

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: P368167

Luminaire Tested: **MSA-SA3D-830-U-SL3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P368167  
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-SA3D-830-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 12989 lumens  
Efficiency: N/A  
Efficacy: 67.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G3

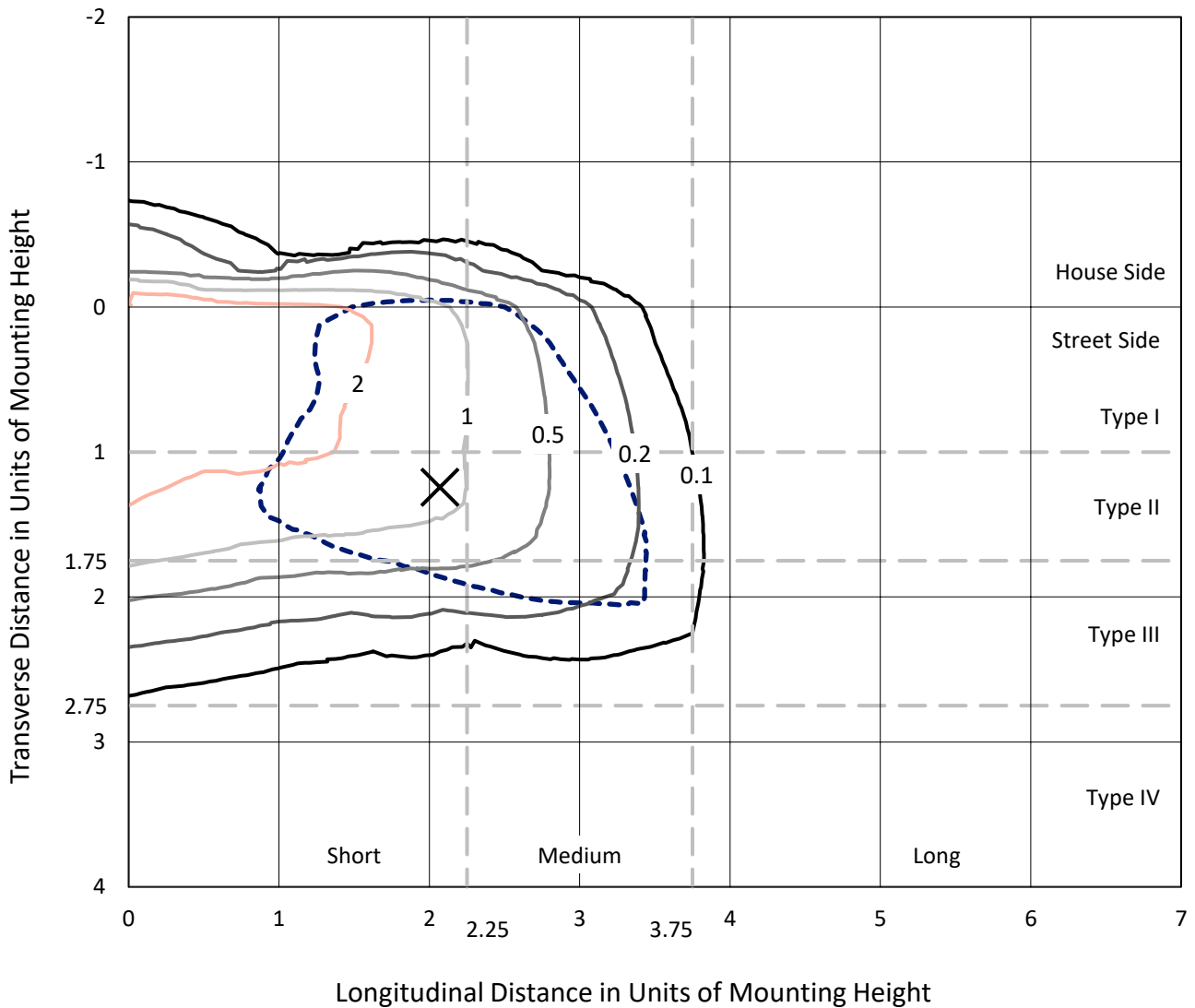
Input Watts (W): 192  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



