

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: P368255

Luminaire Tested: **MSA-SA4A-750-U-SL3-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368255
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-19)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-750-U-SL3-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS
EACH AND TYPE III SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12731 lumens
Efficiency: N/A
Efficacy: 98.7 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type III - Short
BUG Rating: B1 - U0 - G3

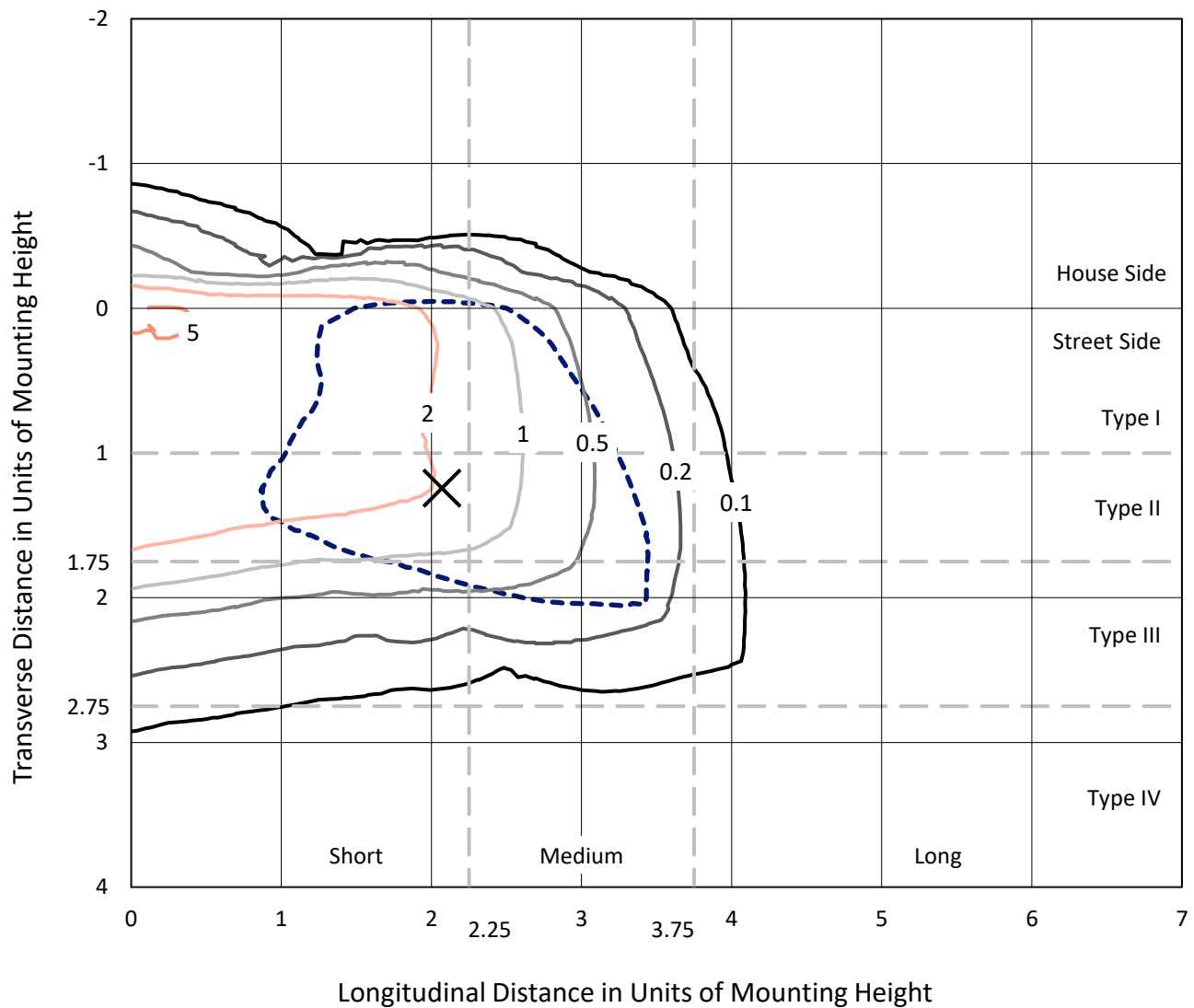
Input Watts (W): 129
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

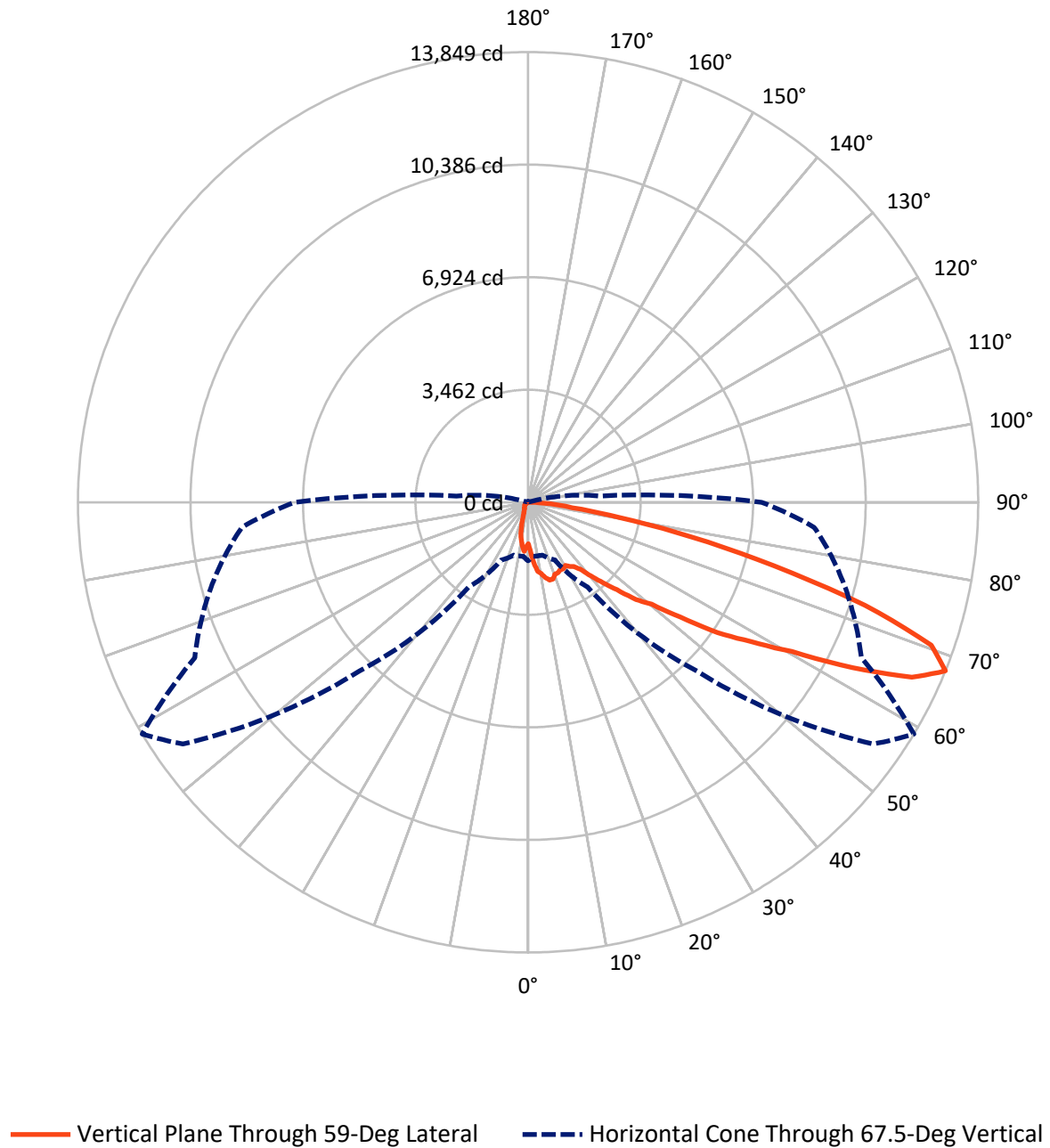
✕ Max cd
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.7 fc
 Type III - Short - N/A

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Luminous Intensity Polar Plot



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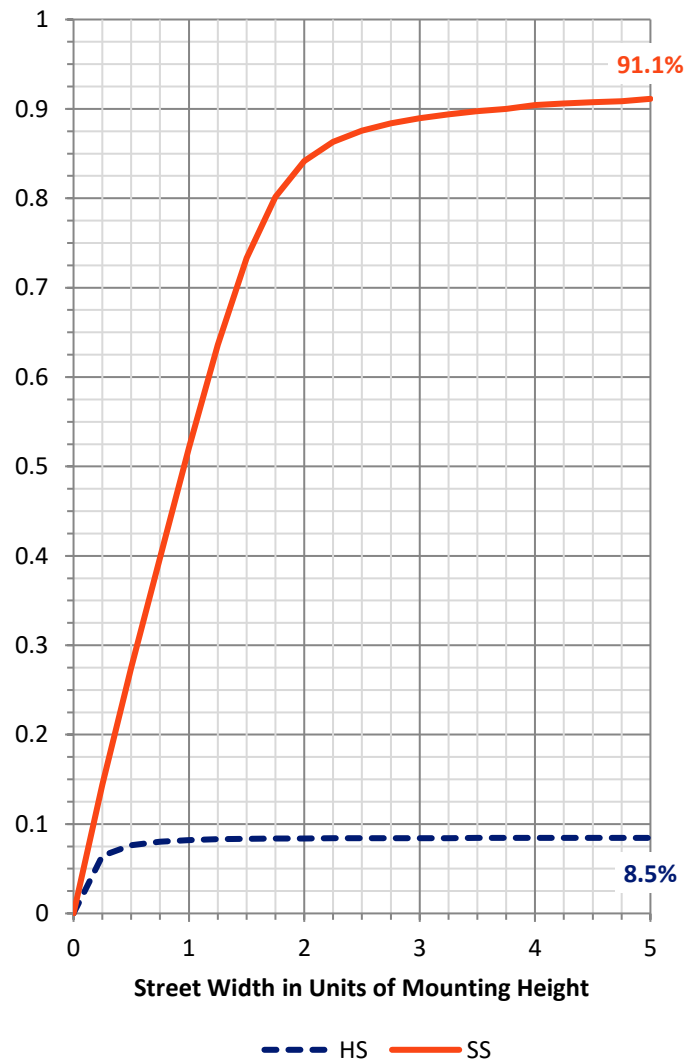
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1082.7	0.0	1082.7
	% Fixture	8.5	0.0	8.5
Street Side	Lumens	11648.3	0.0	11648.3
	% Fixture	91.5	0.0	91.5
Total	Lumens	12731.0	0.0	12731.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	154.9	1.2
