

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: P596757

Luminaire Tested: **MSA-SA4A-827-U-T4FT-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596757  
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-SA4A-827-U-T4FT-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS  
EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

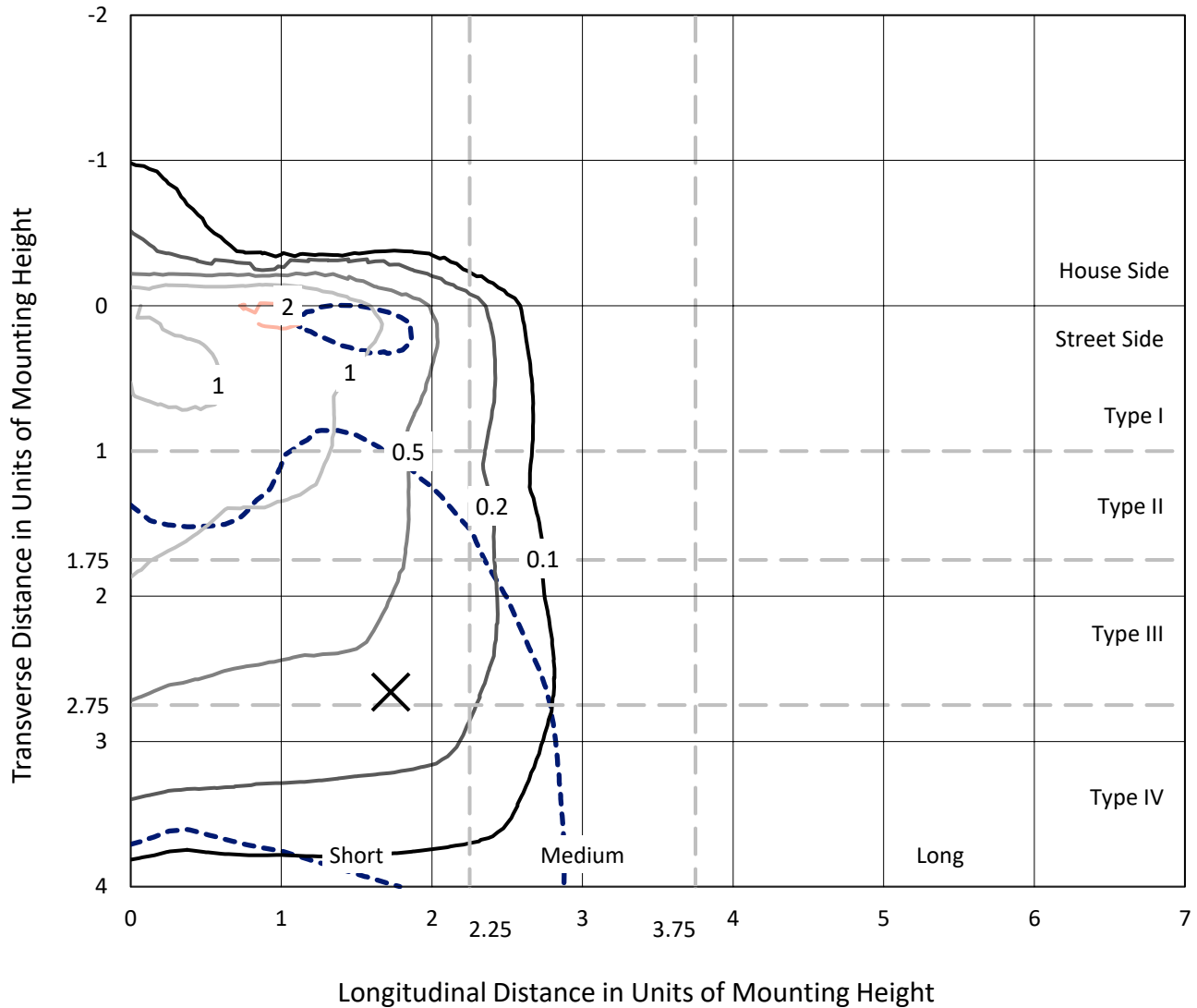
Lumens per Lamp: N/A  
Luminaire Lumens: 8534 lumens  
Efficiency: N/A  
Efficacy: 66.2 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B1 - U0 - G2  
  
