

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: P368461

Luminaire Tested: **MSA-SA4C-727-U-T2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368461
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-9)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4C-727-U-T2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15177 lumens
Efficiency: N/A
Efficacy: 67.5 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Medium
BUG Rating: B1 - U0 - G3

Input Watts (W): 225
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

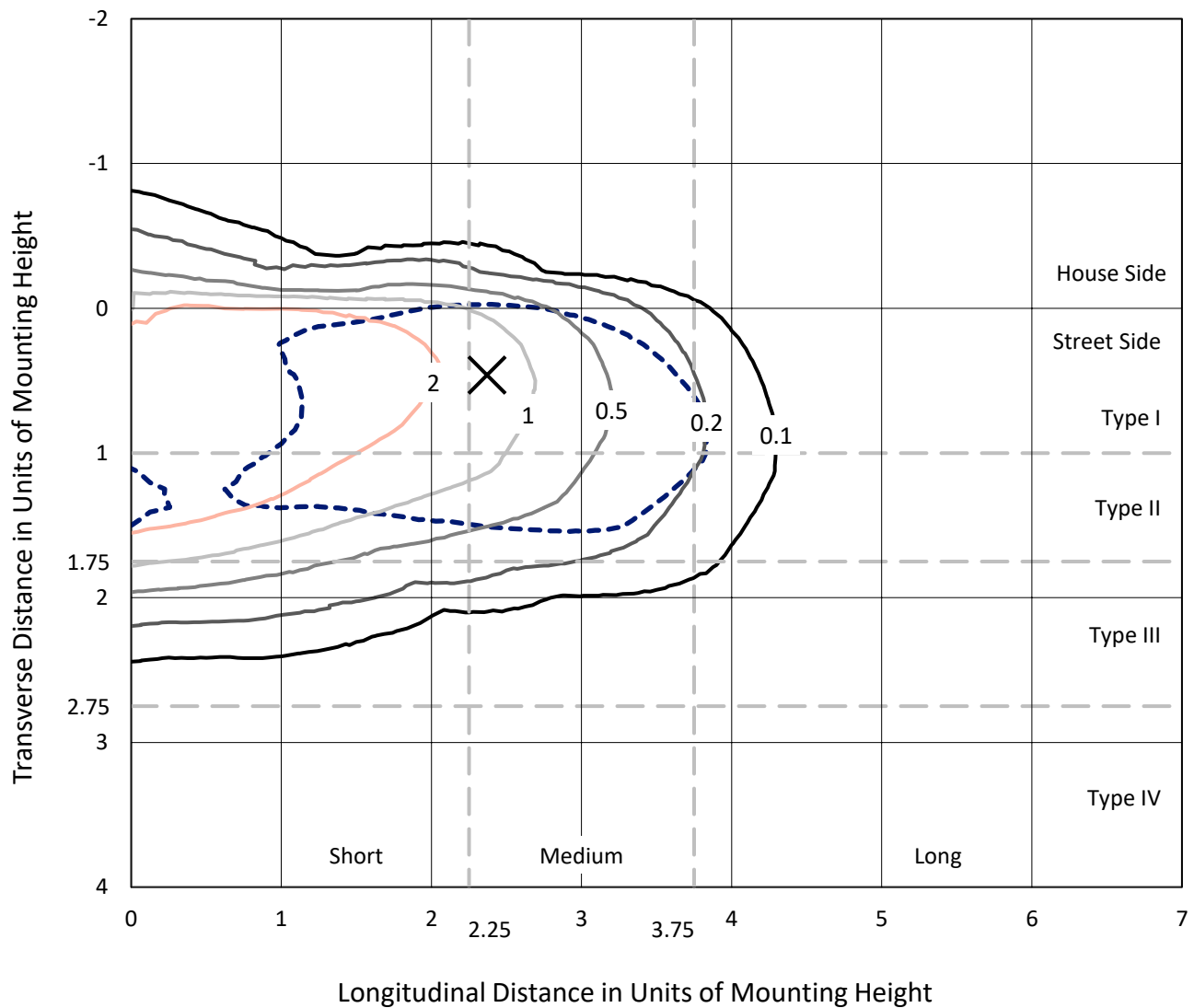


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

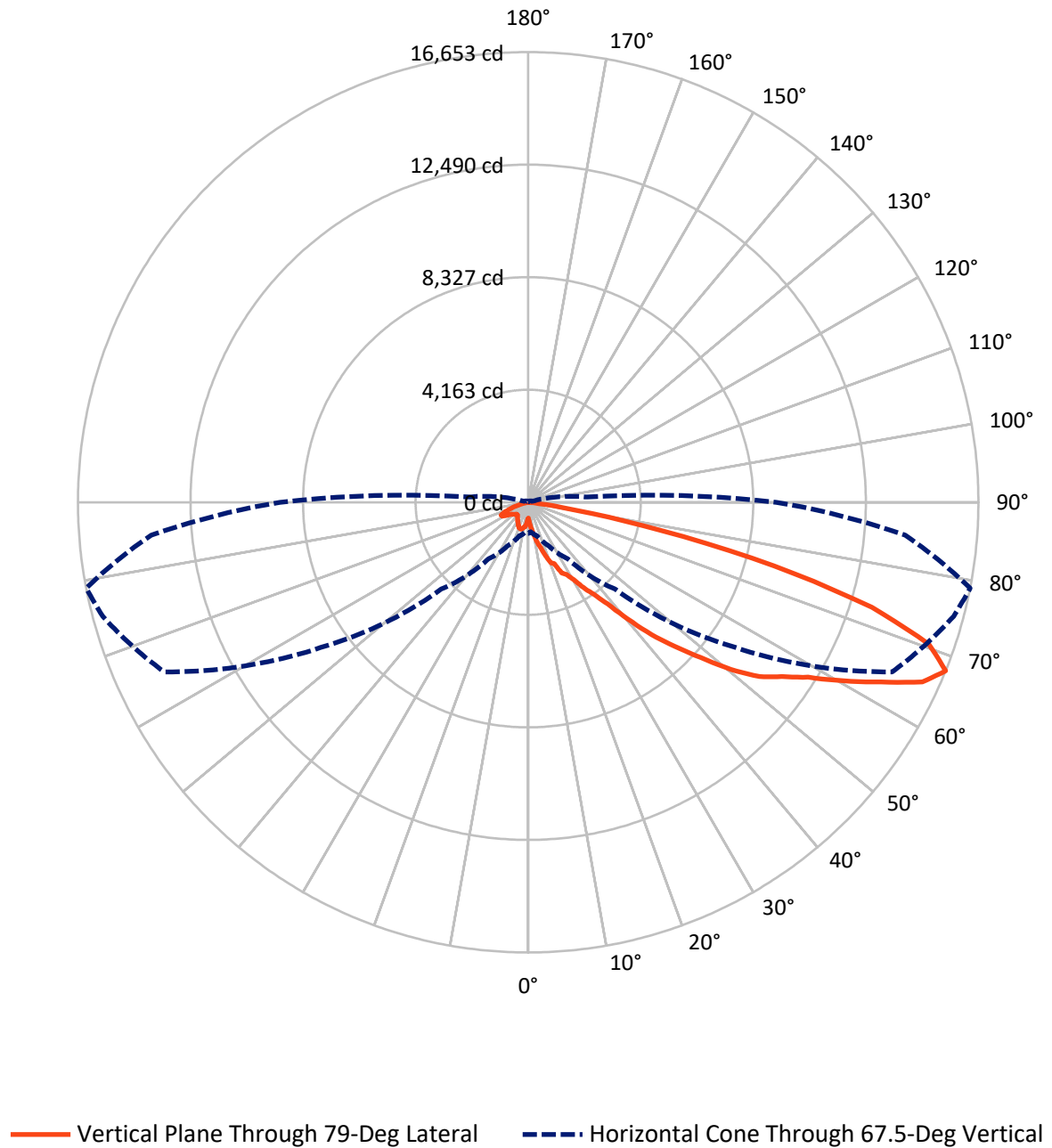


Based on 25 foot mounting height. Maximum calculated value = 4.6 fc
 Type II - Medium - N/A

