

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: P366903

Luminaire Tested: **MSA-SA1C-730-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366903
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1C-730-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) 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: 4277 lumens
Efficiency: N/A
Efficacy: 72.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

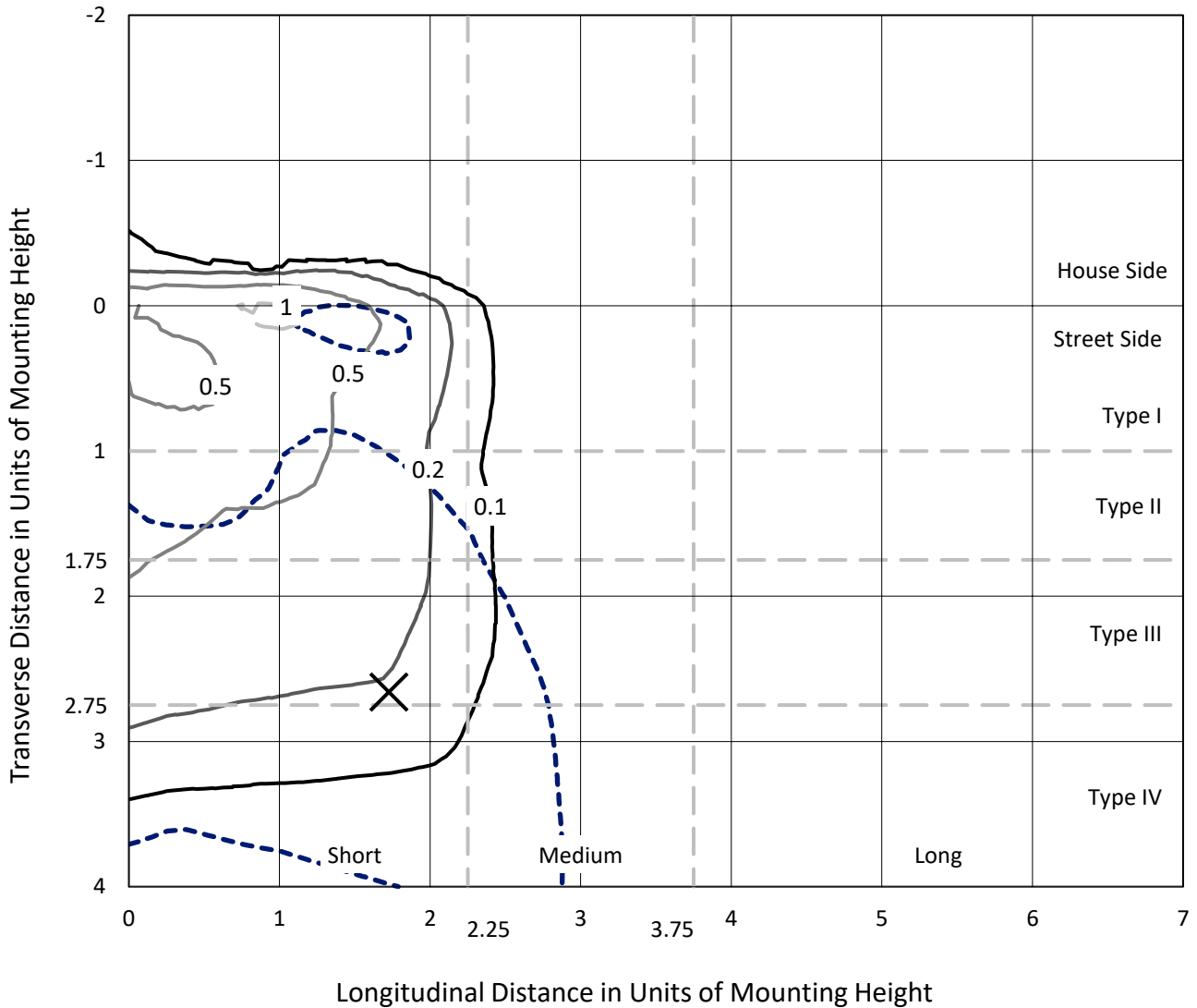
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

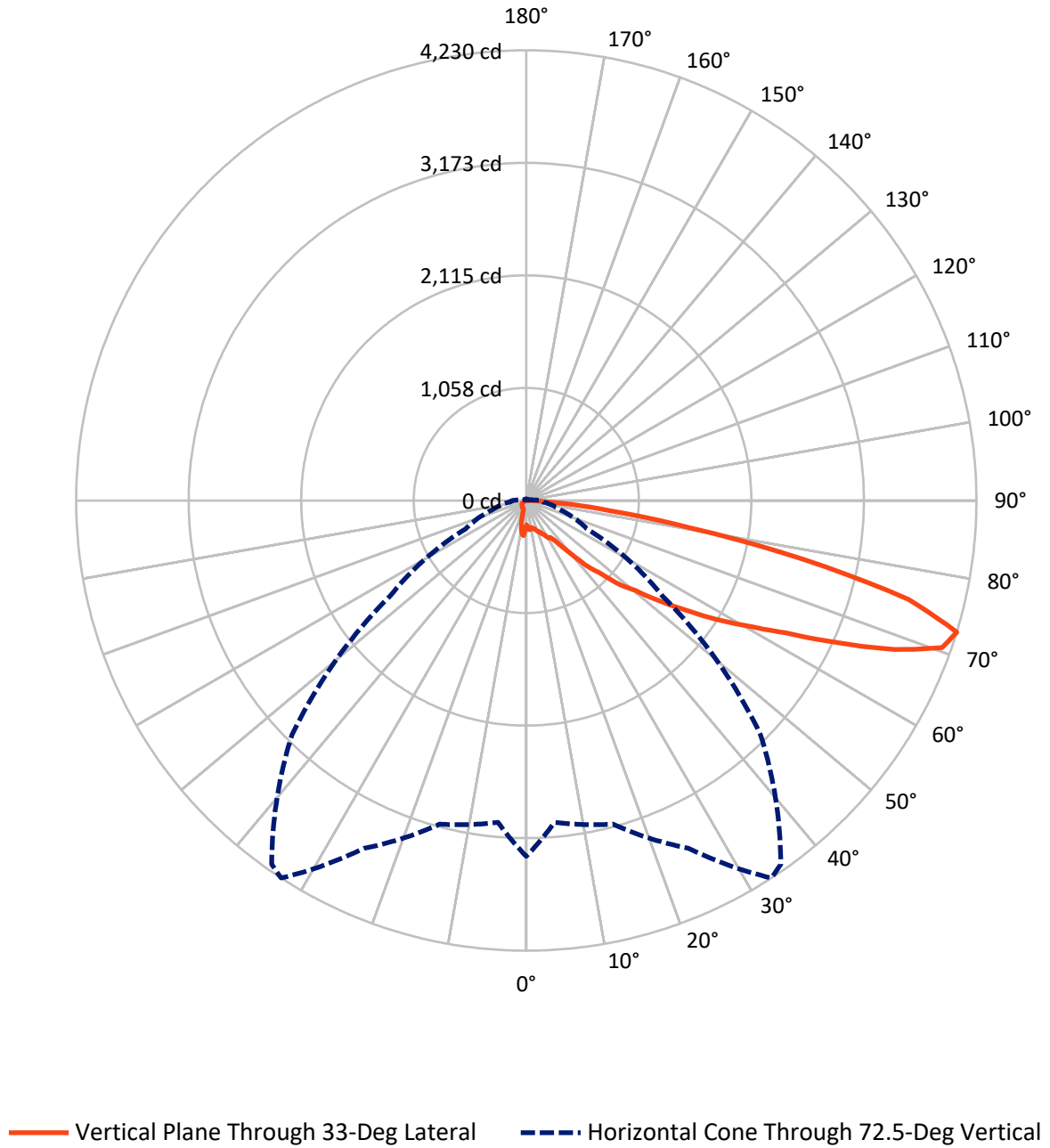
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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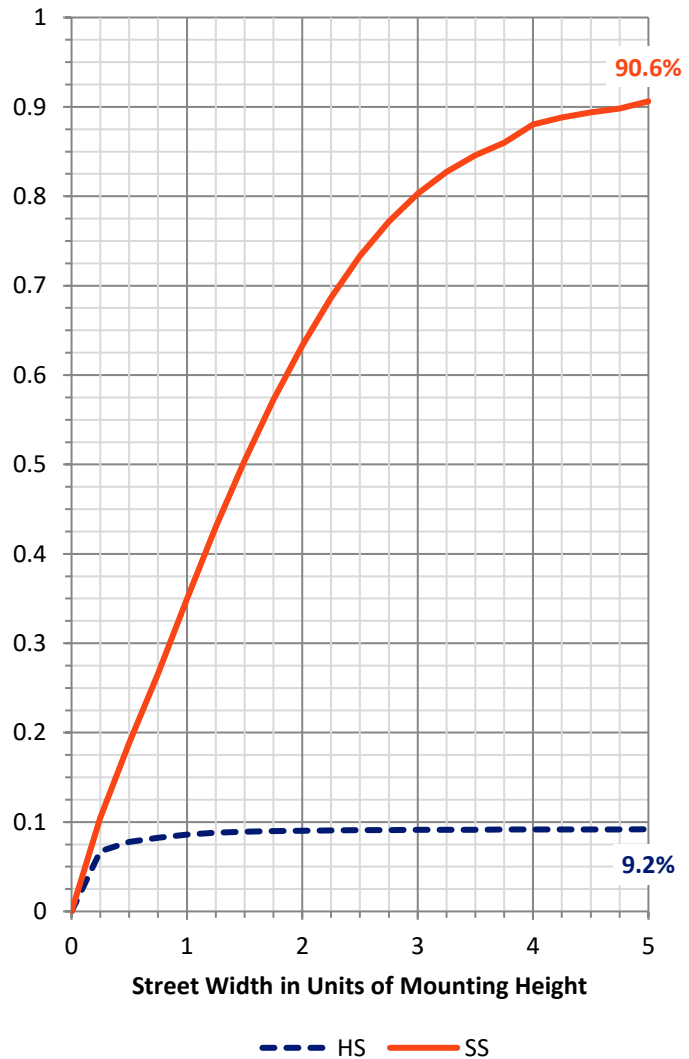
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	395.5	0.0	395.5
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	3881.5	0.0	3881.5
	% Fixture	90.8	0.0	90.8
Total	Lumens	4277.0	0.0	4277.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.4	0.7
10°-20°	87.7	2.1
20°-30°	148.8	3.5
30°-40°	272.3	6.4
40°-50°	574.7	13.4
50°-60°	961.6	22.5
60°-70°	1287.1	30.1
70°-80°	840.8	19.7
