

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: P596539

Luminaire Tested: **MSA-SA1C-827-U-T4W-HSS**

Issue Date: 5/27/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P596539  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)  
Test Lab: INNOVATIONS CENTER  
Issue Date: 5/27/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: MSA-SA1C-827-U-T4W-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS  
EACH AND TYPE IV WIDE OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

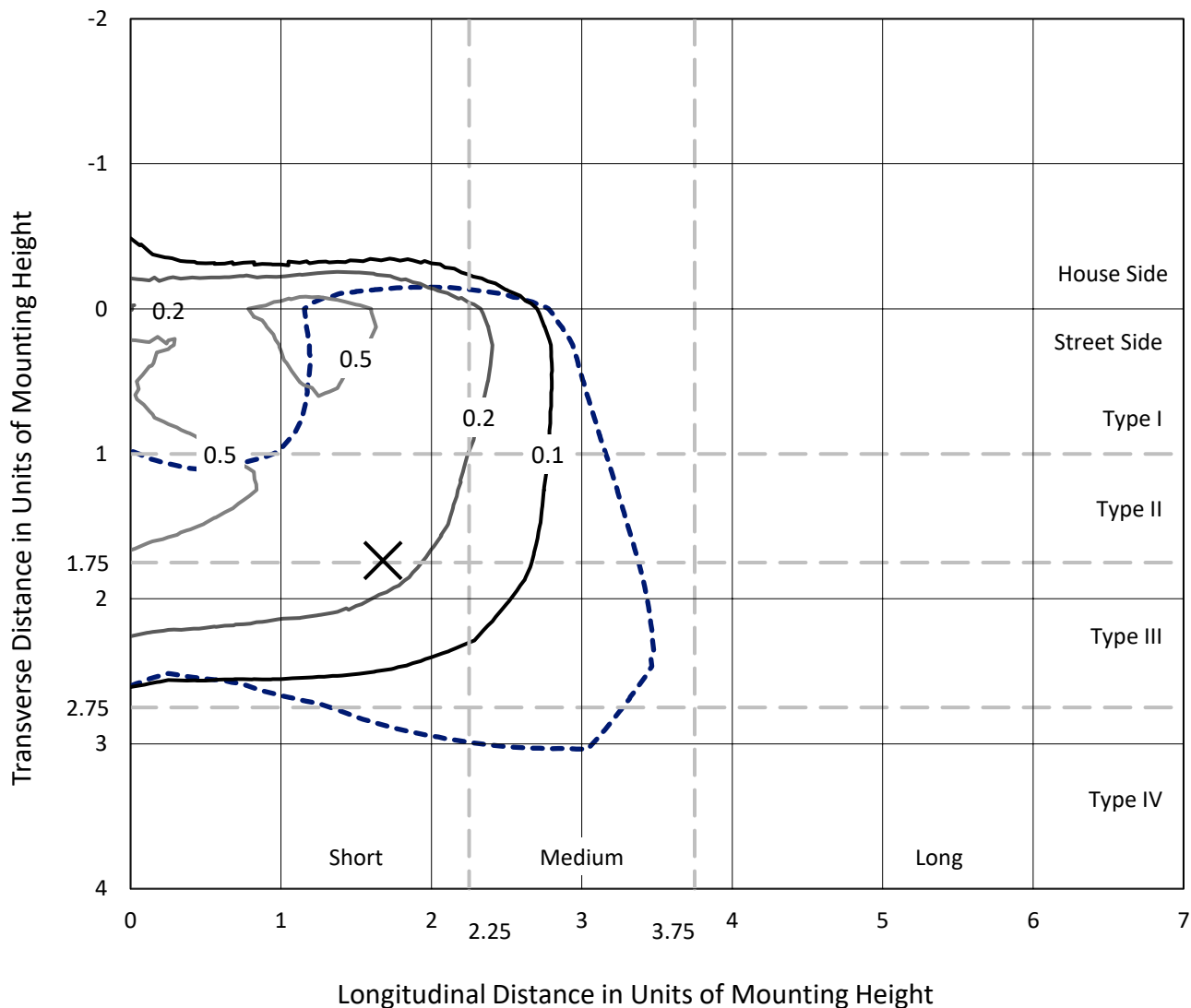
Lumens per Lamp: N/A  
Luminaire Lumens: 3476 lumens  
Efficiency: N/A  
Efficacy: 58.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short  
BUG Rating: B0 - U0 - G1  
  
Input Watts (W): 59  
Input Voltage (V): NR  
Input Current (Ain): NR  
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

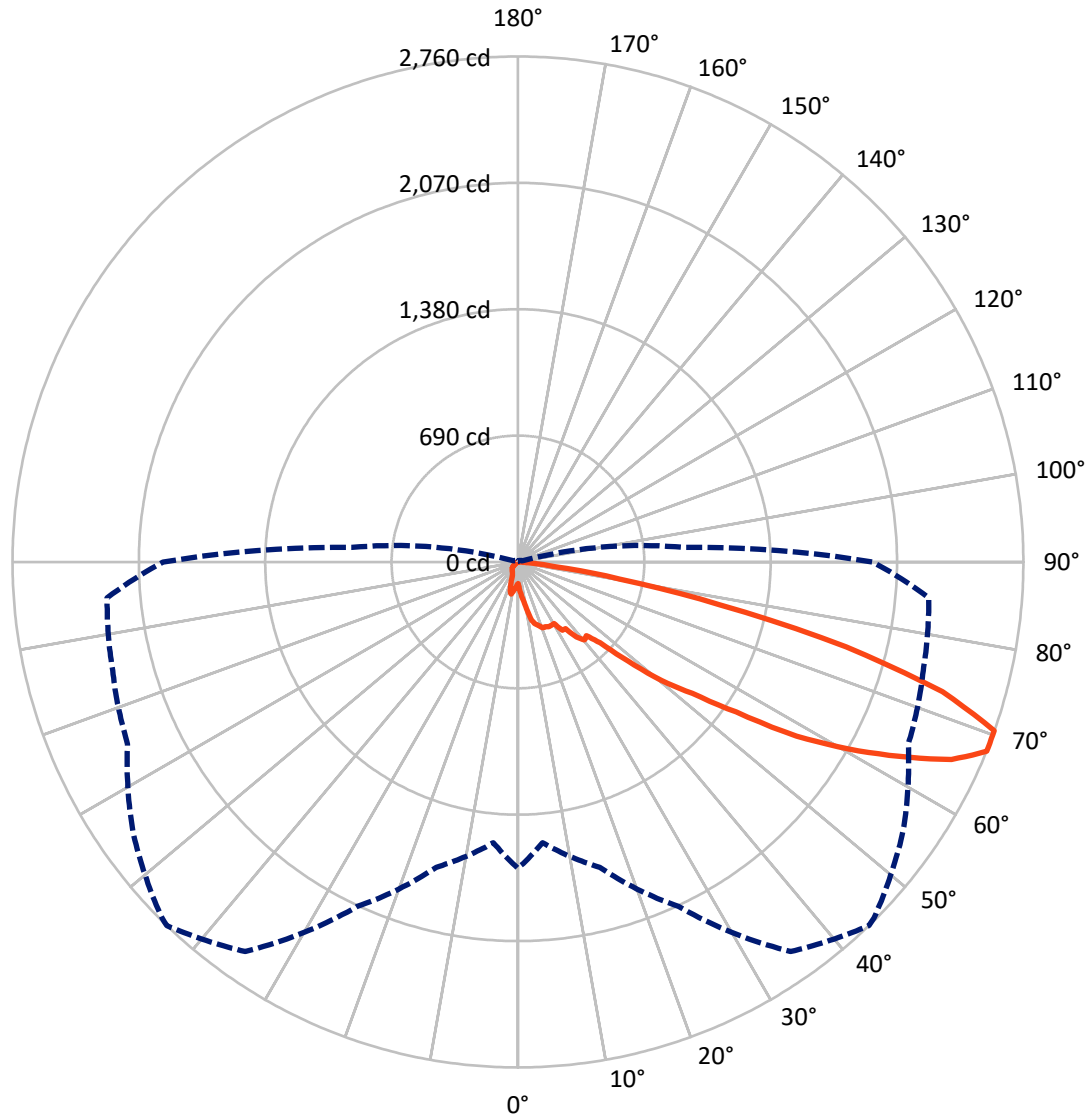
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

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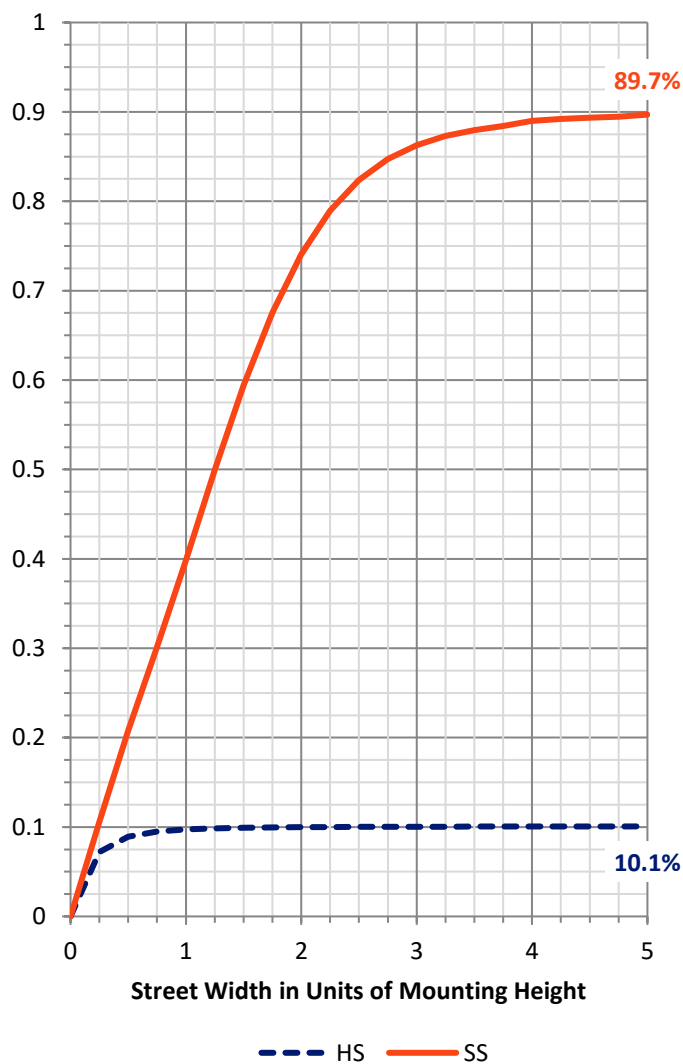
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	353.1	0.0	353.1
	% Fixture	10.2	0.0	10.2