10°-20°	436.1	3.4
20°-30°	648.7	5.1
30°-40°	1000.7	7.9
40°-50°	1786.0	14.0
50°-60°	3178.2	25.0
60°-70°	3701.5	29.1
70°-80°	1646.1	12.9
80°-90°	178.8	1.4
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°	12731.0	100.0
0°-180°	12731.0	100.0

Coefficient of Utilization



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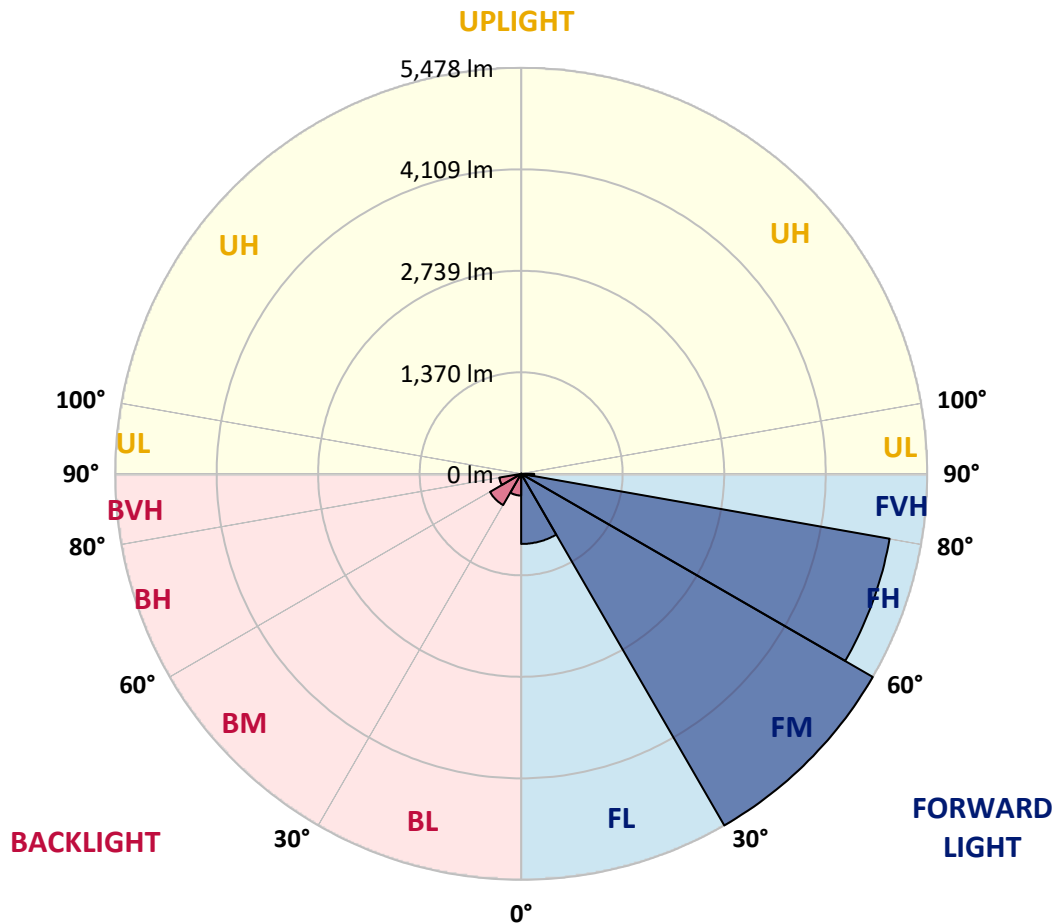
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	946.8	7.4			
FM	(30°-60°)	5478.2	43.0			
FH	(60°-80°)	5047.7	39.6			G3/7500
FVH	(80°-90°)	175.6	1.4			G2/225
BL	(0°-30°)	292.8	2.3	B1/500		
BM	(30°-60°)	486.8	3.8	B1/1000		
BH	(60°-80°)	299.9	2.4	B1/500		G1/500
BVH	(80°-90°)	3.2	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 III Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1273.8	1273.8	1273.8	1273.8	1273.8	1273.8	1273.8	1273.8	1273.8	1273.8	1273.8
2.5°	1660.6	1598.0	1509.1	1535.5	1559.3	1581.9	1544.5	1523.2	1512.9	1421.4	1536.1
5°	2038.9	1960.9	1920.3	1910.0	1884.2	1826.9	1922.3	1879.7	1893.9	1912.0	1949.3
7.5°	2154.3	2118.9	2060.2	2082.1	1984.2	1975.8	2107.9	2144.7	2193.0	2160.1	2205.3
10°	2095.0	2033.8	2061.5	2053.8	2049.9	2136.3	2229.1	2231.0	2303.2	2338.1	2185.3
12.5°	1977.7	1984.8	2084.1	2076.3	2205.3	2378.0	2399.3	2376.7	2494.7	2434.1	2410.9