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage 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

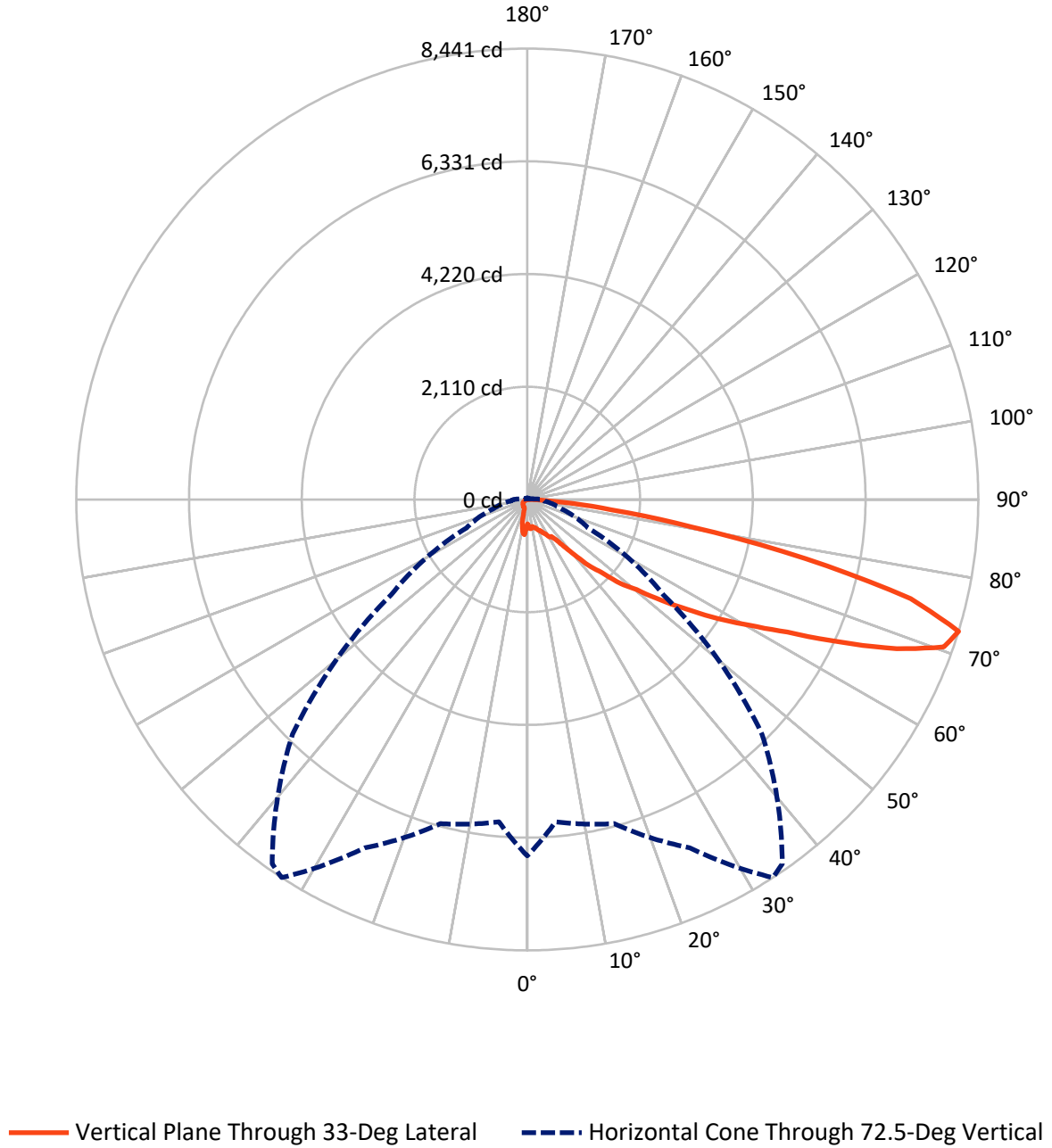
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.1 fc  
 Type IV - Short - N/A