<b>Street Side</b>	Lumens	3122.9	0.0	3122.9
	% Fixture	89.8	0.0	89.8
<b>Total</b>	Lumens	3476.0	0.0	3476.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	17.4	0.5
10°-20°	72.7	2.1
20°-30°	128.7	3.7
30°-40°	209.3	6.0
40°-50°	418.7	12.0
50°-60°	859.0	24.7
60°-70°	1180.1	33.9
70°-80°	554.6	16.0
80°-90°	35.5	1.0
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°	3476.0	100.0
0°-180°	3476.0	100.0

**Coefficient of Utilization**



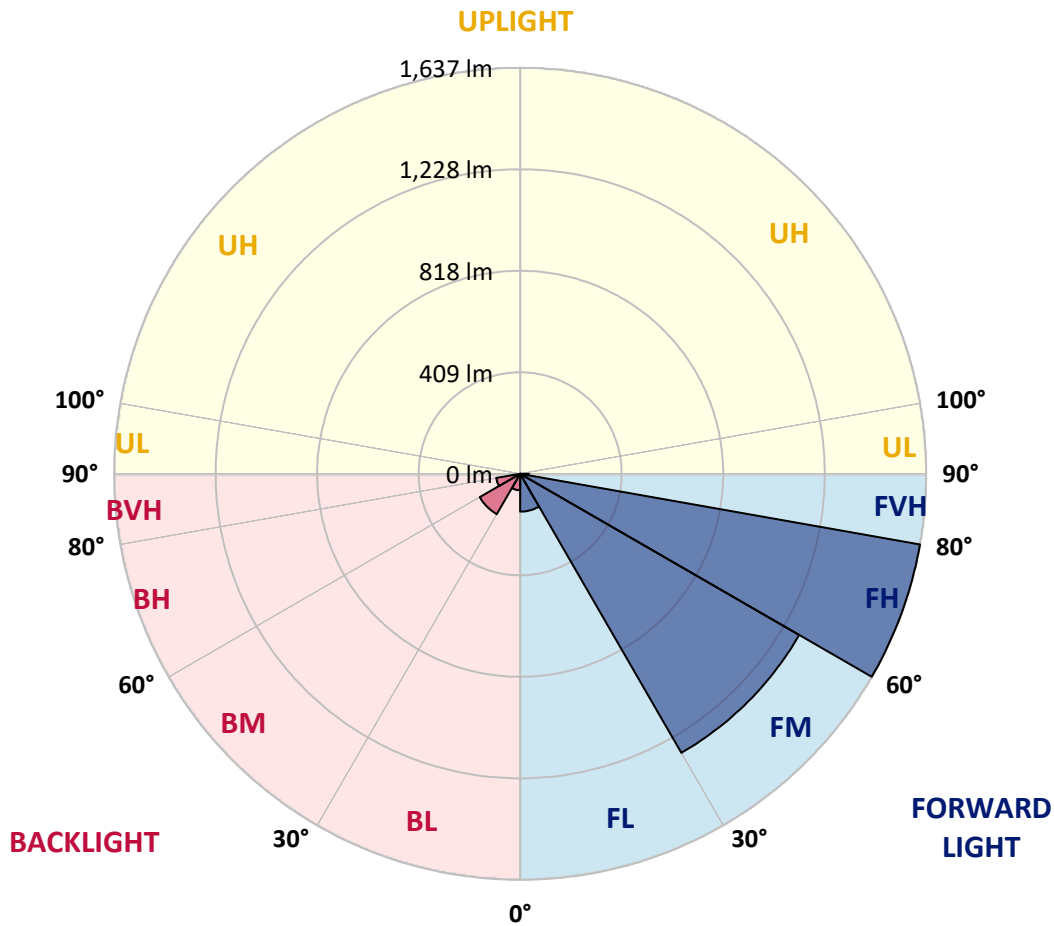
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	152.5	4.4			
FM (30°-60°)	1298.9	37.4			
FH (60°-80°)	1636.7	47.1			G1/1800
FVH (80°-90°)	34.8	1.0			G1/100
BL (0°-30°)	66.3	1.9	B0/110		
BM (30°-60°)	188.1	5.4	B0/220		
BH (60°-80°)	98.0	2.8	B0/110		G0/110
BVH (80°-90°)	0.7	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	117.1	117.1	117.1	117.1	117.1	117.1	117.1	117.1	117.1	117.1	117.1
2.5°	148.9	144.1	137.2	138.8	139.5	141.6	141.8	139.2	131.5	129.4	138.8
5°	208.7	197.0	194.9	190.5	181.7	176.9	175.8	180.6	174.4	172.5	175.0
7.5°	266.6	256.7	245.7	239.8	221.4	210.1	209.5	211.4	212.6	205.9	209.3
10°	305.1	294.2	291.9	277.9	262.0	259.3	258.2	250.9	245.0	240.0	223.3