15°	2055.7	2113.7	2058.9	2077.6	2123.4	2339.3	2414.8	2484.4	2595.9	2632.0	2475.4
17.5°	2149.8	2155.6	2055.7	2032.5	2147.9	2248.4	2426.4	2483.7	2494.7	2811.2	2620.4
20°	2098.9	2148.5	2029.3	1882.9	2062.2	2198.8	2379.3	2361.3	2434.7	2864.1	2653.3
22.5°	2234.3	2163.4	2010.6	1900.4	1960.9	2085.4	2238.1	2356.1	2466.3	2737.7	2695.8
25°	2247.2	2221.4	2085.4	1987.4	1977.1	2008.6	2221.4	2297.4	2470.2	2851.2	2659.7
27.5°	2392.2	2362.5	2084.1	2093.7	1997.0	1899.7	2140.2	2318.7	2540.5	2782.2	2736.4
30°	2579.1	2581.7	2222.7	2253.0	2115.0	1958.4	2206.5	2255.5	2588.2	2892.4	2793.2
32.5°	2768.7	2846.7	2496.6	2336.1	2292.9	2180.8	2124.0	2350.3	2536.0	3080.7	2935.0
35°	3056.8	3109.7	2722.2	2578.5	2409.0	2281.3	2348.4	2429.6	2723.5	3330.1	3121.3
37.5°	3544.8	3449.4	3127.1	2877.0	2836.3	2648.1	2681.6	2608.8	2915.0	3624.1	3490.0
40°	3819.4	3733.0	3397.8	3276.0	3016.8	3045.8	2940.1	2982.7	3192.8	3930.3	3825.8
42.5°	4105.6	4023.1	3729.2	3642.8	3395.9	3276.0	3228.3	3381.1	3618.9	4440.2	4307.4
45°	4393.1	4183.6	4059.2	4102.4	3991.5	3754.3	3698.9	3834.9	4084.3	5066.7	4815.3
47.5°	4635.5	4458.9	4365.4	4345.4	4302.2	4631.6	4406.0	4466.0	4576.2	5621.1	5448.4
50°	5072.5	4898.5	4752.2	4711.6	4921.7	5389.1	5041.0	4924.9	5145.4	6290.9	6181.9
