

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: P401933

Luminaire Tested: **ENT-SA1F-827-U-T4W-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401933  
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-827-U-T4W-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 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: 4268 lumens  
Efficiency: N/A  
Efficacy: 64.6 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 - G1

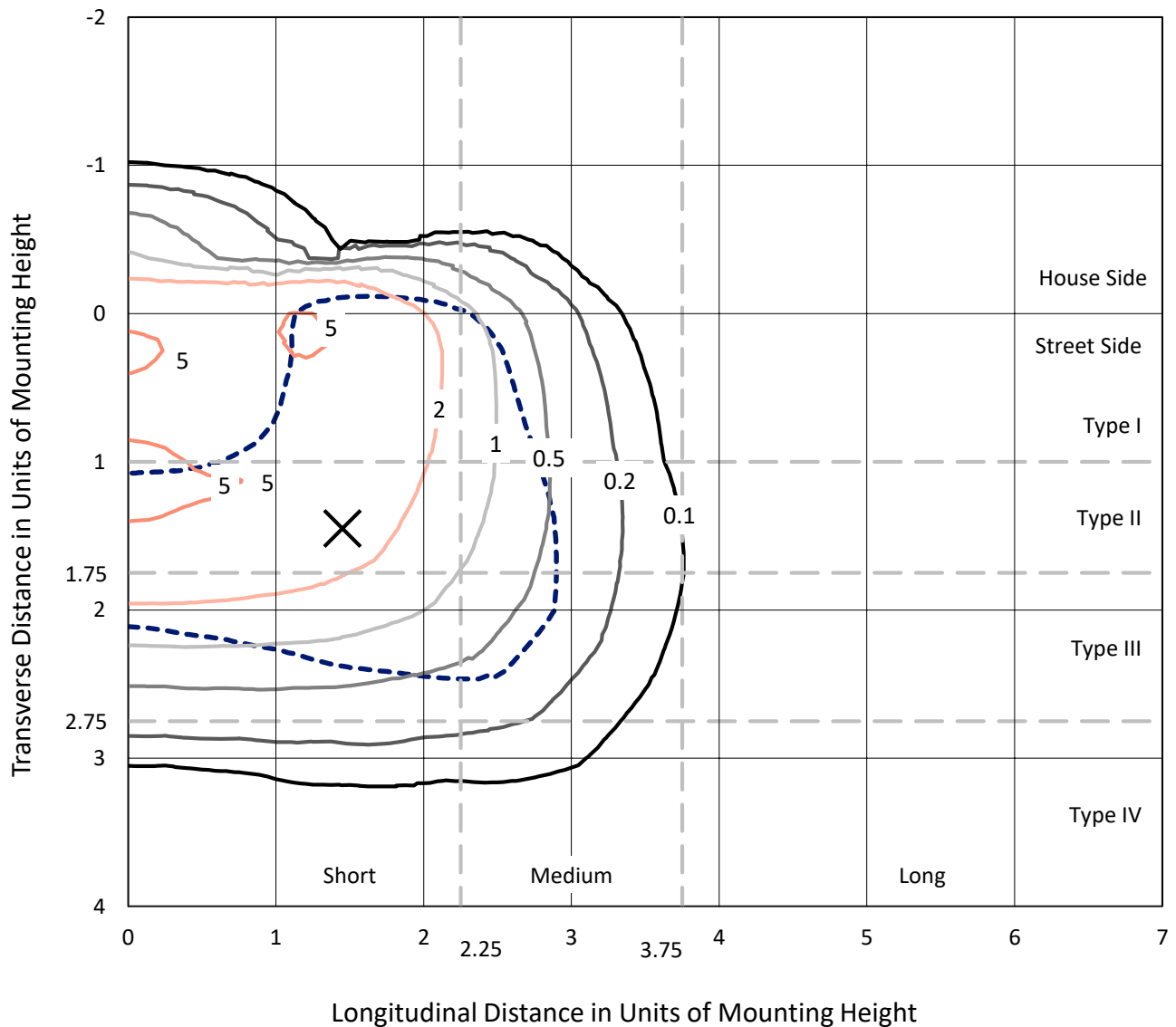
Input Watts (W): 66.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

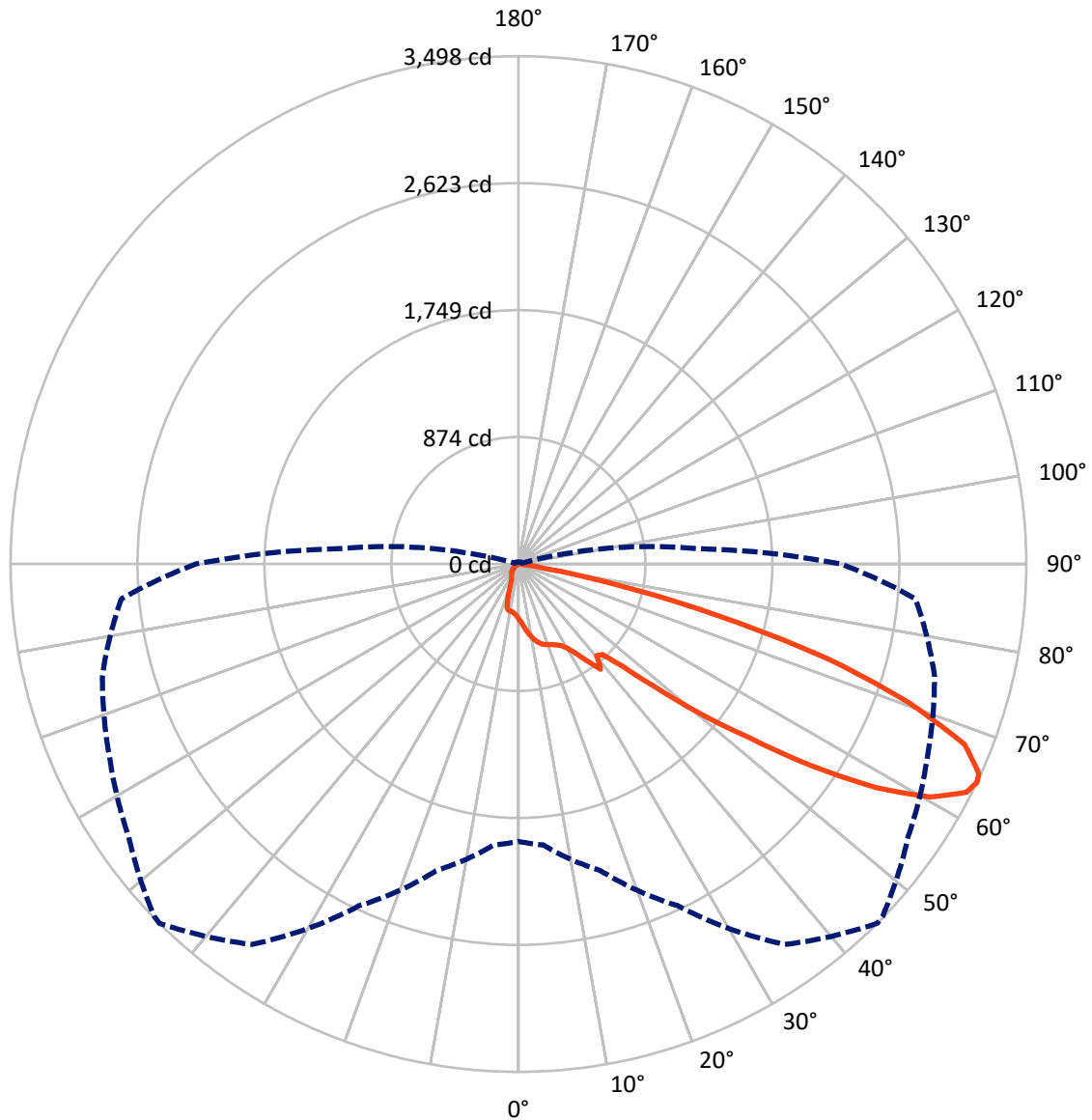
✕ Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.6 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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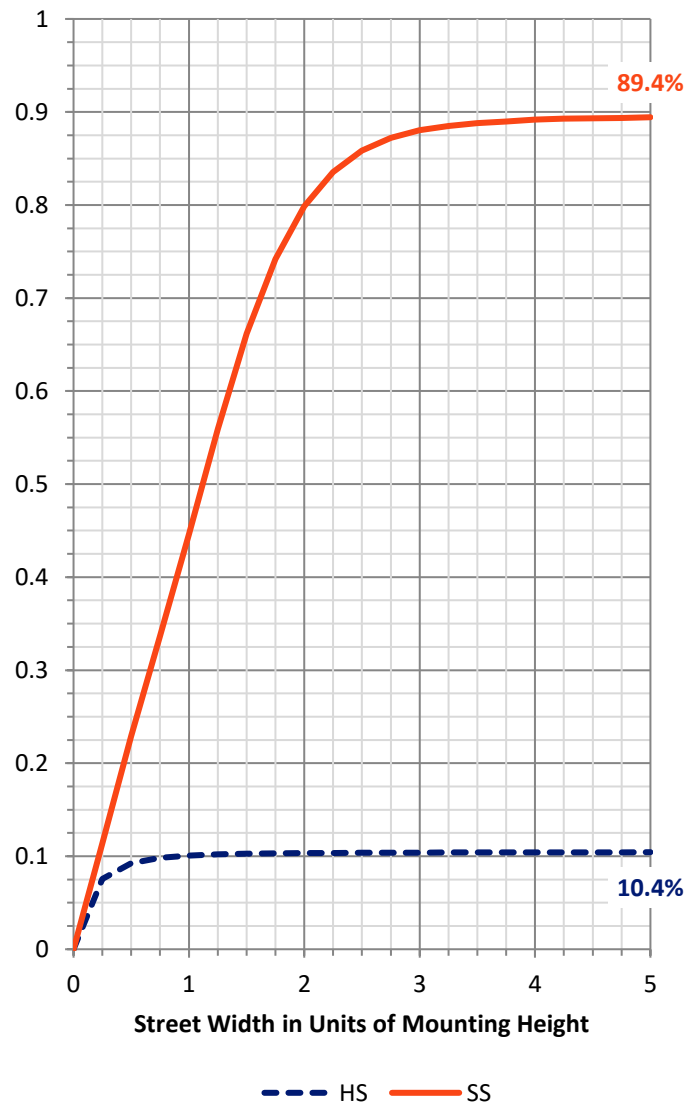
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	450.3	0.0	450.3
	% Fixture	10.6	0.0	10.6
<b>Street Side</b>	Lumens	3817.7	0.0	3817.7
	% Fixture	89.4	0.0	89.4
<b>Total</b>	Lumens	4268.0	0.0	4268.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	38.4	0.9
10°-20°	119.6	2.8
20°-30°	194.8	4.6
30°-40°	309.4	7.2
40°-50°	589.3	13.8