80°-90°	74.5	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°	4277.0	100.0
0°-180°	4277.0	100.0

Coefficient of Utilization



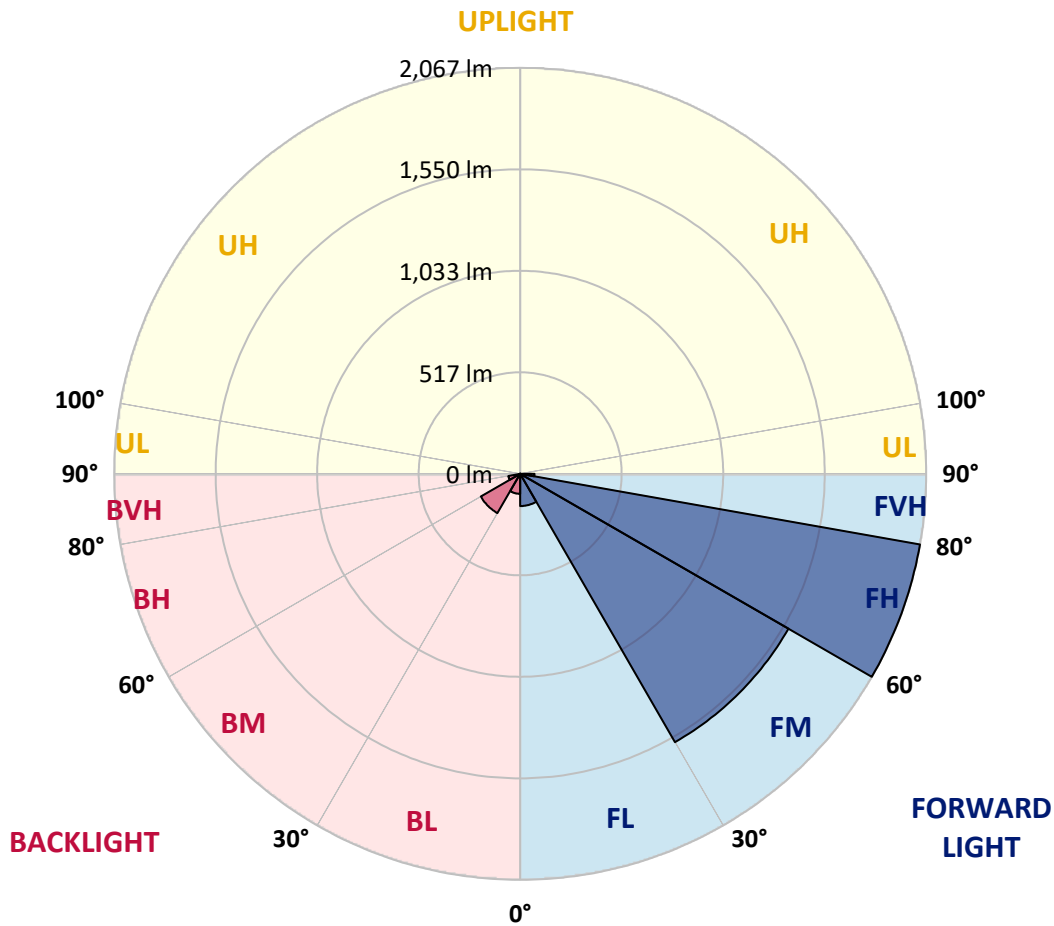
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	164.2	3.8			
FM (30°-60°)	1577.4	36.9			
FH (60°-80°)	2066.8	48.3			G2/5000
FVH (80°-90°)	73.1	1.7			G1/100
BL (0°-30°)	101.8	2.4	B0/110		
BM (30°-60°)	231.2	5.4	B1/1000		
BH (60°-80°)	61.0	1.4	B0/110		G0/110
BVH (80°-90°)	1.4	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	227.5	227.5	227.5	227.5	227.5	227.5	227.5	227.5	227.5	227.5	227.5
2.5°	271.2	260.7	245.5	246.5	249.1	251.2	256.9	254.6	250.0	249.8	271.2
5°	287.3	275.7	274.7	276.2	275.5	279.3	274.5	289.9	303.0	318.7	343.8
7.5°	279.5	274.0	267.1	274.3	274.0	272.1	275.2	306.6	338.1	358.1	399.6
10°	256.9	250.8	256.0	258.4	256.7	265.0	285.7	311.3	349.1	390.9	411.0
12.5°	250.5	254.3	256.2	256.2	272.1	276.4	308.0	332.2	377.1	410.1	468.7
15°	275.5	282.8	269.8	266.9	271.9	274.3	309.4	338.6	396.1	456.4	505.6
17.5°	315.1	314.6	294.5	283.3	291.1	296.8	316.3	350.5	384.2	492.7	564.0
20°	342.4	342.9	306.6	283.3	309.2	312.5	334.1	361.4	388.0	511.0	602.2