52.5°	5703.6	5481.9	5249.2	5249.8	5646.3	5902.8	6067.8	5864.1	5905.4	7027.7	6979.3
55°	6211.0	5929.3	5736.5	5888.6	6479.8	6623.5	7253.3	7074.8	7021.2	7711.0	7651.7
57.5°	6280.6	5942.8	5851.3	6118.1	6927.1	7845.1	8522.6	8076.5	7994.6	8282.8	8400.7
60°	5630.8	5272.4	5341.4	5770.7	7072.8	8589.6	9688.1	9323.8	8803.6	8952.5	9033.8
62.5°	4199.7	3913.5	4106.9	4675.5	6511.3	9088.6	11037.3	11206.1	9742.2	9455.3	9437.9
65°	2724.8	2545.6	2672.6	3138.7	4927.5	9031.8	12242.7	12975.0	10481.6	9865.3	9564.9
67.5°	1802.4	1666.4	1684.4	1960.3	3186.4	7345.5	12963.4	13848.5	11313.2	10098.0	8837.2
70°	1343.4	1236.4	1242.8	1392.4	1891.3	4844.4	11958.4	13159.4	11616.8	9291.6	7132.8
72.5°	968.9	897.3	957.3	1123.6	1507.1	2561.7	8913.2	10837.4	10129.6	7328.7	4805.7
75°	671.1	624.0	722.0	939.9	1375.6	1590.3	5889.9	7801.2	7099.9	4598.1	2172.4
77.5°	371.9	357.8	498.9	765.8	1248.6	1303.4	3608.0	5126.1	3938.0	1648.3	517.0
80°	162.4	157.3	241.7	575.0	1049.4	1177.7	2031.2	2842.1	1549.0	293.9	167.0
82.5°	69.6	67.0	103.1	346.2	762.6	985.0	1252.5	1367.9	533.1	90.9	94.8
85°	12.2	13.5	41.3	182.4	464.1	500.2	907.0	809.6	268.2	43.2	67.7
87.5°	0.0	0.0	6.4	35.5	87.0	143.1	393.2	283.6	50.9	14.2	11.6
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°	1273.8	1273.8	1273.8	1273.8	1273.8	1273.8	1273.8	1273.8	1273.8	1273.8	1273.8
