

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: P367845

Luminaire Tested: **MSA-SA3B-740-U-T2-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367845  
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-SA3B-740-U-T2-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 11087 lumens  
Efficiency: N/A  
Efficacy: 88.0 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type II - Medium  
BUG Rating: B1 - U0 - G2

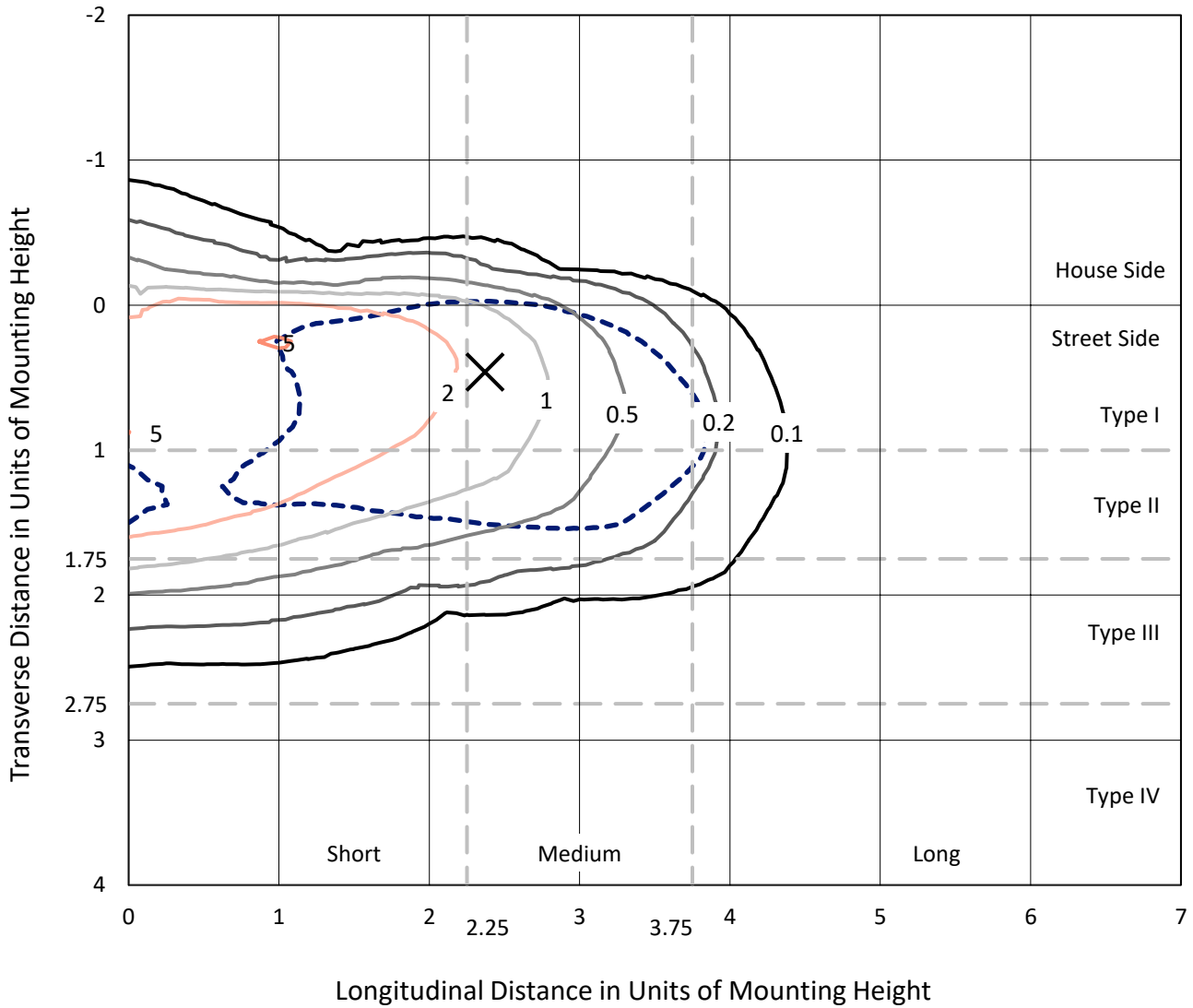
Input Watts (W): 126  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

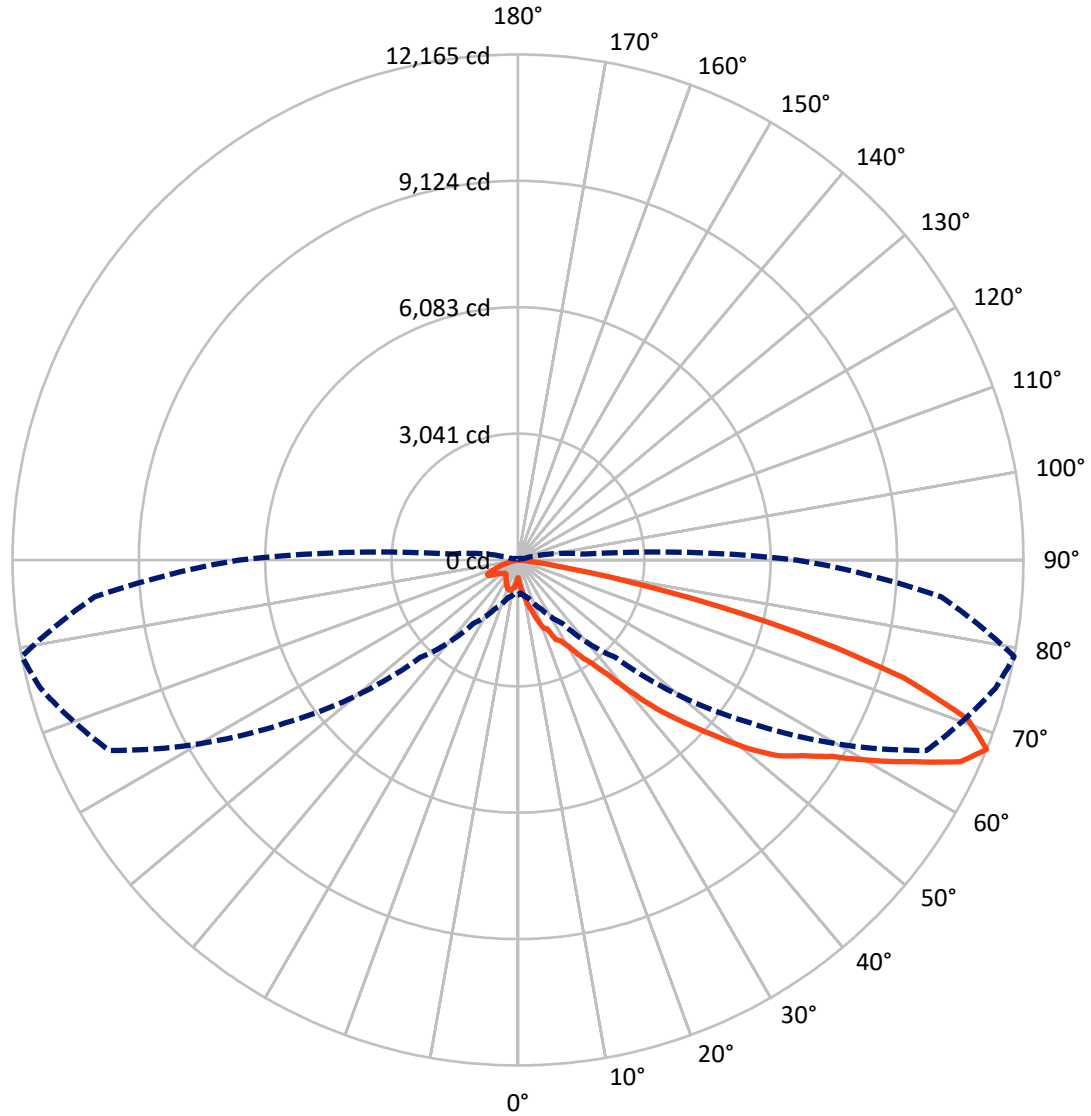
× Max cd  
 - - - 1/2 Max cd



Based on 20 foot mounting height. Maximum calculated value = 5.2 fc  
 Type II - Medium - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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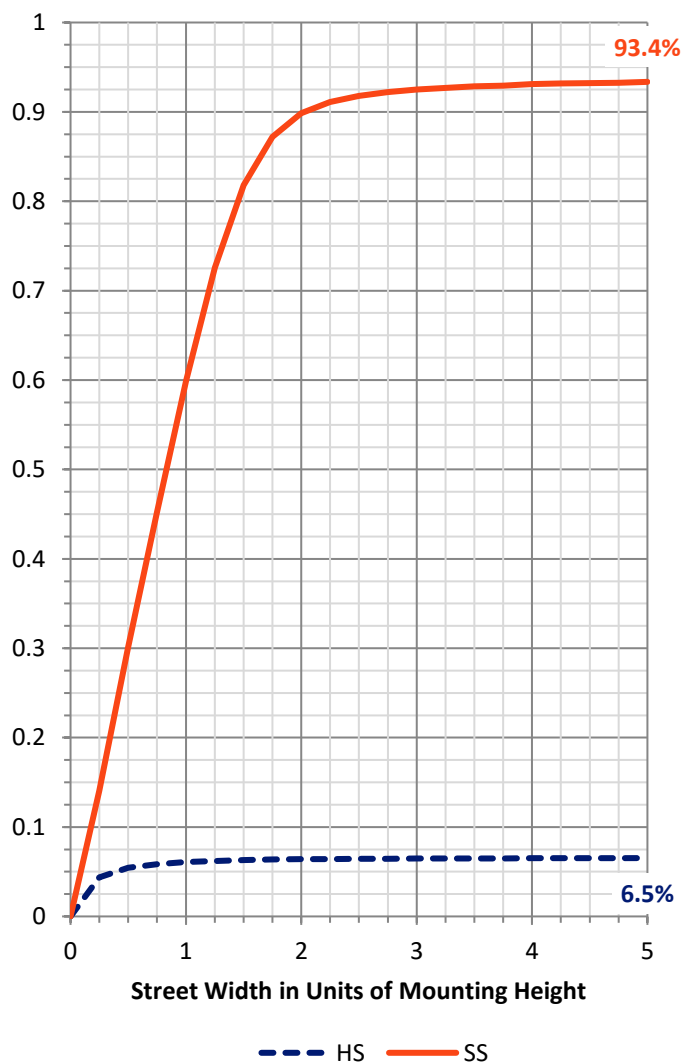
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	728.5	0.0	728.5
	% Fixture	6.6	0.0	6.6
<b>Street Side</b>	Lumens	10358.5	0.0	10358.5
	% Fixture	93.4	0.0	93.4
<b>Total</b>	Lumens	11087.0	0.0	11087.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	62.1	0.6
10°-20°	247.7	2.2
20°-30°	477.9	4.3
30°-40°	938.8	8.5
40°-50°	1880.7	17.0