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Luminous Intensity Polar Plot



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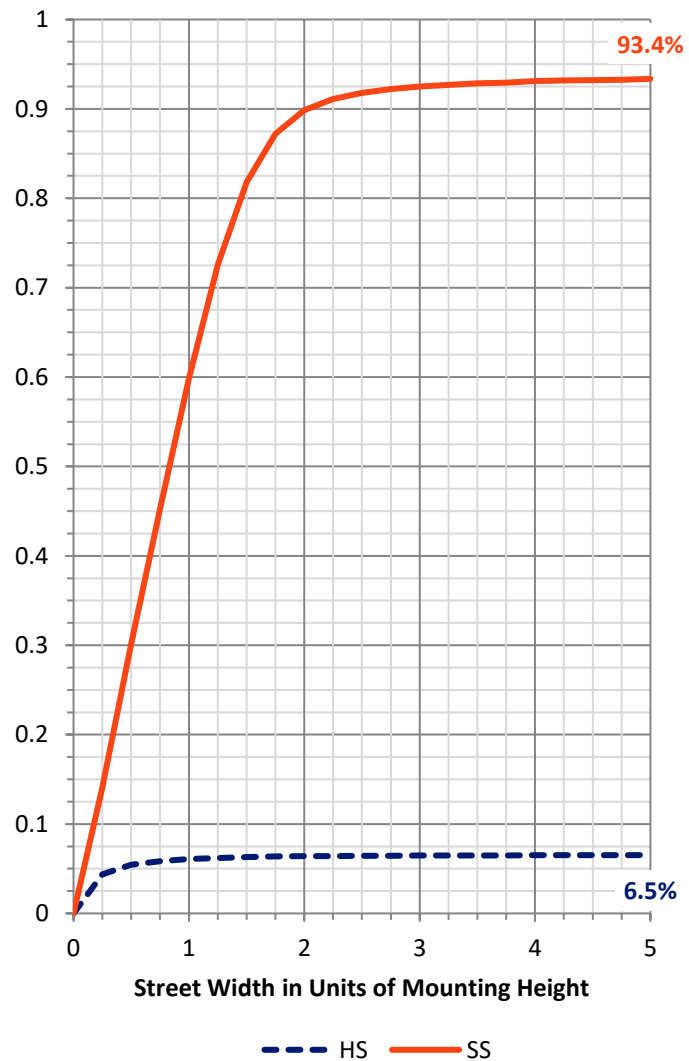
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	997.2	0.0	997.2
	% Fixture	6.6	0.0	6.6
Street Side	Lumens	14179.8	0.0	14179.8
	% Fixture	93.4	0.0	93.4
Total	Lumens	15177.0	0.0	15177.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	85.1	0.6
10°-20°	339.1	2.2
20°-30°	654.2	4.3
30°-40°	1285.2	8.5
40°-50°	2574.5	17.0
50°-60°	4115.0	27.1
60°-70°	4140.4	27.3
70°-80°	1867.9	12.3
80°-90°	115.6	0.8
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°	15177.0	100.0
0°-180°	15177.0	100.0