12.5°	340.0	339.8	344.1	323.9	321.4	324.1	323.2	297.1	291.2	270.3	265.5
15°	386.4	397.9	379.7	362.8	341.4	350.6	348.1	331.4	327.4	313.2	292.7
17.5°	434.5	437.6	407.1	381.2	375.7	363.6	366.1	360.2	339.8	351.1	330.8
20°	435.7	442.4	409.8	367.1	384.1	383.5	383.7	378.0	351.1	377.6	359.0
22.5°	451.8	435.3	405.0	377.8	380.9	383.7	386.8	379.7	374.0	380.5	383.9
25°	445.3	438.7	409.6	391.6	388.7	391.0	391.8	400.8	397.2	412.9	404.2
27.5°	462.1	452.7	400.6	403.9	393.7	391.0	386.4	416.5	427.2	414.8	437.8
30°	491.1	489.7	416.1	420.9	413.1	389.5	401.8	441.0	454.5	446.8	474.8
32.5°	536.3	540.9	461.6	430.5	434.5	445.1	440.5	441.0	475.0	492.0	514.3
35°	600.5	598.0	505.8	466.9	445.8	447.6	454.1	485.3	529.2	528.1	551.6
37.5°	726.6	699.4	584.2	504.1	510.4	519.1	514.3	556.2	560.5	562.0	618.3
40°	912.6	876.3	707.9	582.5	521.5	559.7	557.4	567.7	595.9	606.5	688.7
42.5°	1157.5	1108.8	925.4	726.6	575.2	549.0	563.1	582.7	677.4	707.5	797.6
45°	1428.2	1329.6	1142.4	932.1	709.8	628.3	639.0	675.5	806.8	856.6	956.1
47.5°	1603.6	1516.9	1357.2	1114.2	850.1	807.3	808.3	816.2	958.8	1051.1	1184.6
50°	1755.9	1663.7	1515.6	1304.5	1098.3	1017.4	999.0	962.8	1152.3	1278.7	1426.6