22.5°	377.6	365.0	324.8	302.3	319.9	322.9	346.7	368.3	407.5	508.9	651.1
25°	406.3	398.2	347.6	332.0	347.6	343.4	365.0	397.5	428.4	542.8	679.8
27.5°	450.9	437.2	363.8	366.6	365.7	368.8	373.8	423.6	465.2	544.5	746.3
30°	492.5	484.4	399.9	399.9	409.1	403.2	406.8	467.1	500.8	583.0	821.1
32.5°	535.5	535.9	442.4	419.8	412.5	436.9	460.9	488.2	543.8	649.0	935.6
35°	649.2	639.7	523.8	467.6	461.6	460.2	498.7	572.5	620.0	734.9	1089.7
37.5°	878.4	845.4	699.1	575.8	553.5	545.9	589.6	665.4	712.6	861.3	1344.5
40°	1113.5	1052.9	890.5	751.6	679.1	646.4	697.2	761.5	845.6	1000.9	1580.3
42.5°	1319.8	1245.0	1034.6	941.1	846.8	832.5	784.8	889.5	1035.6	1204.2	1811.3
45°	1520.9	1373.7	1162.8	1088.8	974.3	982.4	966.2	1056.9	1232.9	1426.9	2016.3
47.5°	1659.4	1527.1	1320.0	1223.9	1178.0	1130.8	1259.0	1353.3	1408.6	1568.4	2193.4
50°	1808.5	1674.6	1455.2	1388.0	1327.6	1375.4	1541.8	1554.4	1549.9	1700.5	2314.0
52.5°	2001.1	1843.2	1610.2	1534.2	1568.4	1615.9	1808.0	1810.4	1675.5	1811.6	2401.0
55°	2179.2	2004.2	1816.8	1745.1	1816.6	1856.7	2069.7	1991.6	1748.7	1887.1	2443.7
57.5°	2430.2	2227.6	2091.5	1965.2	2110.1	2071.6	2299.8	2183.7	1830.8	1937.2	2428.0