Coefficient of Utilization



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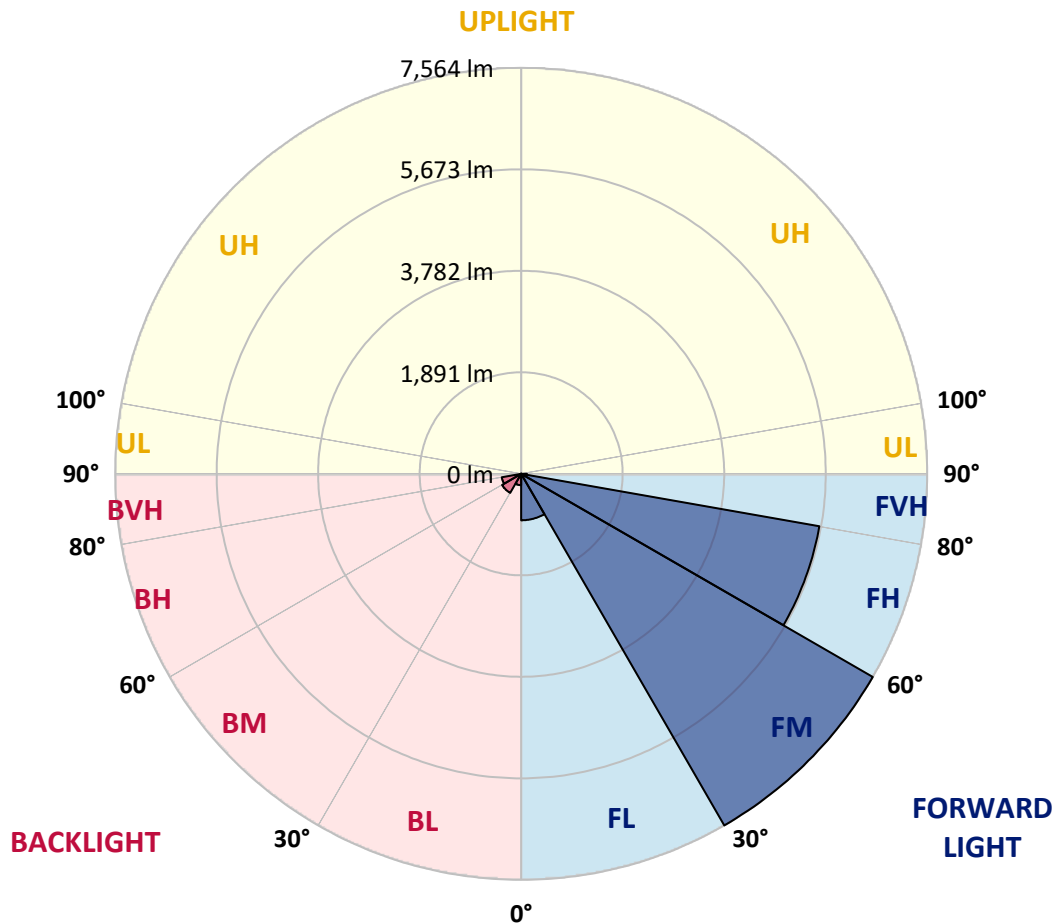
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	866.4	5.7			
FM	(30°-60°)	7564.4	49.8			
FH	(60°-80°)	5640.7	37.2			G3/7500
FVH	(80°-90°)	108.2	0.7			G2/225
BL	(0°-30°)	212.0	1.4	B1/500		
BM	(30°-60°)	410.3	2.7	B1/1000		
BH	(60°-80°)	367.6	2.4	B1/500		G1/500
BVH	(80°-90°)	7.4	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-G3