REPORT NUMBER: P596757  
CATALOG NUMBER: MSA-SA4A-827-U-T4FT-HSS

### Luminous Intensity Polar Plot



REPORT NUMBER: P596757

CATALOG NUMBER: MSA-SA4A-827-U-T4FT-HSS

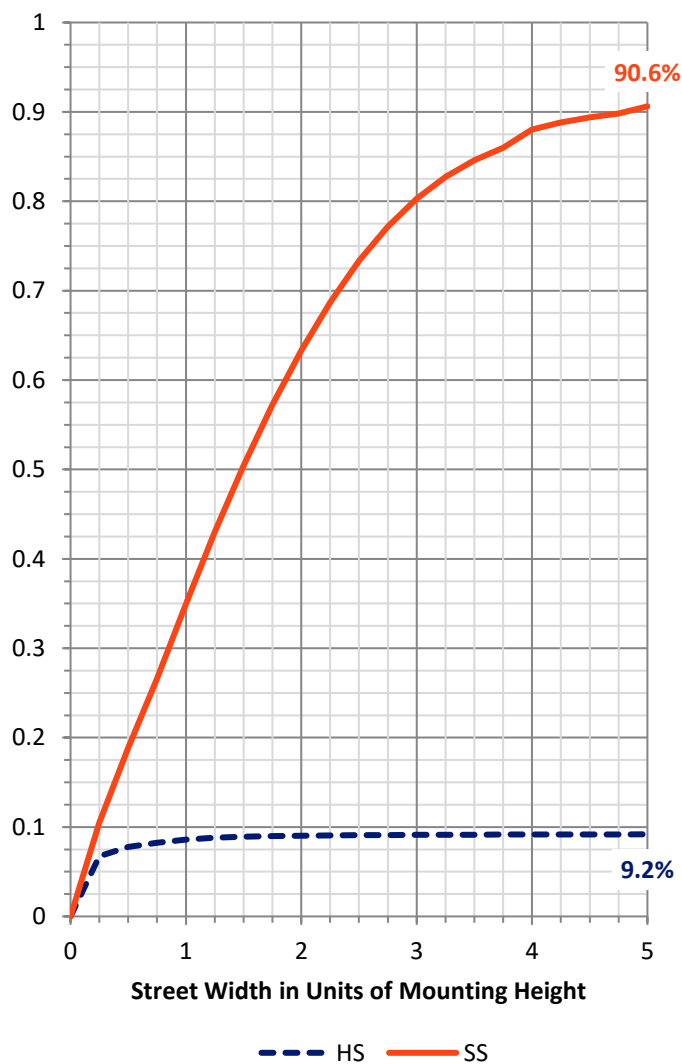
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	789.1	0.0	789.1
	% Fixture	9.2	0.0	9.2
<b>Street Side</b>	Lumens	7744.9	0.0	7744.9
	% Fixture	90.8	0.0	90.8
<b>Total</b>	Lumens	8534.0	0.0	8534.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	58.8	0.7
10°-20°	175.1	2.1
20°-30°	296.9	3.5
30°-40°	543.4	6.4
40°-50°	1146.8	13.4
50°-60°	1918.6	22.5
60°-70°	2568.2	30.1
70°-80°	1677.6	19.7
80°-90°	148.7	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°	8534.0	100.0
0°-180°	8534.0	100.0