50°-60°	3006.1	27.1
60°-70°	3024.6	27.3
70°-80°	1364.5	12.3
80°-90°	84.4	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°	11087.0	100.0
0°-180°	11087.0	100.0

**Coefficient of Utilization**



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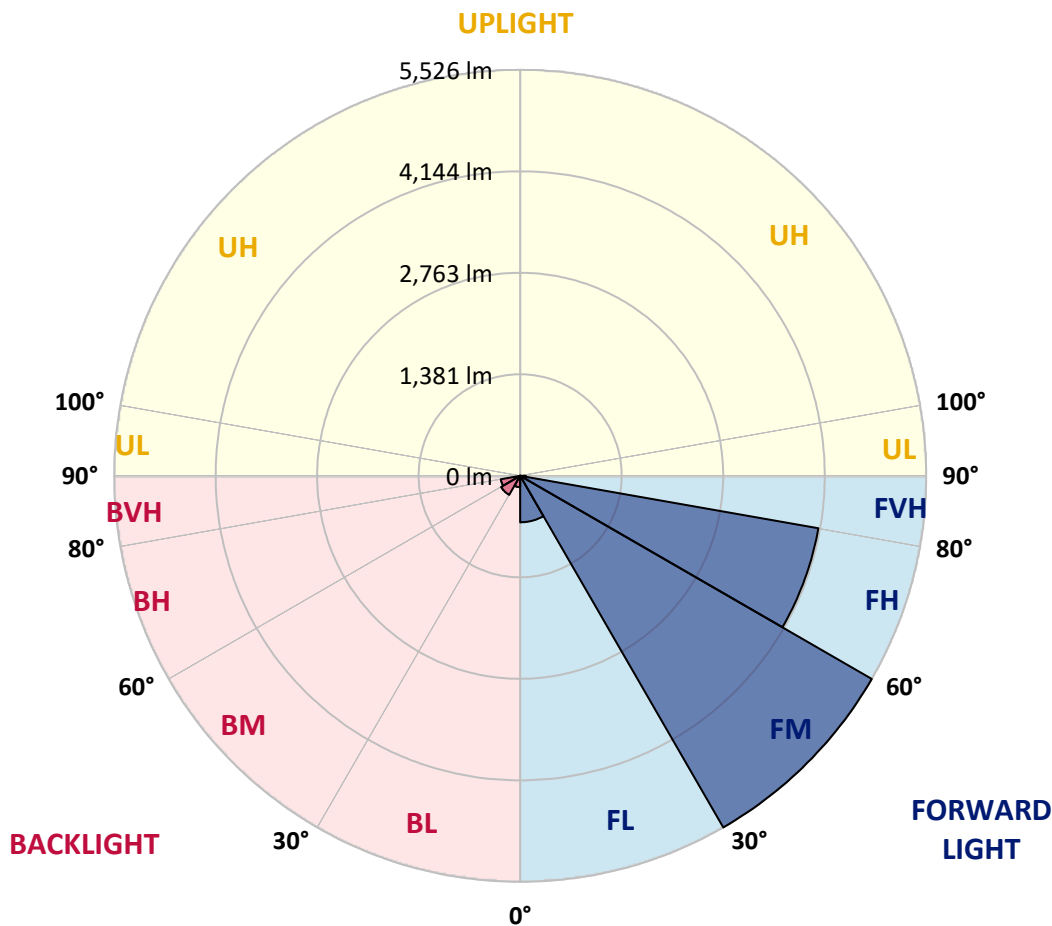
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	633.0	5.7			
FM (30°-60°)	5525.9	49.8			
FH (60°-80°)	4120.6	37.2			G2/5000
FVH (80°-90°)	79.0	0.7			G1/100
BL (0°-30°)	154.8	1.4	B1/500		
BM (30°-60°)	299.7	2.7	B1/1000		
BH (60°-80°)	268.5	2.4	B1/500		G1/500
BVH (80°-90°)	5.4	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 II Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	427.2	427.2	427.2	427.2	427.2	427.2	427.2	427.2	427.2	427.2	427.2
2.5°	576.9	556.2	522.6	541.5	540.3	550.1	531.7	511.6	479.2	511.6	514.0
5°	830.6	792.1	767.6	762.7	735.9	710.8	705.3	684.5	668.6	639.9	665.6
7.5°	1034.7	1017.0	973.6	968.7	902.7	866.0	877.6	868.5	808.0	778.0	803.1
10°	1121.5	1090.9	1097.1	1090.9	1062.8	1073.2	1049.4	1021.9	973.6	924.1	861.8
12.5°	1155.1	1150.2	1201.0	1194.8	1260.9	1340.3	1287.1	1241.3	1129.5	1117.2	1032.3
15°	1227.2	1257.8	1250.5	1276.1	1318.3	1453.4	1452.2	1463.2	1344.6	1281.0	1158.2