60°	2747.4	2509.0	2372.7	2239.0	2394.3	2420.4	2524.4	2279.6	1862.6	1953.6	2333.8
62.5°	3070.1	2830.3	2651.0	2560.3	2736.5	2822.5	2732.5	2327.3	1824.4	1921.5	2120.3
65°	3470.5	3163.4	2954.0	2900.8	3227.3	3353.6	2978.5	2339.0	1750.6	1745.1	1704.7
67.5°	3744.7	3445.8	3253.7	3342.7	3737.1	3747.4	3199.3	2342.5	1501.9	1366.3	1118.9
70°	3809.8	3489.7	3403.8	3665.9	4143.9	4015.4	3270.5	2162.1	1113.9	810.9	511.5
72.5°	3344.4	3036.2	3148.0	3604.9	4230.4	4171.5	3113.1	1559.9	627.1	324.4	157.0
75°	2051.4	1865.0	2361.5	3056.3	3713.4	3675.4	2428.7	805.9	252.7	129.7	58.7
77.5°	892.1	828.5	1232.4	2027.9	2668.3	2634.4	1423.1	296.8	130.6	91.2	29.7
80°	295.2	286.4	466.8	960.3	1563.0	1533.0	599.6	123.5	93.1	73.1	16.6
82.5°	70.1	69.6	162.9	441.9	796.2	771.3	184.0	68.2	67.4	57.7	8.8
85°	17.6	18.0	45.1	180.7	323.4	285.2	48.0	34.0	47.5	39.2	4.5
87.5°	0.0	0.0	11.6	25.9	48.9	30.6	5.2	9.0	13.3	14.0	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



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	227.5	227.5	227.5	227.5	227.5	227.5	227.5	227.5	227.5	227.5	227.5
