

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: P596691

Luminaire Tested: **MSA-SA3B-827-U-T4FT-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596691  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA3B-827-U-T4FT-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 8092 lumens  
Efficiency: N/A  
Efficacy: 64.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2

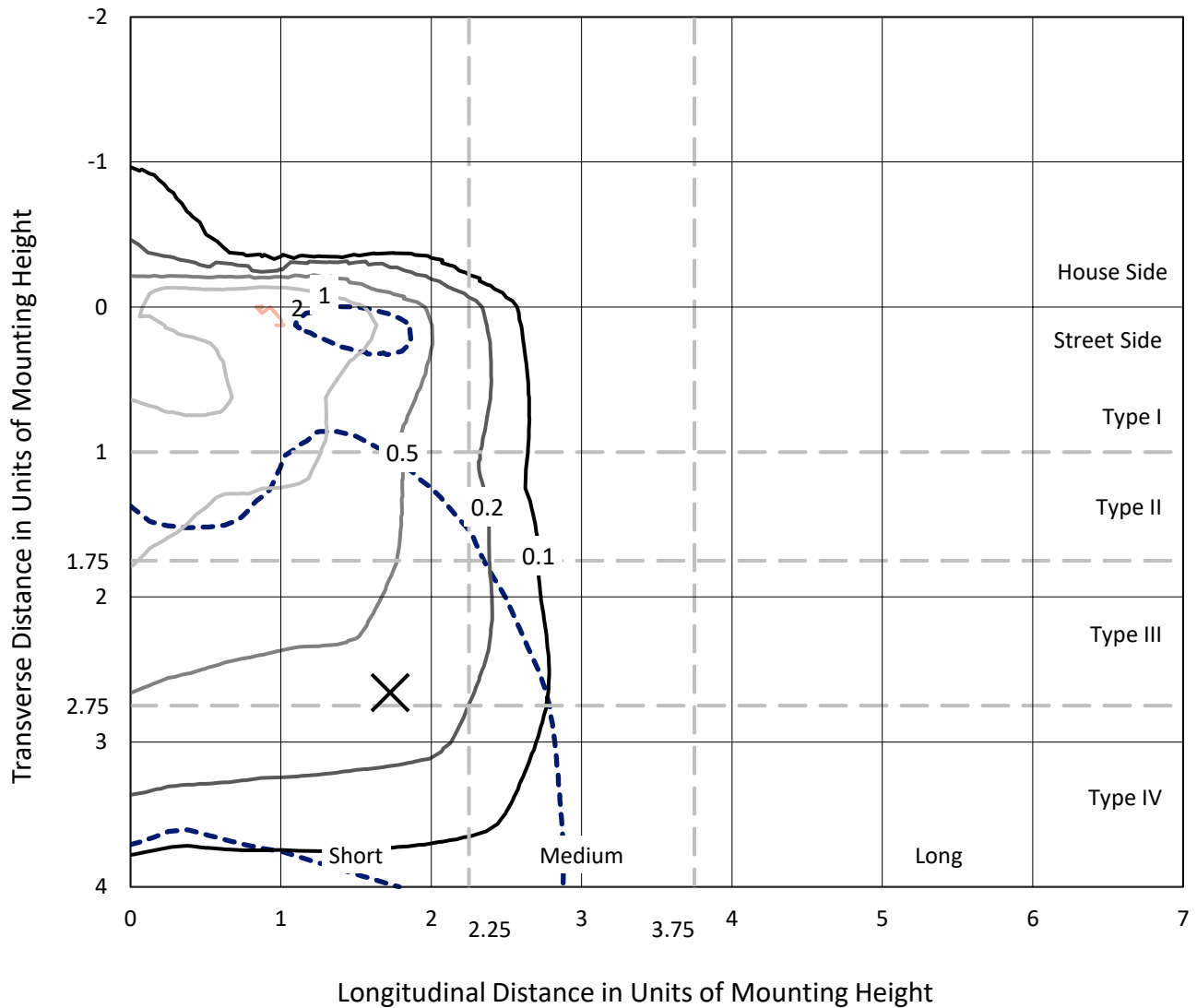
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

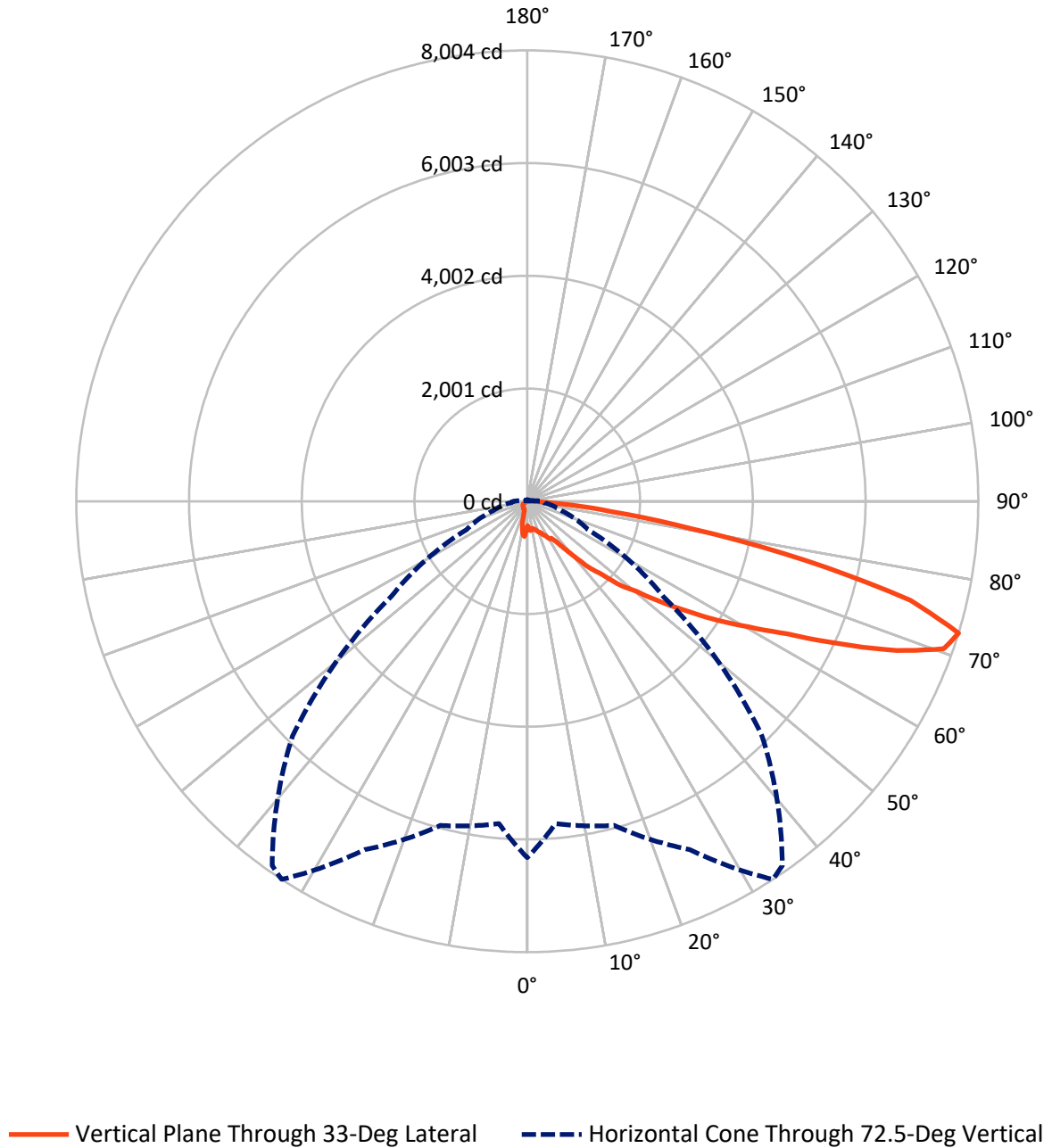
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



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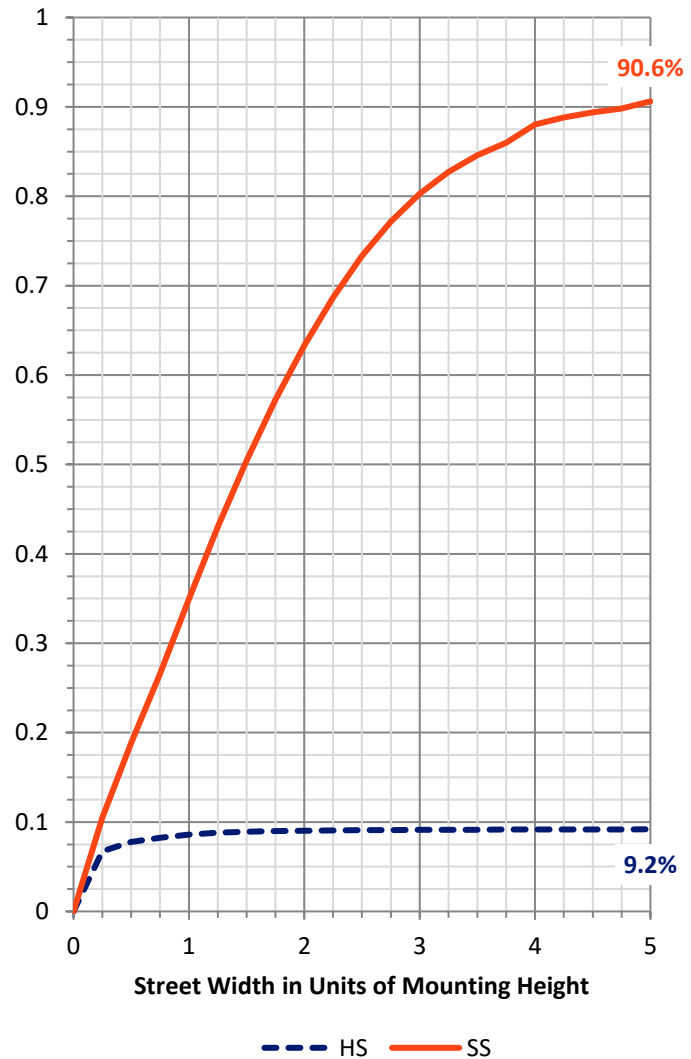
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	748.2	0.0	748.2
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	7343.8	0.0	7343.8
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	8092.0	0.0	8092.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	55.7	0.7
10°-20°	166.0	2.1
20°-30°	281.5	3.5
30°-40°	515.2	6.4
40°-50°	1087.4	13.4
50°-60°	1819.3	22.5
60°-70°	2435.2	30.1
70°-80°	1590.7	19.7
80°-90°	141.0	1.7