17.5°	1291.4	1314.0	1277.4	1306.7	1421.6	1503.5	1612.9	1570.1	1583.6	1518.8	1328.7
20°	1263.9	1289.6	1252.9	1235.2	1437.5	1592.7	1738.8	1707.6	1788.3	1748.0	1485.8
22.5°	1435.6	1387.4	1295.1	1237.6	1388.6	1590.9	1783.4	1913.6	1899.5	1800.5	1631.8
25°	1647.7	1618.4	1507.8	1406.3	1419.8	1579.9	1924.0	2115.3	2156.8	2114.7	1770.6
27.5°	1933.8	1927.0	1700.9	1656.9	1526.1	1531.6	1946.0	2369.5	2274.8	2208.8	1932.5
30°	2307.2	2254.0	1985.7	1928.3	1735.1	1640.4	2080.4	2588.9	2519.3	2429.4	2084.7
32.5°	2708.7	2716.7	2374.4	2184.9	2029.7	1917.3	2027.3	2691.6	2821.8	2749.1	2274.8
35°	3164.7	3200.1	2781.5	2559.0	2257.1	2091.4	2255.8	3007.0	3240.4	3049.1	2529.7
37.5°	3866.9	3865.7	3376.7	2933.6	2714.2	2534.5	2636.6	3293.6	3755.1	3486.1	2986.8
40°	4484.8	4350.3	3895.6	3386.5	3044.3	2995.4	2921.4	3686.0	4304.5	4142.5	3393.2
42.5°	4946.2	4851.5	4302.1	3906.0	3481.9	3326.6	3300.3	4261.1	5115.5	4888.8	3973.2
45°	5498.1	5187.6	4783.1	4426.1	3994.0	3948.8	3887.1	4844.8	6059.2	5548.2	4477.5
47.5°	5992.6	5700.4	5317.8	4859.4	4363.2	4736.0	4498.9	5357.6	6745.5	6265.8	5033.6
50°	6408.8	6098.3	5669.9	5320.9	5108.2	5361.2	4965.8	5779.9	7486.9	7098.2	5553.7
52.5°	6620.9	6269.4	5938.2	5722.4	5852.6	5795.8	5599.0	6291.4	8118.8	7827.9	6014.6