52.5°	1971.0	1863.3	1673.9	1527.8	1381.4	1190.9	1184.4	1196.6	1380.6	1513.5	1674.9
55°	2165.0	2034.1	1853.3	1761.3	1704.2	1445.8	1451.4	1471.9	1673.7	1744.0	1895.7
57.5°	2250.6	2108.8	2015.8	1974.4	1944.0	1794.1	1775.3	1763.0	1904.9	1931.7	2127.0
60°	2306.8	2171.9	2129.7	2139.3	2231.7	2072.6	2055.5	1984.2	2096.2	2118.2	2334.4
62.5°	2271.3	2148.3	2157.3	2237.2	2442.3	2337.7	2288.4	2169.2	2252.6	2270.4	2483.3
65°	2048.0	1919.8	2035.6	2229.0	2602.9	2600.5	2577.6	2340.0	2339.2	2362.0	2494.8
67.5°	1672.9	1538.4	1725.6	2074.5	2596.2	2759.7	2749.0	2566.5	2351.7	2290.7	2251.4
70°	1163.1	1046.4	1258.7	1713.2	2364.9	2758.6	2741.3	2718.7	2253.1	1971.8	1745.6
72.5°	604.4	540.1	737.9	1180.5	1885.1	2423.7	2480.7	2443.5	1923.8	1432.6	1028.0
75°	205.3	184.2	304.4	626.6	1253.2	1850.8	1917.5	1879.8	1306.6	768.6	406.5
77.5°	79.5	74.0	109.1	254.4	628.7	1127.8	1200.3	1161.7	700.8	281.6	95.6
80°	45.2	43.7	60.2	114.6	277.2	561.0	612.0	555.1	252.6	94.9	24.9
82.5°	19.2	19.7	33.5	61.9	139.3	198.0	220.8	201.5	105.8	65.0	9.2
85°	4.2	5.2	15.9	34.5	58.5	56.5	59.2	65.7	65.0	47.7	4.0
87.5°	0.0	0.0	5.0	9.4	14.0	9.2	7.3	12.8	19.9	19.2	1.7