**Coefficient of Utilization**



REPORT NUMBER: P596757

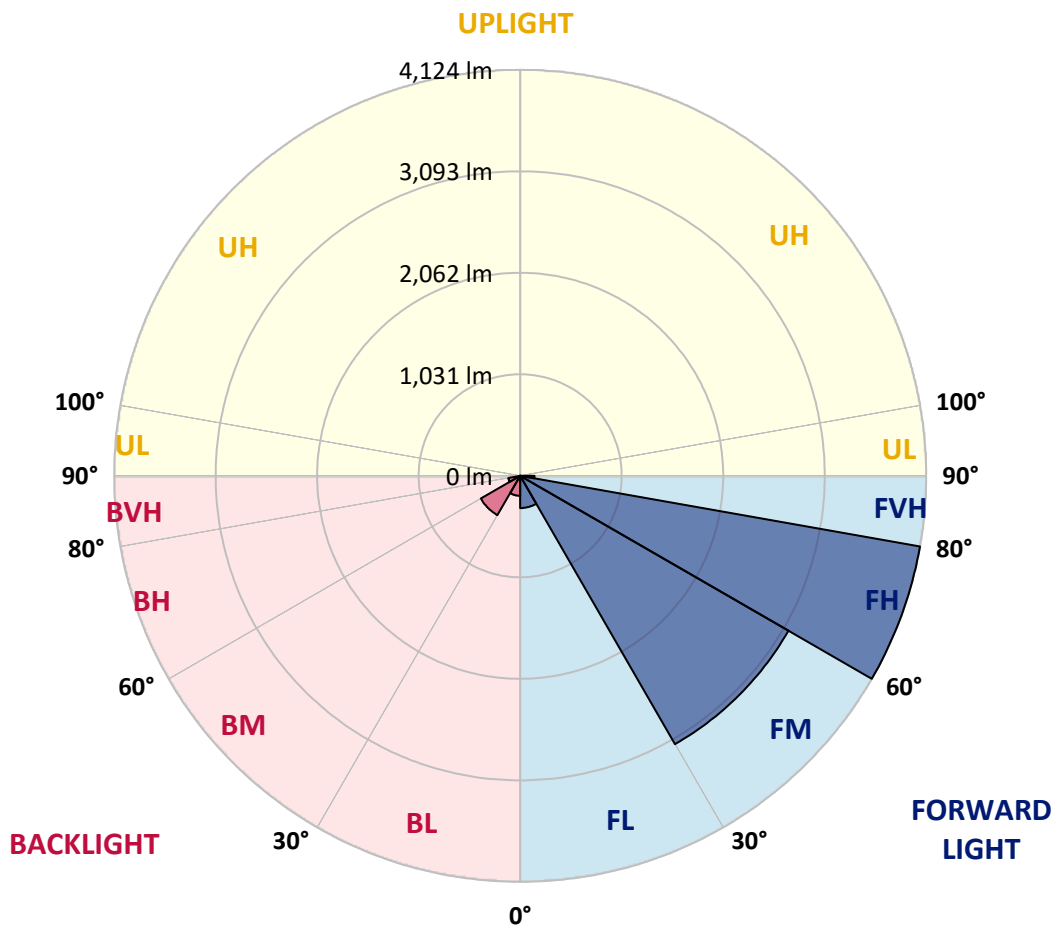
CATALOG NUMBER: MSA-SA4A-827-U-T4FT-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	327.6	3.8			
FM (30°-60°)	3147.5	36.9			
FH (60°-80°)	4124.0	48.3			G2/5000
FVH (80°-90°)	145.9	1.7			G2/225
BL (0°-30°)	203.1	2.4	B1/500		
BM (30°-60°)	461.3	5.4	B1/1000		
BH (60°-80°)	121.8	1.4	B1/500		G1/500
BVH (80°-90°)	2.9	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