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°	8092.0	100.0
0°-180°	8092.0	100.0

**Coefficient of Utilization**



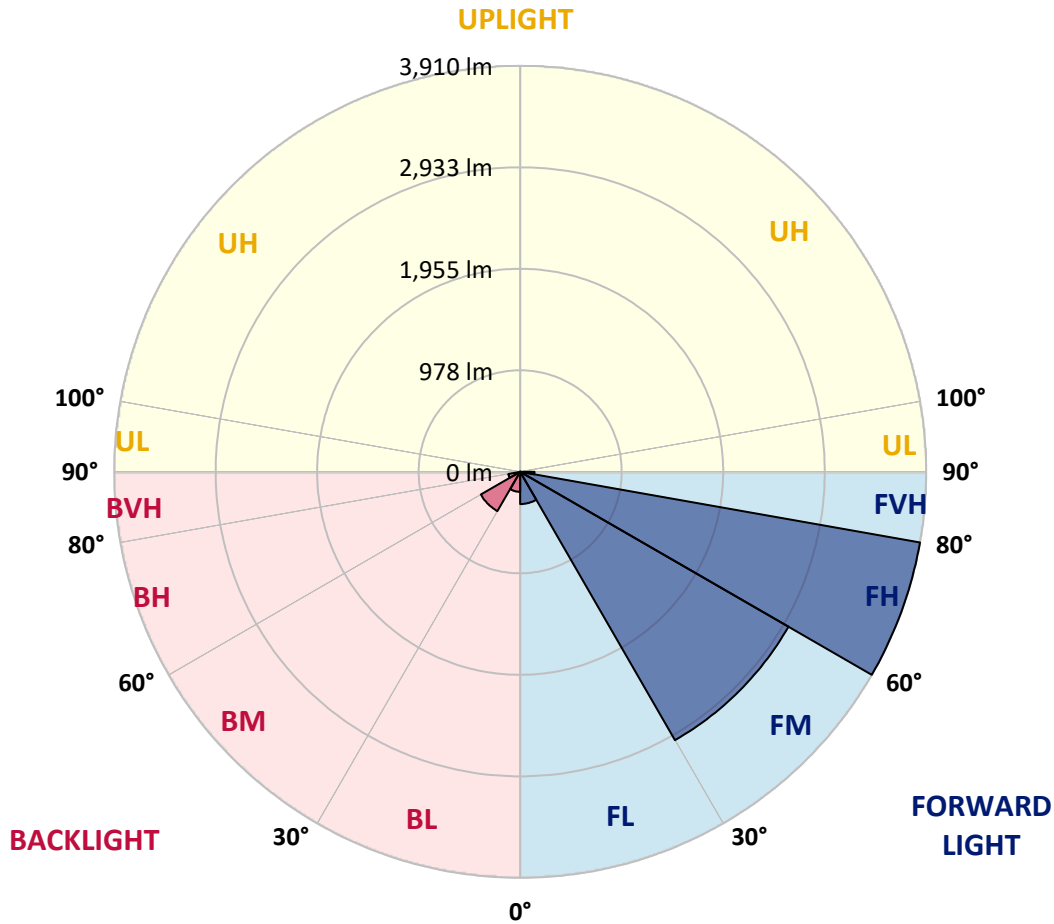
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	310.6	3.8			
FM (30°-60°)	2984.4	36.9			
FH (60°-80°)	3910.4	48.3			G2/5000
FVH (80°-90°)	138.3	1.7			G2/225
BL (0°-30°)	192.6	2.4	B1/500		
BM (30°-60°)	437.4	5.4	B1/1000		
BH (60°-80°)	115.5	1.4	B1/500		G1/500
BVH (80°-90°)	2.7	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B1-U0-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	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°	513.1	493.3	464.5	466.3	471.3	475.3	486.1	481.6	473.1	472.6	513.1
5°	543.6	521.6	519.8	522.5	521.2	528.3	519.4	548.6	573.3	602.9	650.5
7.5°	528.8	518.5	505.4	518.9	518.5	514.9	520.7	580.0	639.8	677.5	756.1
10°	486.1	474.4	484.3	488.8	485.7	501.4	540.5	589.0	660.4	739.5	777.7
12.5°	474.0	481.2	484.8	484.8	514.9	522.9	582.7	628.5	713.4	775.9	886.9
15°	521.2	535.1	510.4	505.0	514.4	518.9	585.4	640.7	749.4	863.5	956.5
17.5°	596.2	595.3	557.1	536.0	550.8	561.6	598.4	663.1	726.9	932.2	1067.0
20°	647.8	648.7	580.0	536.0	584.9	591.2	632.1	683.8	734.1	966.8	1139.3