50°-60°	1214.4	28.5
60°-70°	1356.3	31.8
70°-80°	428.4	10.0
80°-90°	17.4	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°	4268.0	100.0
0°-180°	4268.0	100.0



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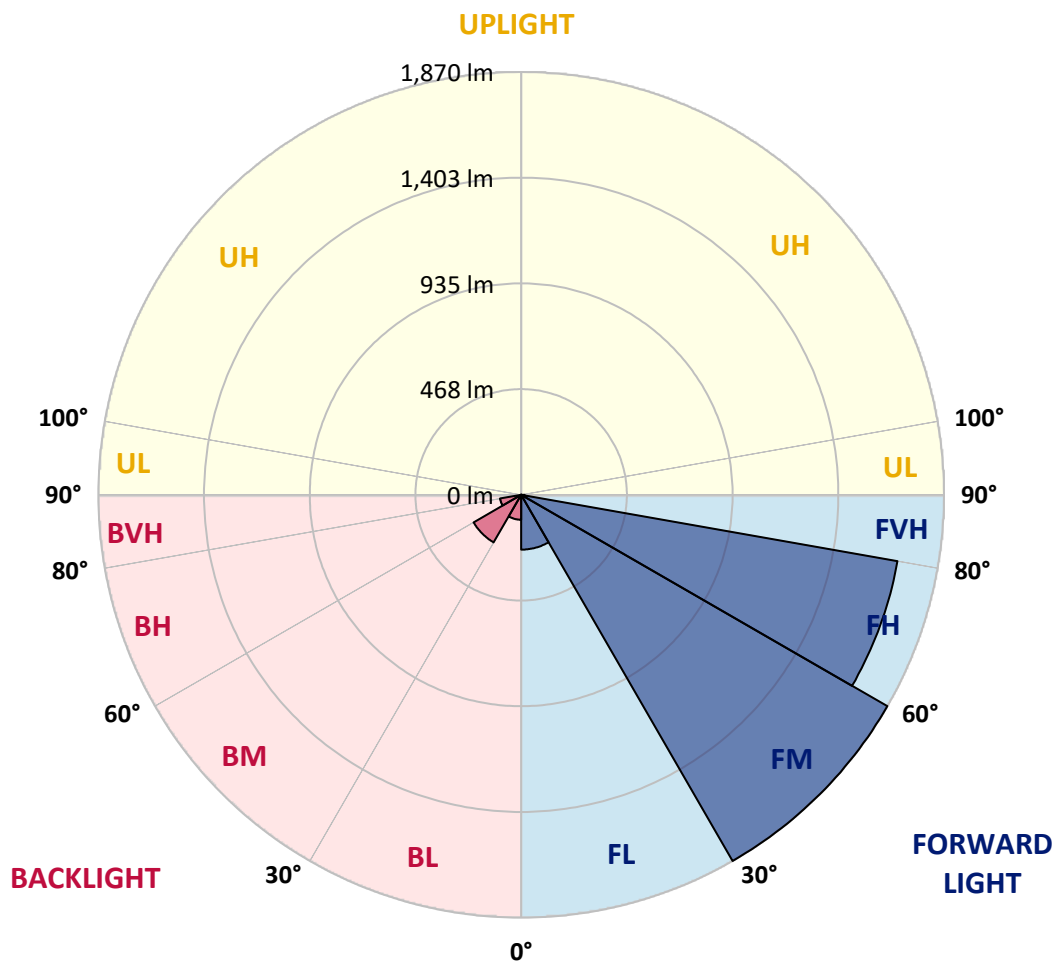
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	242.4	5.7			
FM	(30°-60°)	1870.1	43.8			
FH	(60°-80°)	1689.8	39.6			G1/1800
FVH	(80°-90°)	15.3	0.4			G1/100
BL	(0°-30°)	110.3	2.6	B1/500		
BM	(30°-60°)	243.0	5.7	B1/1000		
BH	(60°-80°)	94.9	2.2	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-G1**

Type III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3
2.5°	417.4	419.0	416.5	413.3	410.0	404.3	405.2	397.8	392.1	388.1	381.6
5°	470.2	469.4	464.5	457.2	449.9	439.3	437.7	426.3	414.1	401.1	388.9
7.5°	523.9	521.5	516.6	506.8	493.0	479.2	475.1	458.8	440.9	421.4	400.3
10°	567.9	566.2	560.5	550.0	533.7	512.5	512.5	489.8	466.2	442.6	417.4
12.5°	603.7	602.0	595.5	582.5	563.0	544.3	541.8	521.5	495.5	467.8	436.9
15°	625.6	624.0	616.7	602.0	584.9	567.9	565.4	545.9	522.3	490.6	454.8
17.5°	631.3	629.7	624.0	611.0	598.0	583.3	580.1	563.0	542.6	510.1	473.5