2.5°	1552.3	1516.2	1378.9	1361.4	1342.8	1315.0	1304.7	1245.4	1237.7	1313.7	1313.7
5°	1931.9	1803.0	1672.2	1569.0	1476.8	1349.2	1313.1	1275.7	1245.4	1237.7	1261.5
7.5°	2132.4	1975.1	1769.5	1507.1	1294.4	1109.4	1032.0	977.9	917.3	935.3	945.0
10°	2121.5	1954.5	1692.1	1355.0	1119.1	914.7	718.1	603.4	539.6	508.0	504.1
12.5°	2229.1	2071.8	1639.9	1233.8	932.8	650.4	451.9	370.0	323.0	323.6	319.7
15°	2291.6	2120.2	1579.3	1080.4	656.9	418.4	313.3	295.2	288.8	295.9	292.0
17.5°	2401.9	2171.1	1442.0	851.5	451.9	315.9	288.1	281.1	289.4	304.3	300.4
20°	2393.5	2082.8	1246.7	600.1	333.9	284.3	272.7	261.7	279.1	294.6	292.0
22.5°	2385.8	1996.4	1063.0	442.9	279.1	259.1	249.5	245.0	254.0	272.0	275.9
25°	2317.4	1953.9	876.7	332.6	252.7	235.3	230.8	226.9	230.1	245.0	244.3
27.5°	2401.2	1846.2	676.9	279.1	234.0	213.4	209.5	203.1	196.6	209.5	211.4
30°	2383.8	1861.0	530.5	245.6	215.3	187.6	188.9	175.3	163.7	175.3	175.3
32.5°	2447.0	1752.7	424.8	223.0	196.6	176.6	160.5	146.3	137.9	145.0	146.3
35°	2539.2	1757.2	332.6	208.9	180.5	157.3	137.9	123.8	116.0	119.3	121.2
37.5°	2847.9	1726.3	277.8	197.9	174.7	145.7	125.7	107.0	101.9	105.7	107.7
40°	3049.1	1808.8	245.0	192.1	159.9	134.1	107.7	94.1	89.6	91.5	94.8