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°	117.1	117.1	117.1	117.1	117.1	117.1	117.1	117.1	117.1	117.1	117.1
2.5°	140.5	138.6	126.5	125.7	126.5	124.4	124.2	119.8	120.2	130.1	130.9
5°	175.0	165.4	155.1	151.8	148.7	141.8	145.7	145.7	145.7	152.0	153.9
7.5°	206.2	193.4	178.8	166.6	154.7	146.1	152.0	156.2	158.7	166.9	170.8
10°	220.4	207.8	194.7	177.3	168.1	164.8	157.9	154.3	158.7	157.0	159.1
12.5°	250.7	239.2	216.8	198.8	191.9	180.7	160.4	146.2	136.9	135.3	134.9
15°	280.2	273.1	243.0	218.9	194.9	169.2	134.6	115.8	105.8	104.1	104.3
17.5°	317.6	307.4	263.2	228.5	187.8	141.6	103.9	87.8	87.0	91.2	91.6
20°	342.5	325.8	273.3	220.6	164.5	107.1	81.3	77.4	83.6	91.2	90.5
22.5°	366.3	348.3	286.7	213.7	127.5	81.3	74.8	75.1	80.3	88.6	90.7
25°	382.0	375.5	303.2	197.6	97.2	70.3	71.5	74.4	78.8	86.6	86.6
27.5°	429.4	398.9	301.3	166.4	74.8	65.6	68.2	71.9	74.2	83.6	84.5
30°	458.1	448.1	311.3	134.6	65.6	59.4	64.6	67.9	69.4	80.1	80.5
32.5°	493.4	471.3	323.4	99.3	61.0	59.0	57.9	60.4	64.8	74.2	74.8
35°	536.3	529.8	306.1	78.0	59.4	55.2	52.9	54.2	57.1	63.4	64.8
37.5°	623.9	585.2	295.8	66.9	59.4	53.9	51.4	47.9	48.3	52.7	55.2
40°	697.7	685.8	266.8	65.0	56.7	51.9	45.8	41.6	38.7	40.1	41.0