22.5°	714.3	690.5	614.6	571.9	605.2	611.0	655.9	696.8	770.9	962.8	1231.9
25°	768.7	753.4	657.7	628.1	657.7	649.6	690.5	752.1	810.5	1027.0	1286.3
27.5°	853.2	827.1	688.3	693.7	691.9	697.7	707.2	801.5	880.1	1030.2	1412.1
30°	931.8	916.5	756.6	756.6	774.1	762.9	769.6	883.7	947.5	1103.0	1553.6
32.5°	1013.1	1014.0	837.0	794.3	780.4	826.7	872.0	923.7	1028.8	1227.9	1770.1
35°	1228.3	1210.3	991.1	884.6	873.4	870.7	943.5	1083.2	1173.0	1390.5	2061.7
37.5°	1661.8	1599.4	1322.7	1089.5	1047.2	1032.9	1115.5	1258.9	1348.3	1629.5	2543.8
40°	2106.6	1992.1	1684.8	1421.9	1284.9	1222.9	1319.1	1440.8	1599.8	1893.7	2989.9
42.5°	2497.0	2355.5	1957.5	1780.5	1602.1	1575.1	1484.8	1683.0	1959.3	2278.2	3427.0
45°	2877.6	2599.0	2200.1	2059.9	1843.4	1858.6	1828.1	1999.7	2332.6	2699.7	3814.7
47.5°	3139.5	2889.3	2497.5	2315.5	2228.8	2139.4	2382.0	2560.4	2665.1	2967.4	4149.9
50°	3421.6	3168.3	2753.1	2626.0	2511.9	2602.2	2917.1	2940.9	2932.4	3217.2	4378.1
52.5°	3786.0	3487.2	3046.5	2902.7	2967.4	3057.3	3420.7	3425.2	3170.0	3427.5	4542.6
55°	4122.9	3791.8	3437.4	3301.7	3436.9	3512.8	3915.8	3768.0	3308.4	3570.3	4623.4