20°	628.9	625.6	622.4	611.8	601.2	591.5	589.8	577.6	559.7	532.1	493.0
22.5°	622.4	619.1	616.7	609.4	603.7	602.8	601.2	593.9	582.5	558.9	522.3
25°	619.9	617.5	615.0	610.2	609.4	617.5	616.7	615.9	611.0	590.6	552.4
27.5°	633.8	632.9	627.3	619.1	623.2	637.0	637.8	641.9	638.6	625.6	596.3
30°	682.6	678.5	665.5	647.6	658.2	676.1	679.3	692.3	693.2	694.8	654.9
32.5°	748.5	742.0	720.0	697.2	703.7	737.1	737.9	758.2	801.4	774.5	686.6
35°	794.0	785.9	752.5	740.3	772.9	825.8	833.1	874.6	877.8	780.2	684.2
37.5°	921.8	909.6	848.5	774.5	806.2	920.1	928.3	920.9	852.6	772.1	719.2
40°	1092.6	1081.2	1026.7	902.2	812.7	829.8	833.9	855.9	868.9	829.0	831.5
42.5°	1314.7	1300.1	1243.9	1091.8	914.4	851.8	859.9	904.7	990.1	1008.8	1104.8
45°	1541.7	1533.6	1476.6	1312.3	1099.9	1001.5	1005.6	1060.1	1213.0	1331.0	1412.3
47.5°	1763.8	1765.4	1716.6	1577.5	1370.0	1261.0	1256.1	1326.9	1520.5	1604.3	1687.3
50°	2077.0	2075.4	1988.3	1902.1	1740.2	1610.8	1602.7	1642.6	1828.9	1859.8	1988.3
52.5°	2433.3	2431.7	2300.7	2260.1	2191.7	1983.5	2005.4	1971.2	2105.5	2160.8	2343.0
55°	2602.6	2587.9	2532.6	2583.9	2665.2	2456.1	2452.9	2322.7	2427.7	2474.8	2644.9