REPORT NUMBER: P368167  
 CATALOG NUMBER: MSA-SA3D-830-U-SL3-HSS

### Iso-Footcandle Lines of Horizontal Illumination

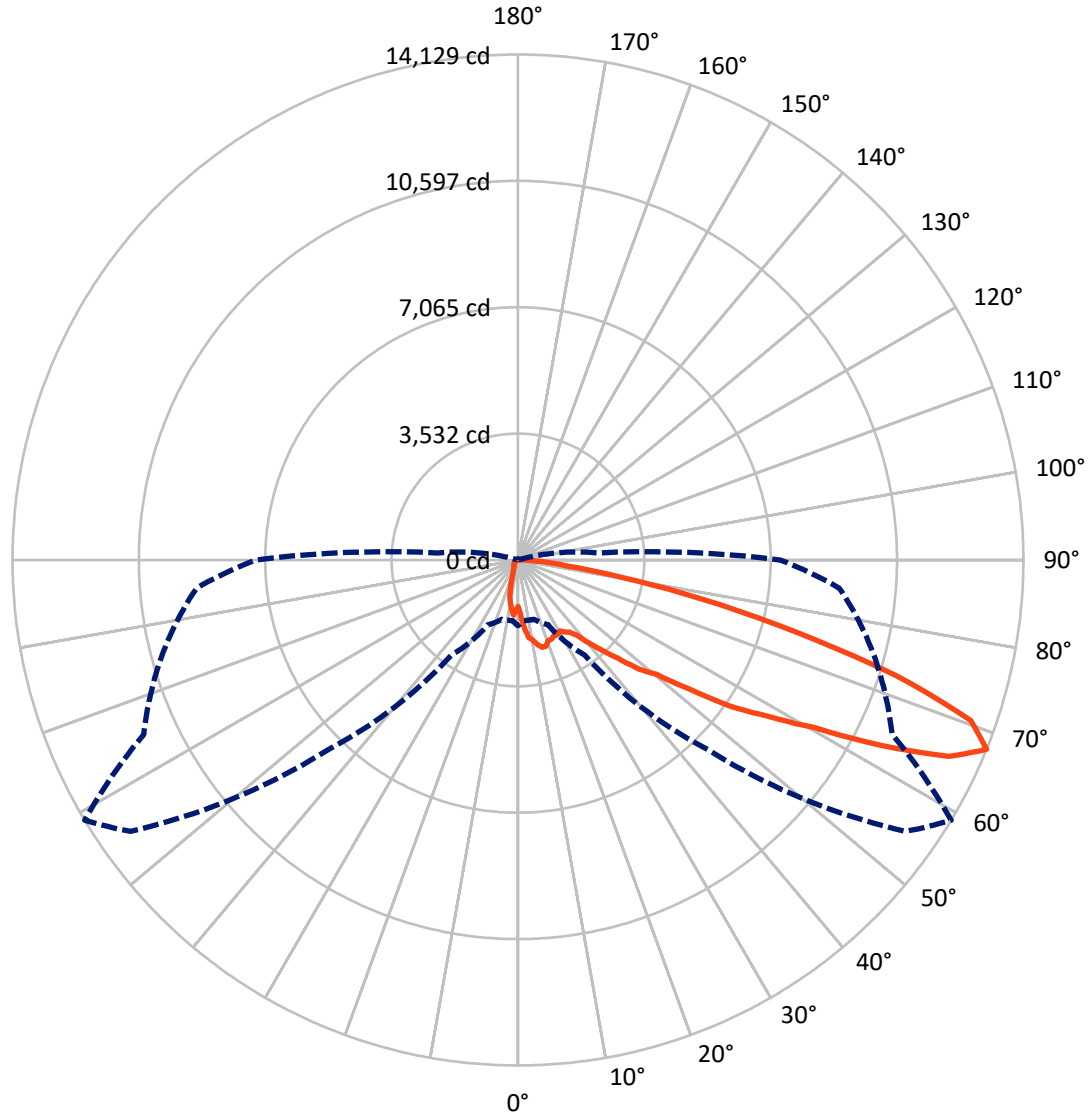
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.7 fc  
 Type III - Short - N/A

REPORT NUMBER: P368167  
CATALOG NUMBER: MSA-SA3D-830-U-SL3-HSS

### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral    - - - Horizontal Cone Through 67.5-Deg Vertical