REPORT NUMBER: P596757

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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	453.9	453.9	453.9	453.9	453.9	453.9	453.9	453.9	453.9	453.9	453.9
2.5°	541.1	520.2	489.9	491.8	497.0	501.3	512.7	507.9	498.9	498.4	541.1
5°	573.3	550.1	548.2	551.0	549.6	557.2	547.7	578.5	604.6	635.9	686.1
7.5°	557.7	546.8	533.0	547.3	546.8	543.0	549.1	611.7	674.7	714.5	797.4
10°	512.7	500.3	510.8	515.5	512.2	528.8	570.0	621.2	696.5	779.9	820.2
12.5°	499.9	507.5	511.2	511.2	543.0	551.5	614.5	662.9	752.4	818.3	935.3
15°	549.6	564.3	538.2	532.6	542.5	547.3	617.4	675.7	790.3	910.7	1008.7
17.5°	628.7	627.8	587.5	565.3	580.9	592.3	631.1	699.3	766.6	983.2	1125.3
20°	683.2	684.2	611.7	565.3	616.9	623.5	666.7	721.1	774.2	1019.6	1201.6
22.5°	753.4	728.2	648.2	603.2	638.2	644.4	691.8	734.9	813.1	1015.4	1299.2
25°	810.7	794.6	693.7	662.4	693.7	685.1	728.2	793.2	854.8	1083.1	1356.5
27.5°	899.8	872.3	725.9	731.6	729.7	735.8	745.8	845.3	928.2	1086.4	1489.2
30°	982.7	966.6	797.9	797.9	816.4	804.5	811.6	932.0	999.3	1163.2	1638.4
32.5°	1068.4	1069.4	882.7	837.7	823.0	871.8	919.7	974.2	1085.0	1294.9	1866.8
35°	1295.4	1276.4	1045.2	932.9	921.1	918.2	995.0	1142.4	1237.1	1466.4	2174.3
37.5°	1752.6	1686.8	1394.9	1149.0	1104.5	1089.3	1176.5	1327.6	1421.9	1718.5	2682.7
40°	2221.7	2100.9	1776.8	1499.6	1355.1	1289.7	1391.1	1519.5	1687.2	1997.1	3153.2
42.5°	2633.4	2484.2	2064.4	1877.7	1689.6	1661.2	1565.9	1774.9	2066.3	2402.7	3614.2
45°	3034.8	2741.0	2320.2	2172.4	1944.0	1960.2	1927.9	2108.9	2460.0	2847.1	4023.1
47.5°	3311.0	3047.1	2633.9	2442.0	2350.6	2256.3	2512.1	2700.2	2810.6	3129.5	4376.6
50°	3608.5	3341.3	2903.5	2769.4	2649.1	2744.3	3076.4	3101.6	3092.6	3393.0	4617.3
52.5°	3992.8	3677.7	3212.9	3061.3	3129.5	3224.3	3607.6	3612.3	3343.2	3614.7	4790.7
55°	4348.2	3999.0	3625.1	3482.0	3624.6	3704.7	4129.7	3973.8	3489.1	3765.4	4876.0
57.5°	4849.0	4444.8	4173.3	3921.2	4210.3	4133.5	4588.8	4357.2	3653.1	3865.3	4844.7
60°	5482.0	5006.3	4734.3	4467.6	4777.4	4829.5	5037.1	4548.6	3716.6	3898.0	4656.6
62.5°	6125.9	5647.3	5289.6	5108.6	5460.2	5631.7	5452.1	4643.8	3640.3	3834.1	4230.6
65°	6924.7	6312.1	5894.2	5788.1	6439.5	6691.6	5943.0	4667.0	3492.9	3482.0	3401.5
67.5°	7472.0	6875.5	6492.1	6669.8	7456.8	7477.2	6383.6	4674.1	2996.8	2726.3	2232.6
70°	7601.8	6963.1	6791.6	7314.7	8268.5	8012.1	6525.8	4314.0	2222.6	1618.1	1020.6
72.5°	6673.1	6058.1	6281.3	7192.9	8440.9	8323.4	6211.6	3112.5	1251.3	647.2	313.2
75°	4093.2	3721.3	4712.0	6098.4	7409.4	7333.6	4846.1	1608.1	504.1	258.7	117.0
77.5°	1780.1	1653.1	2459.1	4046.3	5324.2	5256.4	2839.5	592.3	260.6	181.9	59.2
80°	588.9	571.4	931.5	1916.1	3118.6	3058.9	1196.4	246.4	185.7	145.9	33.2
82.5°	139.8	138.8	325.0	881.8	1588.7	1538.9	367.2	136.0	134.6	115.1	17.5