2.5°	275.9	273.3	251.9	257.2	265.2	264.5	269.8	265.7	262.2	279.7	278.1
5°	351.0	336.7	330.1	339.3	334.3	322.7	332.4	330.8	327.9	333.9	338.4
7.5°	407.2	394.2	388.2	368.8	340.5	318.2	321.8	313.4	305.6	314.9	324.4
10°	425.8	418.6	417.9	379.9	353.3	321.0	282.8	249.8	241.0	229.4	234.6
12.5°	476.1	480.4	453.5	409.1	357.9	295.9	228.0	181.2	162.2	149.8	150.5
15°	517.4	532.4	493.4	413.7	314.9	225.6	151.7	109.7	97.8	94.7	93.8
17.5°	578.9	593.4	505.8	381.6	253.8	152.9	97.6	85.5	86.2	88.3	87.9
20°	624.5	622.4	495.1	324.8	187.1	100.2	81.7	80.0	83.8	90.0	88.6
22.5°	668.5	653.7	488.5	272.4	121.1	80.5	78.8	78.6	82.2	88.1	89.8
25°	699.8	702.2	477.3	213.2	88.1	74.8	76.2	78.4	81.9	88.3	87.4
27.5°	789.6	723.1	430.8	154.8	74.3	71.7	75.3	79.5	80.7	88.8	89.0
30°	847.7	801.9	400.4	104.2	68.6	66.3	73.4	79.1	80.5	90.9	91.7
32.5°	949.1	835.9	365.2	77.4	63.9	64.6	69.1	76.7	83.3	94.5	95.0
35°	1075.2	944.9	301.6	69.6	62.2	61.0	63.2	72.0	82.9	95.0	97.4
37.5°	1315.3	1010.2	239.1	67.4	62.2	60.1	62.2	67.4	81.4	99.7	104.7
40°	1476.1	1143.1	172.4	67.0	61.0	59.1	59.8	65.1	77.4	96.9	104.2
42.5°	1674.1	1199.2	127.0	65.8	59.8	57.0	57.5	64.1	73.4	90.9	96.4