Type II Medium



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	584.8	584.8	584.8	584.8	584.8	584.8	584.8	584.8	584.8	584.8	584.8
2.5°	789.8	761.3	715.3	741.3	739.6	753.0	727.9	700.3	655.9	700.3	703.6
5°	1137.0	1084.3	1050.8	1044.1	1007.3	973.0	965.5	937.0	915.3	876.0	911.1
7.5°	1416.4	1392.2	1332.8	1326.1	1235.7	1185.5	1201.4	1188.9	1106.0	1065.0	1099.3
10°	1535.2	1493.4	1501.8	1493.4	1454.9	1469.1	1436.5	1398.9	1332.8	1265.0	1179.7
12.5°	1581.2	1574.6	1644.0	1635.6	1726.0	1834.7	1762.0	1699.2	1546.1	1529.4	1413.1
15°	1680.0	1721.8	1711.8	1746.9	1804.6	1989.5	1987.8	2002.9	1840.6	1753.6	1585.4
17.5°	1767.8	1798.8	1748.6	1788.7	1946.0	2058.1	2207.9	2149.3	2167.7	2079.0	1818.8
20°	1730.2	1765.3	1715.1	1690.8	1967.8	2180.3	2380.2	2337.6	2448.0	2392.8	2033.9
22.5°	1965.3	1899.2	1772.8	1694.2	1900.8	2177.8	2441.3	2619.5	2600.3	2464.7	2233.8
25°	2255.6	2215.4	2064.0	1925.1	1943.5	2162.7	2633.7	2895.6	2952.5	2894.8	2423.7
27.5°	2647.1	2637.9	2328.4	2268.1	2089.1	2096.6	2663.9	3243.6	3114.0	3023.6	2645.4
30°	3158.3	3085.5	2718.2	2639.6	2375.2	2245.5	2847.9	3544.0	3448.6	3325.6	2853.8
32.5°	3708.0	3718.9	3250.3	2991.0	2778.5	2624.5	2775.1	3684.5	3862.8	3763.2	3114.0
35°	4332.1	4380.6	3807.5	3503.0	3089.7	2863.0	3088.0	4116.3	4435.8	4174.0	3462.8
37.5°	5293.4	5291.7	4622.4	4015.9	3715.5	3469.5	3609.3	4508.6	5140.3	4772.2	4088.6
40°	6139.2	5955.2	5332.7	4635.8	4167.3	4100.4	3999.1	5045.8	5892.4	5670.7	4645.0
42.5°	6770.9	6641.2	5889.1	5346.9	4766.3	4553.8	4517.8	5833.0	7002.7	6692.3	5439.0
45°	7526.4	7101.4	6547.5	6058.9	5467.4	5405.5	5321.0	6632.0	8294.4	7595.0	6129.2
47.5°	8203.2	7803.3	7279.6	6652.1	5972.8	6483.1	6158.5	7334.0	9234.0	8577.2	6890.5
50°	8773.0	8348.0	7761.5	7283.8	6992.6	7339.0	6797.7	7912.1	10248.8	9716.7	7602.5
52.5°	9063.3	8582.2	8128.8	7833.4	8011.6	7933.8	7664.4	8612.3	11113.9	10715.6	8233.3
55°	8824.8	8354.7	8164.7	8311.2	8852.5	8627.4	8649.2	9697.5	11930.4	11381.6	8782.2
57.5°	7767.3	7338.1	7422.6	7823.4	8860.8	9449.8	9771.9	10751.6	12585.5	12211.6	9628.9
60°	5875.7	5530.2	5843.1	6554.2	8027.5	9285.8	10568.4	11805.8	13521.7	13404.6	10910.6
62.5°	3588.3	3400.9	3844.3	4731.2	6396.9	8481.8	11032.7	13211.3	14523.2	14647.8	12270.1
65°	1830.6	1746.1	2115.9	2895.6	4322.1	6967.5	10697.2	14084.8	15558.1	16018.3	13566.1
67.5°	1152.9	1098.5	1296.0	1766.1	2550.1	4544.6	9366.2	14848.6	16289.3	16653.3	13998.6
70°	799.0	764.7	935.4	1212.3	1608.9	2448.0	6954.1	14135.8	15709.5	15726.3	12952.0
72.5°	507.0	480.2	646.7	897.7	1187.2	1264.2	3986.6	11092.1	13447.3	13292.5	10488.9
75°	328.8	315.4	410.8	657.6	911.9	779.7	1970.3	7484.6	9642.2	9399.6	6966.7
77.5°	235.9	227.6	275.3	439.2	649.2	545.5	883.5	4460.9	5528.5	4998.1	3381.7
80°	142.2	141.4	199.1	275.3	461.8	384.9	408.3	2025.5	2143.5	1747.7	1033.2