55°	6446.7	6103.2	5964.5	6071.4	6466.8	6302.4	6318.3	7084.1	8715.3	8314.4	6415.5
57.5°	5674.1	5360.6	5422.3	5715.1	6472.9	6903.2	7138.5	7854.2	9193.9	8920.7	7034.0
60°	4292.3	4039.9	4268.4	4787.9	5864.2	6783.4	7720.4	8624.3	9877.8	9792.2	7970.3
62.5°	2621.3	2484.4	2808.3	3456.2	4673.0	6196.1	8059.6	9651.1	10609.4	10700.4	8963.5
65°	1337.2	1275.5	1545.7	2115.3	3157.3	5089.9	7814.5	10289.1	11365.4	11701.5	9910.2
67.5°	842.2	802.5	946.7	1290.2	1862.9	3319.9	6842.1	10847.1	11899.6	12165.4	10226.2
70°	583.7	558.6	683.3	885.6	1175.3	1788.3	5080.1	10326.4	11476.0	11488.2	9461.6
72.5°	370.4	350.8	472.4	655.8	867.3	923.5	2912.2	8103.0	9823.4	9710.3	7662.3
75°	240.2	230.4	300.1	480.4	666.2	569.6	1439.3	5467.6	7043.8	6866.5	5089.3
77.5°	172.4	166.2	201.1	320.9	474.3	398.5	645.4	3258.8	4038.6	3651.2	2470.4
80°	103.9	103.3	145.5	201.1	337.4	281.1	298.3	1479.7	1565.8	1276.7	754.8
82.5°	51.9	53.8	81.3	129.6	217.0	184.0	136.3	492.6	420.5	309.9	152.8
85°	12.2	15.3	42.8	89.2	108.8	73.3	64.8	129.0	115.5	87.4	44.6
87.5°	0.0	0.0	13.4	21.4	29.3	12.2	22.0	24.4	31.2	24.4	9.2
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°	427.2	427.2	427.2	427.2	427.2	427.2	427.2	427.2	427.2	427.2	427.2
