	851.6	844.2	819.2	793.3	800.7	838.6	839.6	862.7	911.8	881.2	781.2
35°	903.4	894.2	856.2	842.3	879.4	939.5	947.9	995.1	998.8	887.7	778.5
37.5°	1048.7	1034.9	965.4	881.2	917.3	1046.9	1056.2	1047.8	970.1	878.4	818.3
40°	1243.1	1230.2	1168.2	1026.5	924.7	944.2	948.8	973.8	988.6	943.2	946.0
42.5°	1495.8	1479.2	1415.3	1242.2	1040.4	969.1	978.4	1029.3	1126.5	1147.8	1257.0
45°	1754.1	1744.8	1680.0	1493.1	1251.5	1139.5	1144.1	1206.1	1380.1	1514.3	1606.9
47.5°	2006.8	2008.6	1953.1	1794.8	1558.8	1434.7	1429.2	1509.7	1730.0	1825.4	1919.8
50°	2363.2	2361.3	2262.3	2164.1	1979.9	1832.8	1823.5	1868.9	2080.8	2116.0	2262.3
52.5°	2768.6	2766.7	2617.7	2571.4	2493.7	2256.7	2281.7	2242.8	2395.6	2458.5	2665.8
55°	2961.1	2944.5	2881.5	2939.8	3032.4	2794.5	2790.8	2642.7	2762.1	2815.8	3009.3
57.5°	2941.7	2948.2	3008.3	3201.8	3505.4	3306.4	3311.9	3037.0	3106.4	3139.8	3281.4
60°	2831.5	2836.2	2975.9	3298.1	3741.4	3707.2	3687.7	3405.4	3360.1	3346.2	3413.8
62.5°	2516.8	2518.7	2745.4	3159.2	3739.6	3938.6	3920.1	3664.6	3523.0	3434.1	3311.0
64°	2174.3	2209.5	2487.2	2954.6	3638.7	3979.3	3969.1	3727.6	3537.8	3374.9	3122.2
65°	1892.9	1945.7	2281.7	2773.2	3524.8	3965.4	3953.4	3716.4	3517.4	3263.8	2926.9
67.5°	1291.3	1319.0	1620.8	2182.7	3090.7	3770.1	3766.4	3573.9	3296.2	2819.5	2296.5
70°	761.8	782.2	1005.2	1523.6	2375.2	3238.8	3287.9	3218.4	2736.2	2025.3	1462.5
72.5°	237.0	249.0	443.4	846.0	1556.9	2523.3	2587.2	2537.2	1992.0	1265.3	810.9
75°	88.9	92.6	146.3	367.5	774.8	1613.4	1632.8	1691.1	1213.5	668.3	354.5
77.5°	49.1	50.0	72.2	137.9	340.6	792.3	810.9	803.5	645.2	315.6	112.9
80°	24.1	25.0	35.2	61.1	132.4	224.0	265.7	350.8	227.7	155.5	36.1
82.5°	8.3	7.4	15.7	27.8	44.4	60.2	67.6	97.2	95.3	85.2	13.0
85°	0.0	0.0	0.9	0.9	0.9	1.9	1.9	12.0	24.1	27.8	3.7
87.5°	0.0	0.0	0.0	0.9	0.9	0.9	0.9	0.9	0.9	1.9	1.9
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°	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4	430.4
2.5°	430.4	428.6	422.1	415.6	411.0	405.4	404.5	400.8	399.9	399.9	399.9
5°	435.1	429.5	417.5	407.3	398.0	389.7	386.0	382.3	379.5	378.6	378.6
7.5°	445.2	436.9	417.5	402.7	388.8	378.6	373.0	369.3	366.6	366.6	366.6
10°	460.0	447.1	423.0	402.7	386.0	373.0	364.7	359.1	355.4	354.5	355.4
12.5°	478.6	461.9	432.3	407.3	387.8	371.2	353.6	321.2	299.9	287.9	286.0
15°	496.1	476.7	442.5	413.8	390.6	353.6	289.7	239.7	206.4	196.2	194.4
17.5°	515.6	495.2	456.3	423.0	380.4	285.1	206.4	164.8	158.3	160.1	160.1
20°	539.6	515.6	471.2	432.3	327.7	202.7	150.9	145.3	147.2	150.9	150.9
22.5°	567.4	541.5	491.5	426.7	249.9	148.1	137.9	138.8	140.7	144.4	144.4
25°	603.5	576.7	513.7	385.1	174.0	129.6	130.5	131.4	134.2	137.9	138.8
27.5°	657.2	624.8	540.6	323.0	131.4	120.3	121.3	124.0	126.8	131.4	131.4
30°	714.6	674.8	564.6	249.0	114.8	110.2	111.1	113.9	118.5	122.2	124.0
32.5°	739.6	704.4	569.3	170.3	106.4	101.8	100.0	102.7	106.4	110.2	111.1
35°	753.5	738.7	547.1	123.1	100.0	94.4	90.7	89.8	90.7	93.5	93.5
37.5°	822.0	811.8	502.6	105.5	93.5	87.9	82.4	77.8	75.9	75.0	75.9
40°	953.4	931.2	444.3	97.2	87.9	81.5	74.1	66.6	60.2	57.4	57.4
42.5°	1243.1	1131.1	361.0	91.6	82.4	75.0	63.9	53.7	46.3	44.4	44.4
45°	1555.1	1379.2	271.2	87.0	76.8	67.6	53.7	42.6	36.1	34.2	34.2
47.5°	1855.0	1562.5	189.8	81.5	70.3	59.2	44.4	34.2	29.6	28.7	28.7
50°	2169.7	1721.7	132.4	75.0	63.9	50.9	36.1	27.8	25.0	25.0	25.0
52.5°	2476.1	1839.2	97.2	68.5	55.5	42.6	30.5	25.0	23.1	23.1	23.1
55°	2707.5	1884.6	74.1	60.2	47.2	36.1	27.8	24.1	22.2	21.3	21.3
57.5°	2862.1	1846.7	60.2	50.0	39.8	31.5	25.0	22.2	20.4	19.4	19.4
60°	2858.4	1720.8	48.1	40.7	32.4	26.8	23.1	20.4	18.5	17.6	17.6
62.5°	2690.8	1516.2	38.0	32.4	26.8	23.1	20.4	18.5	16.7	15.7	14.8
64°	2527.0	1389.4	32.4	27.8	24.1	21.3	18.5	16.7	14.8	13.0	13.0
65°	2349.3	1269.1	29.6	25.0	21.3	19.4	17.6	15.7	13.0	11.1	11.1
67.5°	1786.5	939.5	24.1	19.4	16.7	15.7	13.9	12.0	9.3	7.4	7.4
70°	1159.8	608.1	20.4	15.7	13.9	13.9	13.0	10.2	7.4	6.5	5.6
72.5°	594.3	302.7	16.7	13.0	12.0	12.0	11.1	8.3	6.5	5.6	4.6
75°	251.8	123.1	13.9	11.1	10.2	9.3	8.3	7.4	5.6	4.6	4.6
77.5°	87.9	46.3	13.0	11.1	8.3	7.4	7.4	7.4	7.4	6.5	5.6
80°	29.6	17.6	8.3	8.3	9.3	10.2	10.2	9.3	10.2	8.3	6.5
82.5°	12.0	6.5	2.8	3.7	6.5	7.4	8.3	8.3	8.3	6.5	5.6
85°	2.8	1.9	1.9	2.8	2.8	3.7	3.7	4.6	4.6	3.7	3.7
87.5°	1.9	1.9	1.9	1.9	1.9	1.9	2.8	1.9	2.8	2.8	2.8
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)