REPORT NUMBER: P368167  
 CATALOG NUMBER: MSA-SA3D-830-U-SL3-HSS

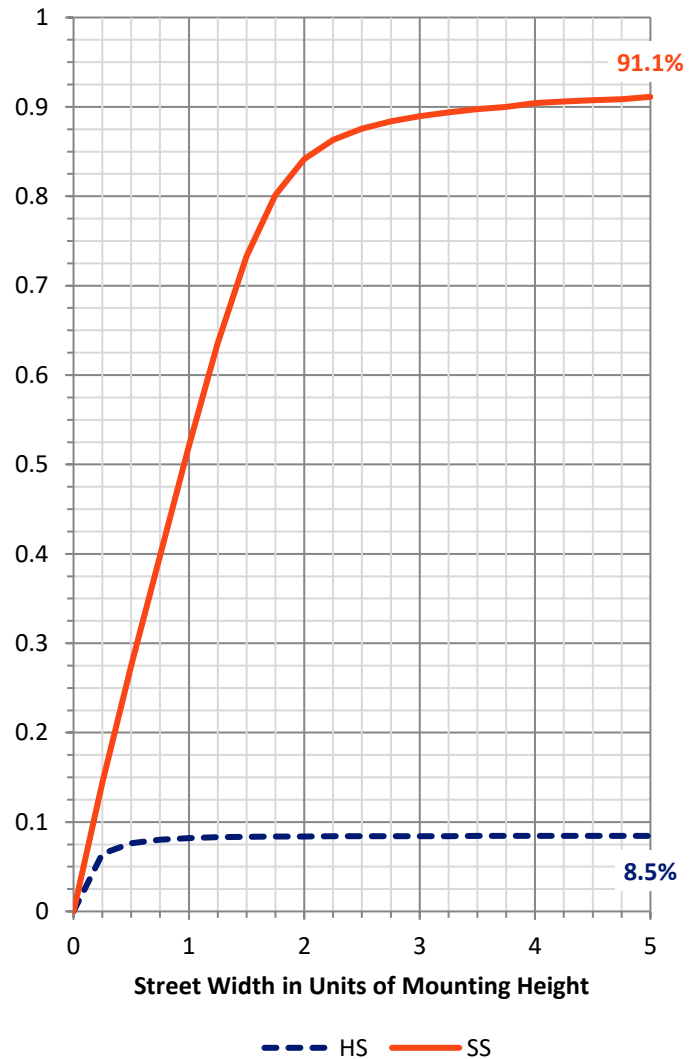
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	1104.6	0.0	1104.6
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	11884.4	0.0	11884.4
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	12989.0	0.0	12989.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	158.0	1.2
10°-20°	444.9	3.4
20°-30°	661.8	5.1
30°-40°	1021.0	7.9
40°-50°	1822.2	14.0
50°-60°	3242.6	25.0
60°-70°	3776.5	29.1
70°-80°	1679.5	12.9
80°-90°	182.4	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°	12989.0	100.0
0°-180°	12989.0	100.0