57.5°	4597.8	4214.6	3957.2	3718.2	3992.2	3919.4	4351.2	4131.5	3463.9	3665.1	4593.8
60°	5198.1	4747.0	4489.1	4236.2	4530.0	4579.4	4776.2	4313.0	3524.1	3696.1	4415.4
62.5°	5808.6	5354.8	5015.6	4844.0	5177.4	5340.0	5169.7	4403.3	3451.7	3635.5	4011.5
65°	6566.1	5985.2	5588.9	5488.3	6106.0	6345.0	5635.2	4425.3	3312.0	3301.7	3225.3
67.5°	7085.0	6519.4	6155.9	6324.4	7070.6	7089.9	6053.0	4432.0	2841.6	2585.1	2117.0
70°	7208.1	6602.5	6439.8	6935.8	7840.2	7597.2	6187.8	4090.6	2107.5	1534.3	967.7
72.5°	6327.5	5744.4	5956.0	6820.4	8003.7	7892.3	5889.9	2951.3	1186.5	613.7	297.0
75°	3881.2	3528.6	4468.0	5782.6	7025.7	6953.8	4595.1	1524.8	478.0	245.3	111.0
77.5°	1687.9	1567.5	2331.7	3836.8	5048.4	4984.2	2692.5	561.6	247.1	172.5	56.2
80°	558.4	541.8	883.3	1816.8	2957.1	2900.5	1134.4	233.6	176.1	138.4	31.4
82.5°	132.5	131.6	308.2	836.1	1506.4	1459.2	348.2	128.9	127.6	109.2	16.6
85°	33.2	34.1	85.4	341.9	611.9	539.6	90.8	64.2	89.9	74.1	8.5
87.5°	0.0	0.0	22.0	49.0	92.5	58.0	9.9	17.1	25.2	26.5	4.5
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°	522.1	517.1	476.7	486.6	501.8	500.5	510.4	502.7	496.0	529.2	526.1
5°	664.0	637.1	624.5	642.0	632.6	610.6	629.0	625.8	620.4	631.7	640.2