57.5°	2585.5	2591.2	2644.1	2814.1	3080.9	2906.0	2910.9	2669.3	2730.3	2759.6	2884.1
60°	2488.7	2492.7	2615.6	2898.7	3288.4	3258.3	3241.2	2993.1	2953.2	2941.0	3000.4
62.5°	2212.1	2213.7	2413.0	2776.7	3286.8	3461.7	3445.4	3220.9	3096.4	3018.3	2910.1
64°	1911.0	1942.0	2186.0	2596.9	3198.1	3497.5	3488.5	3276.2	3109.4	2966.2	2744.1
65°	1663.7	1710.1	2005.4	2437.4	3098.0	3485.3	3474.7	3266.4	3091.5	2868.6	2572.5
67.5°	1134.9	1159.3	1424.5	1918.4	2716.5	3313.6	3310.4	3141.1	2897.1	2478.1	2018.4
70°	669.6	687.5	883.5	1339.1	2087.6	2846.6	2889.8	2828.7	2404.9	1780.1	1285.4
72.5°	208.3	218.8	389.7	743.6	1368.4	2217.8	2273.9	2230.0	1750.8	1112.1	712.7
75°	78.1	81.4	128.5	323.0	680.9	1418.0	1435.1	1486.4	1066.6	587.4	311.6
77.5°	43.1	43.9	63.5	121.2	299.4	696.4	712.7	706.2	567.0	277.4	99.3
80°	21.2	22.0	30.9	53.7	116.3	196.9	233.5	308.3	200.1	136.7	31.7
82.5°	7.3	6.5	13.8	24.4	39.1	52.9	59.4	85.4	83.8	74.8	11.4
85°	0.0	0.0	0.8	0.8	0.8	1.6	1.6	10.6	21.2	24.4	3.3
87.5°	0.0	0.0	0.0	0.8	0.8	0.8	0.8	0.8	0.8	1.6	1.6
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°	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3	378.3
2.5°	378.3	376.7	371.0	365.3	361.2	356.3	355.5	352.3	351.5	351.5	351.5