42.5°	833.2	778.2	229.4	64.0	54.2	47.0	38.9	34.5	30.1	30.5	32.0
45°	997.7	879.0	196.1	63.1	52.5	42.0	32.8	27.6	23.0	23.2	24.7
47.5°	1217.3	1026.0	155.6	60.2	49.5	37.4	26.5	21.1	18.4	19.0	20.3
50°	1466.9	1155.0	123.1	55.8	45.8	33.0	21.5	17.1	16.1	16.7	18.2
52.5°	1689.8	1250.1	101.6	51.8	40.6	26.8	18.0	15.1	14.8	15.1	16.3
55°	1888.0	1305.3	84.9	47.2	34.9	21.7	16.3	14.0	13.8	13.6	14.4
57.5°	2073.9	1321.2	66.3	39.9	28.4	18.8	15.1	13.0	12.7	12.1	12.7
60°	2209.4	1294.0	48.7	32.0	23.2	17.1	14.2	11.7	11.1	10.2	10.5
62.5°	2274.8	1219.4	36.8	25.7	19.7	15.5	12.7	10.2	9.4	8.2	8.4
65°	2212.7	1096.6	28.9	21.7	16.9	13.0	10.7	8.6	7.7	6.5	6.5
67.5°	1937.6	909.7	24.5	18.8	14.2	11.1	8.8	7.9	6.3	5.4	5.2
70°	1422.2	654.4	21.1	16.5	12.3	9.6	7.5	7.1	6.1	5.2	4.8
72.5°	802.7	370.3	18.0	14.6	10.4	8.1	6.3	6.5	5.9	4.8	4.4
75°	306.3	124.8	15.0	12.1	8.4	6.1	5.4	5.4	5.4	4.0	3.5
77.5°	75.9	31.8	11.9	9.8	6.7	4.0	4.4	4.6	4.6	3.5	2.5
80°	20.9	10.7	7.1	7.1	4.8	2.3	3.1	3.1	2.5	1.2	0.0
82.5°	7.7	4.0	2.5	3.1	2.1	0.8	1.2	0.8	0.6	0.0	0.0
85°	3.3	2.1	1.5	1.7	1.0	0.0	0.2	0.4	0.0	0.0	0.0
87.5°	1.3	1.0	0.8	0.8	0.4	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)