**Coefficient of Utilization**



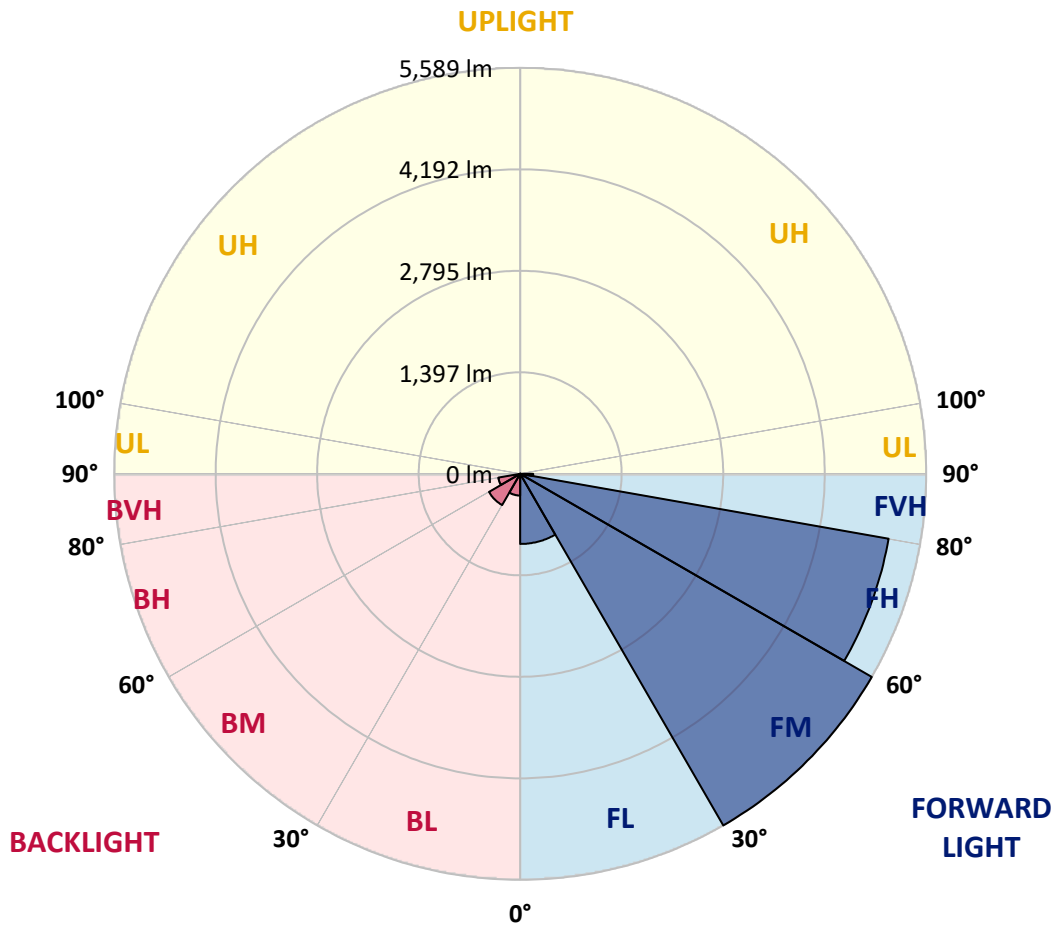
REPORT NUMBER: P368167  
 CATALOG NUMBER: MSA-SA3D-830-U-SL3-HSS

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

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	966.0	7.4			
FM (30°-60°)	5589.2	43.0			
FH (60°-80°)	5150.0	39.6			G3/7500
FVH (80°-90°)	179.1	1.4			G2/225
BL (0°-30°)	298.7	2.3	B1/500		
BM (30°-60°)	496.7	3.8	B1/1000		
BH (60°-80°)	306.0	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