5°	382.4	377.5	366.9	358.0	349.8	342.5	339.3	336.0	333.6	332.7	332.7
7.5°	391.3	384.0	366.9	353.9	341.7	332.7	327.9	324.6	322.2	322.2	322.2
10°	404.3	392.9	371.8	353.9	339.3	327.9	320.5	315.7	312.4	311.6	312.4
12.5°	420.6	406.0	379.9	358.0	340.9	326.2	310.8	282.3	263.6	253.0	251.4
15°	436.1	419.0	388.9	363.7	343.3	310.8	254.6	210.7	181.4	172.5	170.8
17.5°	453.2	435.3	401.1	371.8	334.4	250.6	181.4	144.8	139.1	140.7	140.7
20°	474.3	453.2	414.1	379.9	288.0	178.2	132.6	127.7	129.4	132.6	132.6
22.5°	498.7	475.9	432.0	375.0	219.7	130.2	121.2	122.0	123.7	126.9	126.9
25°	530.4	506.8	451.5	338.4	152.9	113.9	114.7	115.5	118.0	121.2	122.0
27.5°	577.6	549.2	475.1	283.9	115.5	105.8	106.6	109.0	111.5	115.5	115.5
30°	628.1	593.1	496.3	218.8	100.9	96.8	97.6	100.1	104.1	107.4	109.0
32.5°	650.0	619.1	500.3	149.7	93.6	89.5	87.9	90.3	93.6	96.8	97.6
35°	662.2	649.2	480.8	108.2	87.9	83.0	79.7	78.9	79.7	82.2	82.2
37.5°	722.4	713.5	441.8	92.7	82.2	77.3	72.4	68.3	66.7	65.9	66.7
40°	838.0	818.4	390.5	85.4	77.3	71.6	65.1	58.6	52.9	50.4	50.4
42.5°	1092.6	994.2	317.3	80.5	72.4	65.9	56.1	47.2	40.7	39.1	39.1