7.5°	770.5	745.8	734.6	697.7	644.3	602.0	608.8	593.0	578.2	595.7	613.7
10°	805.5	792.1	790.7	718.8	668.5	607.4	535.1	472.6	456.0	434.0	443.9
12.5°	900.8	908.9	858.1	774.1	677.0	559.8	431.3	342.8	306.9	283.5	284.8
15°	979.0	1007.3	933.6	782.6	595.7	426.8	287.1	207.6	185.1	179.3	177.5
17.5°	1095.3	1122.7	956.9	722.0	480.3	289.3	184.6	161.7	163.1	167.1	166.2
20°	1181.6	1177.5	936.7	614.6	354.0	189.6	154.5	151.4	158.6	170.3	167.6
22.5°	1264.7	1236.8	924.1	515.3	229.1	152.3	149.2	148.7	155.4	166.7	169.8
25°	1324.0	1328.5	903.0	403.4	166.7	141.5	144.2	148.3	155.0	167.1	165.3
27.5°	1493.8	1368.0	815.0	292.9	140.6	135.7	142.4	150.5	152.8	168.0	168.5
30°	1603.9	1517.2	757.5	197.2	129.8	125.3	138.8	149.6	152.3	172.1	173.4
32.5°	1795.7	1581.4	691.0	146.5	120.9	122.2	130.7	145.1	157.7	178.8	179.7
35°	2034.3	1787.6	570.6	131.6	117.7	115.5	119.5	136.1	156.8	179.7	184.2
37.5°	2488.5	1911.2	452.4	127.6	117.7	113.7	117.7	127.6	154.1	188.7	198.1
40°	2792.7	2162.8	326.2	126.7	115.5	111.9	113.2	123.1	146.5	183.3	197.2
42.5°	3167.4	2268.8	240.4	124.4	113.2	107.8	108.7	121.3	138.8	172.1	182.4
45°	3474.2	2346.1	189.1	123.5	107.8	106.0	107.8	120.0	131.6	147.8	157.2