REPORT NUMBER: P368167  
 CATALOG NUMBER: MSA-SA3D-830-U-SL3-HSS

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1299.6	1299.6	1299.6	1299.6	1299.6	1299.6	1299.6	1299.6	1299.6	1299.6	1299.6
2.5°	1694.2	1630.4	1539.6	1566.6	1590.9	1614.0	1575.8	1554.1	1543.6	1450.2	1567.3
5°	2080.3	2000.7	1959.3	1948.7	1922.4	1863.9	1961.2	1917.8	1932.3	1950.7	1988.8
7.5°	2198.0	2161.8	2102.0	2124.3	2024.4	2015.8	2150.6	2188.1	2237.5	2203.9	2249.9
10°	2137.5	2075.0	2103.3	2095.4	2091.4	2179.6	2274.3	2276.3	2349.9	2385.4	2229.6
12.5°	2017.8	2025.0	2126.3	2118.4	2249.9	2426.2	2447.9	2424.9	2545.3	2483.4	2459.8
15°	2097.4	2156.6	2100.7	2119.7	2166.4	2386.7	2463.7	2534.7	2648.5	2685.3	2525.5
17.5°	2193.4	2199.3	2097.4	2073.7	2191.4	2294.0	2475.5	2534.1	2545.3	2868.2	2673.5
20°	2141.4	2192.1	2070.4	1921.1	2103.9	2243.4	2427.5	2409.1	2484.1	2922.1	2707.0
22.5°	2279.5	2207.2	2051.3	1938.9	2000.7	2127.6	2283.5	2403.8	2516.3	2793.2	2750.5
25°	2292.7	2266.4	2127.6	2027.7	2017.1	2049.4	2266.4	2344.0	2520.3	2909.0	2713.6
27.5°	2440.7	2410.4	2126.3	2136.2	2037.5	1938.2	2183.5	2365.7	2591.9	2838.6	2791.9
30°	2631.4	2634.0	2267.7	2298.6	2157.9	1998.1	2251.3	2301.2	2640.6	2951.0	2849.8
32.5°	2824.8	2904.3	2547.2	2383.5	2339.4	2225.0	2167.1	2397.9	2587.3	3143.1	2994.5
35°	3118.8	3172.7	2777.4	2630.8	2457.8	2327.6	2396.0	2478.8	2778.7	3397.6	3184.5
37.5°	3616.6	3519.3	3190.4	2935.3	2893.8	2701.8	2736.0	2661.7	2974.1	3697.5	3560.7
40°	3896.8	3808.7	3466.7	3342.4	3078.0	3107.6	2999.7	3043.1	3257.5	4009.9	3903.4
42.5°	4188.8	4104.6	3804.7	3716.6	3464.7	3342.4	3293.7	3449.6	3692.3	4530.2	4394.7
45°	4482.1	4268.4	4141.5	4185.5	4072.4	3830.4	3773.8	3912.6	4167.1	5169.4	4912.9
47.5°	4729.4	4549.2	4453.9	4433.5	4389.4	4725.5	4495.3	4556.5	4668.9	5735.0	5558.8
50°	5175.3	4997.8	4848.5	4807.0	5021.4	5498.3	5143.1	5024.7	5249.7	6418.4	6307.2
52.5°	5819.2	5593.0	5355.6	5356.2	5760.7	6022.4	6190.8	5983.0	6025.1	7170.1	7120.8
55°	6336.8	6049.4	5852.8	6008.0	6611.1	6757.7	7400.3	7218.1	7163.5	7867.3	7806.8
57.5°	6407.9	6063.2	5969.8	6242.1	7067.5	8004.1	8695.3	8240.2	8156.6	8450.6	8571.0
60°	5744.9	5379.2	5449.6	5887.6	7216.2	8763.7	9884.4	9512.8	8982.0	9134.0	9216.8
62.5°	4284.8	3992.8	4190.1	4770.2	6643.3	9272.7	11260.9	11433.2	9939.6	9647.0	9629.2
65°	2780.0	2597.2	2726.8	3202.3	5027.4	9214.9	12490.8	13237.9	10694.0	10065.3	9758.8
67.5°	1838.9	1700.1	1718.5	2000.0	3251.0	7494.4	13226.1	14129.1	11542.4	10302.7	9016.2
70°	1370.6	1261.4	1268.0	1420.6	1929.7	4942.5	12200.8	13426.0	11852.2	9479.9	7277.3
72.5°	988.5	915.5	976.7	1146.3	1537.7	2613.7	9093.8	11057.0	10334.9	7477.3	4903.1
75°	684.7	636.6	736.6	958.9	1403.5	1622.5	6009.3	7959.3	7243.8	4691.3	2216.4
77.5°	379.5	365.0	509.1	781.3	1273.9	1329.8	3681.1	5229.9	4017.8	1681.7	527.5
80°	165.7	160.5	246.6	586.7	1070.7	1201.6	2072.4	2899.7	1580.4	299.9	170.3
82.5°	71.0	68.4	105.2	353.2	778.0	1004.9	1277.9	1395.6	543.9	92.7	96.7
85°	12.5	13.8	42.1	186.1	473.5	510.4	925.4	826.1	273.6	44.1	69.1
87.5°	0.0	0.0	6.6	36.2	88.8	146.0	401.2	289.4	52.0	14.5	11.8
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P368167  
 CATALOG NUMBER: MSA-SA3D-830-U-SL3-HSS