45°	1366.8	1212.2	238.4	76.5	67.5	59.4	47.2	37.4	31.7	30.1	30.1
47.5°	1630.4	1373.3	166.8	71.6	61.8	52.1	39.1	30.1	26.0	25.2	25.2
50°	1907.0	1513.2	116.3	65.9	56.1	44.7	31.7	24.4	22.0	22.0	22.0
52.5°	2176.3	1616.5	85.4	60.2	48.8	37.4	26.8	22.0	20.3	20.3	20.3
55°	2379.7	1656.4	65.1	52.9	41.5	31.7	24.4	21.2	19.5	18.7	18.7
57.5°	2515.5	1623.0	52.9	43.9	35.0	27.7	22.0	19.5	17.9	17.1	17.1
60°	2512.3	1512.4	42.3	35.8	28.5	23.6	20.3	17.9	16.3	15.5	15.5
62.5°	2365.0	1332.6	33.4	28.5	23.6	20.3	17.9	16.3	14.6	13.8	13.0
64°	2221.0	1221.1	28.5	24.4	21.2	18.7	16.3	14.6	13.0	11.4	11.4
65°	2064.8	1115.4	26.0	22.0	18.7	17.1	15.5	13.8	11.4	9.8	9.8
67.5°	1570.2	825.8	21.2	17.1	14.6	13.8	12.2	10.6	8.1	6.5	6.5
70°	1019.4	534.5	17.9	13.8	12.2	12.2	11.4	8.9	6.5	5.7	4.9
72.5°	522.3	266.0	14.6	11.4	10.6	10.6	9.8	7.3	5.7	4.9	4.1
75°	221.3	108.2	12.2	9.8	8.9	8.1	7.3	6.5	4.9	4.1	4.1
77.5°	77.3	40.7	11.4	9.8	7.3	6.5	6.5	6.5	6.5	5.7	4.9
80°	26.0	15.5	7.3	7.3	8.1	8.9	8.9	8.1	8.9	7.3	5.7
82.5°	10.6	5.7	2.4	3.3	5.7	6.5	7.3	7.3	7.3	5.7	4.9
85°	2.4	1.6	1.6	2.4	2.4	3.3	3.3	4.1	4.1	3.3	3.3
87.5°	1.6	1.6	1.6	1.6	1.6	1.6	2.4	1.6	2.4	2.4	2.4
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)