47.5°	3707.4	2435.9	151.9	117.7	106.5	106.0	103.8	112.3	119.5	123.5	129.8
50°	3878.1	2415.7	125.8	108.7	102.0	104.7	100.6	102.0	103.8	101.5	108.7
52.5°	3982.8	2342.9	104.7	97.9	96.6	98.8	93.9	89.9	86.7	84.9	89.4
55°	4021.0	2196.9	89.0	84.0	87.2	88.1	84.0	76.8	71.4	68.7	72.3
57.5°	3948.6	1974.5	77.3	69.6	76.8	76.8	71.4	63.8	57.5	53.0	56.6
60°	3765.3	1728.8	68.7	58.0	65.6	66.0	59.8	51.7	46.7	42.2	44.5
62.5°	3423.9	1461.0	60.2	50.3	56.6	57.1	49.4	41.8	38.2	33.2	35.0
65°	2741.0	1117.3	51.2	44.5	49.0	47.6	40.9	35.5	31.0	26.5	27.4
67.5°	1779.1	689.6	44.5	40.4	41.3	40.0	34.6	31.0	26.1	22.5	22.9
70°	796.6	297.0	39.1	36.4	35.9	33.7	29.2	28.8	25.6	22.5	22.5
72.5°	245.8	111.9	33.7	32.8	31.0	28.3	25.6	27.4	25.2	21.6	21.1
75°	97.0	51.2	27.9	27.9	27.0	23.4	22.9	24.7	23.4	19.8	18.9
77.5°	50.8	32.3	22.9	23.8	23.4	18.0	20.7	22.5	21.6	16.6	13.9
80°	30.1	19.8	17.1	19.3	18.9	12.6	15.7	14.4	10.3	4.9	1.3
82.5°	16.6	9.0	7.6	11.2	11.2	4.5	8.1	7.2	4.0	0.0	0.0
85°	8.1	6.3	5.8	6.3	4.5	1.3	4.0	4.0	2.2	0.0	0.0
87.5°	4.0	3.6	2.7	2.2	1.8	0.0	1.3	1.8	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

(END OF REPORT)