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	1299.6	1299.6	1299.6	1299.6	1299.6	1299.6	1299.6	1299.6	1299.6	1299.6	1299.6
2.5°	1583.7	1546.9	1406.8	1389.0	1370.0	1341.7	1331.2	1270.7	1262.8	1340.4	1340.4
5°	1971.1	1839.6	1706.0	1600.8	1506.8	1376.5	1339.7	1301.6	1270.7	1262.8	1287.1
7.5°	2175.6	2015.2	1805.4	1537.7	1320.6	1131.9	1053.0	997.7	935.9	954.3	964.2
10°	2164.5	1994.1	1726.4	1382.5	1141.7	933.3	732.7	615.6	550.5	518.3	514.3
12.5°	2274.3	2113.8	1673.2	1258.8	951.7	663.6	461.0	377.5	329.5	330.2	326.2
15°	2338.1	2163.1	1611.3	1102.3	670.2	426.8	319.6	301.2	294.6	301.9	297.9
17.5°	2450.5	2215.1	1471.2	868.8	461.0	322.3	294.0	286.8	295.3	310.4	306.5
20°	2442.0	2125.0	1272.0	612.3	340.7	290.0	278.2	267.0	284.8	300.6	297.9
22.5°	2434.1	2036.9	1084.5	451.8	284.8	264.4	254.5	249.9	259.1	277.5	281.5
25°	2364.4	1993.5	894.5	339.4	257.8	240.1	235.5	231.5	234.8	249.9	249.3
27.5°	2449.9	1883.6	690.6	284.8	238.7	217.7	213.7	207.2	200.6	213.7	215.7
30°	2432.1	1898.7	541.3	250.6	219.7	191.4	192.7	178.9	167.1	178.9	178.9
32.5°	2496.6	1788.3	433.4	227.6	200.6	180.2	163.8	149.3	140.7	148.0	149.3
35°	2590.6	1792.9	339.4	213.1	184.2	160.5	140.7	126.3	118.4	121.7	123.6
37.5°	2905.7	1761.3	283.5	201.9	178.2	148.6	128.2	109.2	103.9	107.9	109.8
40°	3110.9	1845.5	249.9	196.0	163.1	136.8	109.8	96.0	91.4	93.4	96.7
42.5°	3497.6	1892.2	233.5	189.4	149.3	117.1	94.0	86.2	79.6	82.2	84.8
45°	3911.3	1971.7	221.0	182.2	138.8	102.6	82.9	76.3	67.7	68.4	71.0
47.5°	4419.7	2161.2	206.5	169.7	124.3	93.4	73.7	63.8	55.9	55.2	58.5
50°	5102.3	2414.4	193.4	153.9	115.1	85.5	64.5	52.0	45.4	43.4	46.0
52.5°	5831.1	2741.9	179.5	142.7	103.9	75.0	55.2	42.1	36.2	34.9	36.8
55°	6553.2	3056.3	166.4	135.5	92.1	64.5	46.7	34.9	29.6	28.3	29.6
57.5°	7376.0	3396.3	149.3	121.0	80.9	55.9	38.8	28.9	24.3	23.0	23.7
60°	7995.5	3516.0	134.8	105.2	70.4	49.3	32.9	23.0	19.7	18.4	19.1
62.5°	8289.5	3320.7	121.0	91.4	61.8	42.7	27.6	19.1	16.4	15.1	15.1
65°	8213.2	2887.9	107.2	78.3	53.3	35.5	21.7	16.4	14.5	12.5	11.8
67.5°	7331.9	2259.8	91.4	65.8	44.7	28.9	18.4	15.8	13.2	11.8	9.9
70°	5814.6	1636.3	74.3	54.6	37.5	23.7	14.5	14.5	12.5	11.8	9.2
72.5°	3811.3	1029.9	60.5	44.1	30.9	18.4	11.2	13.2	11.8	11.8	8.5
75°	1651.5	368.3	48.7	35.5	25.6	12.5	9.9	11.8	12.5	11.8	9.9
77.5°	386.7	114.4	38.1	28.3	21.0	8.5	9.9	11.8	12.5	11.2	8.5
80°	145.3	48.7	25.0	18.4	16.4	5.3	8.5	7.2	6.6	4.6	1.3
82.5°	88.1	20.4	13.2	9.2	7.9	1.3	3.9	2.6	1.3	1.3	0.0
85°	62.5	9.9	7.2	6.6	3.9	0.0	0.7	0.0	0.0	0.7	0.0
87.5°	8.5	2.6	3.3	3.3	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)