2.5°	514.6	507.3	462.7	451.0	449.8	437.0	440.0	427.8	428.4	455.9	455.9
5°	655.8	613.0	570.2	532.3	506.7	470.0	456.5	451.0	446.2	457.2	463.9
7.5°	770.1	707.1	630.1	547.6	471.2	418.7	411.3	397.9	393.0	404.0	412.5
10°	820.8	742.6	636.8	516.4	444.9	402.2	366.7	347.8	344.1	343.5	346.5
12.5°	928.4	831.2	644.2	504.8	427.2	380.2	339.8	308.0	278.7	281.8	278.7
15°	1014.5	899.6	644.2	476.7	384.4	337.4	266.5	250.6	246.3	253.0	247.5
17.5°	1144.7	967.5	611.8	426.6	347.8	262.2	235.3	234.1	242.6	252.4	246.3
20°	1223.0	976.7	557.4	369.1	285.4	227.4	217.6	207.8	220.0	228.0	224.9
22.5°	1304.2	977.3	503.0	338.6	229.8	207.2	191.3	183.4	185.2	192.5	193.7
25°	1339.1	953.4	452.3	298.3	208.4	185.2	168.7	160.1	157.1	160.7	159.5
27.5°	1433.8	907.6	397.3	254.2	198.0	164.4	149.1	138.7	129.6	135.7	136.9
30°	1447.3	892.9	367.3	226.1	184.6	145.5	132.0	121.0	114.3	122.8	122.8
32.5°	1490.0	812.3	352.0	214.5	170.5	134.5	116.1	108.2	107.0	112.5	113.1
35°	1556.1	776.8	329.4	205.4	157.7	121.6	104.5	100.8	99.6	103.9	103.9
37.5°	1779.7	732.8	304.4	197.4	146.7	114.9	101.5	95.3	96.0	99.6	102.1
40°	1928.3	738.3	267.1	187.6	133.8	108.8	95.3	91.1	90.5	92.3	94.1
42.5°	2203.9	742.6	250.6	177.2	124.1	101.5	89.2	86.2	83.7	85.6	87.4