85°	35.1	36.0	90.0	360.6	645.3	569.0	95.7	67.8	94.8	78.2	9.0
87.5°	0.0	0.0	23.2	51.6	97.6	61.1	10.4	18.0	26.5	28.0	4.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P596757  
 CATALOG NUMBER: MSA-SA4A-827-U-T4FT-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	453.9	453.9	453.9	453.9	453.9	453.9	453.9	453.9	453.9	453.9	453.9
2.5°	550.6	545.4	502.7	513.1	529.2	527.8	538.2	530.2	523.1	558.1	554.8
5°	700.3	671.9	658.6	677.1	667.1	643.9	663.3	660.0	654.3	666.2	675.2
7.5°	812.6	786.5	774.7	735.8	679.4	634.9	642.0	625.4	609.8	628.3	647.2
10°	849.5	835.3	833.9	758.1	705.0	640.6	564.3	498.4	480.9	457.7	468.1
12.5°	950.0	958.5	905.0	816.4	714.0	590.4	454.9	361.5	323.6	299.0	300.4
15°	1032.4	1062.3	984.6	825.4	628.3	450.1	302.8	218.9	195.2	189.1	187.2
17.5°	1155.1	1184.1	1009.2	761.4	506.5	305.1	194.7	170.6	172.0	176.3	175.3
20°	1246.1	1241.9	987.9	648.2	373.4	199.9	163.0	159.7	167.3	179.6	176.7
22.5°	1333.8	1304.4	974.6	543.5	241.6	160.6	157.3	156.8	163.9	175.8	179.1
25°	1396.3	1401.1	952.4	425.5	175.8	149.3	152.1	156.4	163.5	176.3	174.4
27.5°	1575.4	1442.8	859.5	308.9	148.3	143.1	150.2	158.7	161.1	177.2	177.7
30°	1691.5	1600.1	798.8	208.0	136.9	132.2	146.4	157.8	160.6	181.5	182.9
32.5°	1893.8	1667.8	728.7	154.5	127.5	128.9	137.9	153.0	166.3	188.6	189.5
35°	2145.4	1885.3	601.7	138.8	124.1	121.8	126.0	143.6	165.4	189.5	194.3
37.5°	2624.4	2015.6	477.1	134.6	124.1	119.9	124.1	134.6	162.5	199.0	209.0
40°	2945.2	2280.9	344.0	133.6	121.8	118.0	119.4	129.8	154.5	193.3	208.0
42.5°	3340.4	2392.7	253.5	131.2	119.4	113.7	114.7	127.9	146.4	181.5	192.4
45°	3664.0	2474.2	199.5	130.3	113.7	111.8	113.7	126.5	138.8	155.9	165.8
47.5°	3909.9	2569.0	160.1	124.1	112.3	111.8	109.5	118.5	126.0	130.3	136.9
50°	4089.9	2547.7	132.7	114.7	107.6	110.4	106.1	107.6	109.5	107.1	114.7
52.5°	4200.3	2470.9	110.4	103.3	101.9	104.2	99.0	94.8	91.4	89.6	94.3
55°	4240.6	2316.9	93.8	88.6	91.9	92.9	88.6	81.0	75.3	72.5	76.3
57.5°	4164.3	2082.4	81.5	73.4	81.0	81.0	75.3	67.3	60.6	55.9	59.7
60°	3971.0	1823.2	72.5	61.1	69.2	69.7	63.0	54.5	49.3	44.5	46.9
62.5°	3610.9	1540.8	63.5	53.1	59.7	60.2	52.1	44.1	40.3	35.1	37.0
65°	2890.7	1178.4	54.0	46.9	51.6	50.2	43.1	37.4	32.7	28.0	28.9
67.5°	1876.3	727.3	46.9	42.6	43.6	42.2	36.5	32.7	27.5	23.7	24.2
70°	840.1	313.2	41.2	38.4	37.9	35.5	30.8	30.3	27.0	23.7	23.7
72.5°	259.2	118.0	35.5	34.6	32.7	29.9	27.0	28.9	26.5	22.7	22.3
75°	102.3	54.0	29.4	29.4	28.4	24.6	24.2	26.1	24.6	20.8	19.9
77.5°	53.5	34.1	24.2	25.1	24.6	19.0	21.8	23.7	22.7	17.5	14.7
80°	31.7	20.8	18.0	20.4	19.9	13.3	16.6	15.2	10.9	5.2	1.4
82.5°	17.5	9.5	8.1	11.8	11.8	4.7	8.5	7.6	4.3	0.0	0.0
85°	8.5	6.6	6.2	6.6	4.7	1.4	4.3	4.3	2.4	0.0	0.0
87.5°	4.3	3.8	2.8	2.4	1.9	0.0	1.4	1.9	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)