82.5°	71.1	73.6	111.3	177.4	297.0	251.8	186.6	674.3	575.6	424.2	209.2
85°	16.7	20.9	58.6	122.1	148.9	100.4	88.7	176.5	158.1	119.6	61.1
87.5°	0.0	0.0	18.4	29.3	40.2	16.7	30.1	33.5	42.7	33.5	12.5
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°	584.8	584.8	584.8	584.8	584.8	584.8	584.8	584.8	584.8	584.8	584.8
2.5°	704.4	694.4	633.3	617.4	615.8	598.2	602.4	585.6	586.5	624.1	624.1
5°	897.7	839.1	780.6	728.7	693.6	643.4	625.0	617.4	610.7	625.8	635.0
7.5°	1054.2	968.0	862.6	749.6	645.0	573.1	563.1	544.7	538.0	553.0	564.7
10°	1123.6	1016.5	871.8	707.0	609.1	550.5	502.0	476.0	471.0	470.2	474.4
12.5°	1270.9	1137.8	881.8	691.1	584.8	520.4	465.2	421.7	381.5	385.7	381.5
15°	1388.8	1231.5	881.8	652.6	526.2	461.8	364.8	343.0	337.2	346.4	338.8
17.5°	1567.0	1324.4	837.5	584.0	476.0	358.9	322.1	320.4	332.1	345.5	337.2
20°	1674.1	1336.9	763.0	505.3	390.7	311.2	297.8	284.5	301.2	312.1	307.9
22.5°	1785.4	1337.8	688.6	463.5	314.6	283.6	261.9	251.0	253.5	263.5	265.2
25°	1833.1	1305.2	619.1	408.3	285.3	253.5	230.9	219.2	215.0	220.0	218.4
27.5°	1962.8	1242.4	543.8	348.0	271.1	225.1	204.1	189.9	177.4	185.7	187.4
30°	1981.2	1222.3	502.8	309.6	252.7	199.1	180.7	165.7	156.5	168.2	168.2
32.5°	2039.7	1111.9	481.9	293.7	233.4	184.1	159.0	148.1	146.4	153.9	154.8
35°	2130.1	1063.4	450.9	281.1	215.9	166.5	143.1	138.0	136.4	142.2	142.2
37.5°	2436.3	1003.1	416.6	270.2	200.8	157.3	138.9	130.5	131.4	136.4	139.7
40°	2639.6	1010.7	365.6	256.8	183.2	148.9	130.5	124.7	123.8	126.3	128.8
42.5°	3016.9	1016.5	343.0	242.6	169.8	138.9	122.1	118.0	114.6	117.1	119.6
45°	3438.6	1047.5	331.3	230.9	162.3	133.0	114.6	112.1	104.6	106.3	109.6
47.5°	3845.2	1160.4	317.1	214.2	155.6	129.7	107.1	101.2	96.2	95.4	98.7
50°	4307.0	1270.0	301.2	195.8	148.9	124.7	99.6	90.4	87.0	87.0	89.5
52.5°	4720.3	1374.6	286.1	183.2	143.9	115.5	92.9	83.7	81.2	81.2	84.5
55°	5155.4	1484.2	272.7	171.5	137.2	106.3	87.0	78.6	77.8	76.1	78.6
57.5°	5923.4	1723.5	256.0	161.5	128.0	98.7	82.0	73.6	72.0	69.4	72.0
60°	7042.0	2090.8	234.3	151.4	117.1	93.7	77.8	67.8	65.3	61.1	61.9
62.5°	8135.5	2387.8	209.2	138.9	107.1	88.7	71.1	61.1	56.9	51.9	52.7
65°	9072.5	2504.9	182.4	123.8	97.0	77.0	61.9	53.5	47.7	41.0	40.2
67.5°	9182.9	2212.1	156.5	109.6	87.0	65.3	52.7	47.7	38.5	32.6	31.0
70°	8264.3	1648.2	130.5	97.0	75.3	55.2	45.2	41.8	36.0	31.0	28.4
72.5°	6581.0	1216.5	109.6	86.2	66.1	46.9	38.5	39.3	36.0	30.1	26.8
75°	4352.2	696.1	89.5	72.0	55.2	37.6	35.1	35.1	34.3	28.4	25.1
77.5°	2094.1	300.4	68.6	56.9	44.3	28.4	31.8	31.8	32.6	25.9	20.9
80°	594.0	90.4	42.7	38.5	32.6	19.2	25.1	24.3	21.8	15.1	9.2
82.5°	106.3	35.1	19.2	20.1	18.4	7.5	14.2	13.4	10.9	5.9	0.8
85°	29.3	13.4	10.9	11.7	9.2	2.5	5.9	7.5	5.9	3.3	0.0
87.5°	7.5	5.9	7.5	8.4	6.7	0.8	2.5	0.8	2.5	0.8	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)