45°	1836.3	1240.0	100.0	65.3	57.0	56.0	57.0	63.4	69.6	78.1	83.1
47.5°	1959.5	1287.5	80.3	62.2	56.3	56.0	54.9	59.4	63.2	65.3	68.6
50°	2049.8	1276.8	66.5	57.5	53.9	55.3	53.2	53.9	54.9	53.7	57.5
52.5°	2105.1	1238.4	55.3	51.8	51.1	52.2	49.6	47.5	45.8	44.9	47.3
55°	2125.3	1161.2	47.0	44.4	46.1	46.5	44.4	40.6	37.8	36.3	38.2
57.5°	2087.0	1043.6	40.8	36.8	40.6	40.6	37.8	33.7	30.4	28.0	29.9
60°	1990.2	913.7	36.3	30.6	34.7	34.9	31.6	27.3	24.7	22.3	23.5
62.5°	1809.7	772.2	31.8	26.6	29.9	30.2	26.1	22.1	20.2	17.6	18.5
65°	1448.7	590.6	27.1	23.5	25.9	25.2	21.6	18.8	16.4	14.0	14.5
67.5°	940.3	364.5	23.5	21.4	21.8	21.1	18.3	16.4	13.8	11.9	12.1
70°	421.0	157.0	20.7	19.2	19.0	17.8	15.4	15.2	13.5	11.9	11.9
72.5°	129.9	59.1	17.8	17.3	16.4	15.0	13.5	14.5	13.3	11.4	11.2
75°	51.3	27.1	14.7	14.7	14.2	12.3	12.1	13.1	12.3	10.4	10.0
77.5°	26.8	17.1	12.1	12.6	12.3	9.5	10.9	11.9	11.4	8.8	7.4
80°	15.9	10.4	9.0	10.2	10.0	6.6	8.3	7.6	5.5	2.6	0.7
82.5°	8.8	4.7	4.0	5.9	5.9	2.4	4.3	3.8	2.1	0.0	0.0
85°	4.3	3.3	3.1	3.3	2.4	0.7	2.1	2.1	1.2	0.0	0.0
87.5°	2.1	1.9	1.4	1.2	0.9	0.0	0.7	0.9	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)