45°	2511.9	765.2	242.0	168.7	118.6	97.2	83.7	81.9	76.4	77.6	80.1
47.5°	2809.0	847.7	231.6	156.5	113.7	94.7	78.2	74.0	70.3	69.7	72.1
50°	3146.3	927.8	220.0	143.0	108.8	91.1	72.7	66.0	63.6	63.6	65.4
52.5°	3448.2	1004.2	209.0	133.8	105.1	84.3	67.8	61.1	59.3	59.3	61.7
55°	3766.1	1084.2	199.2	125.3	100.2	77.6	63.6	57.5	56.8	55.6	57.5
57.5°	4327.1	1259.0	187.0	118.0	93.5	72.1	59.9	53.8	52.6	50.7	52.6
60°	5144.3	1527.3	171.1	110.6	85.6	68.5	56.8	49.5	47.7	44.6	45.2
62.5°	5943.1	1744.3	152.8	101.5	78.2	64.8	51.9	44.6	41.6	37.9	38.5
65°	6627.6	1829.9	133.2	90.5	70.9	56.2	45.2	39.1	34.8	29.9	29.3
67.5°	6708.3	1615.9	114.3	80.1	63.6	47.7	38.5	34.8	28.1	23.8	22.6
70°	6037.2	1204.0	95.3	70.9	55.0	40.3	33.0	30.6	26.3	22.6	20.8
72.5°	4807.5	888.6	80.1	63.0	48.3	34.2	28.1	28.7	26.3	22.0	19.6
75°	3179.3	508.5	65.4	52.6	40.3	27.5	25.7	25.7	25.1	20.8	18.3
77.5°	1529.8	219.4	50.1	41.6	32.4	20.8	23.2	23.2	23.8	18.9	15.3
80°	433.9	66.0	31.2	28.1	23.8	14.1	18.3	17.7	15.9	11.0	6.7
82.5°	77.6	25.7	14.1	14.7	13.4	5.5	10.4	9.8	7.9	4.3	0.6
85°	21.4	9.8	7.9	8.6	6.7	1.8	4.3	5.5	4.3	2.4	0.0
87.5°	5.5	4.3	5.5	6.1	4.9	0.6	1.8	0.6	1.8	0.6	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)