42.5°	3428.1	1854.6	228.8	185.7	146.3	114.7	92.2	84.4	78.0	80.6	83.2
45°	3833.6	1932.6	216.6	178.6	136.0	100.6	81.2	74.8	66.4	67.0	69.6
47.5°	4331.9	2118.2	202.4	166.3	121.8	91.5	72.2	62.5	54.8	54.1	57.4
50°	5001.0	2366.4	189.5	150.8	112.8	83.8	63.2	50.9	44.5	42.5	45.1
52.5°	5715.2	2687.4	176.0	139.9	101.9	73.5	54.1	41.3	35.5	34.2	36.1
55°	6423.0	2995.6	163.1	132.8	90.2	63.2	45.8	34.2	29.0	27.7	29.0
57.5°	7229.5	3328.8	146.3	118.6	79.3	54.8	38.0	28.4	23.9	22.6	23.2
60°	7836.7	3446.2	132.1	103.1	69.0	48.3	32.2	22.6	19.3	18.0	18.7
62.5°	8124.8	3254.7	118.6	89.6	60.6	41.9	27.1	18.7	16.1	14.8	14.8
65°	8050.1	2830.5	105.1	76.7	52.2	34.8	21.3	16.1	14.2	12.2	11.6
67.5°	7186.3	2214.9	89.6	64.5	43.8	28.4	18.0	15.5	12.9	11.6	9.7
70°	5699.1	1603.8	72.8	53.5	36.7	23.2	14.2	14.2	12.2	11.6	9.0
72.5°	3735.6	1009.5	59.3	43.2	30.3	18.0	11.0	12.9	11.6	11.6	8.4
75°	1618.7	361.0	47.7	34.8	25.1	12.2	9.7	11.6	12.2	11.6	9.7
77.5°	379.0	112.2	37.4	27.7	20.6	8.4	9.7	11.6	12.2	11.0	8.4
80°	142.5	47.7	24.5	18.0	16.1	5.2	8.4	7.1	6.4	4.5	1.3
82.5°	86.4	20.0	12.9	9.0	7.7	1.3	3.9	2.6	1.3	1.3	0.0
85°	61.2	9.7	7.1	6.4	3.9	0.0	0.6	0.0	0.0	0.6	0.0
87.5°	8.4	2.6	3.2	3.2	2.6	0.0	0.0	0.0	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)