

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: P367617

Luminaire Tested: **MSA-SA2D-760-U-SL3-HSS**

Issue Date: 12/2/2019

**Test Information**

Test Method: LM-79-08  
Report Number: P367617  
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-SA2D-760-U-SL3-HSS  
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 11076 lumens  
Efficiency: N/A  
Efficacy: 85.9 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')  
IES Classification: Type III - Short  
BUG Rating: B1 - U0 - G2

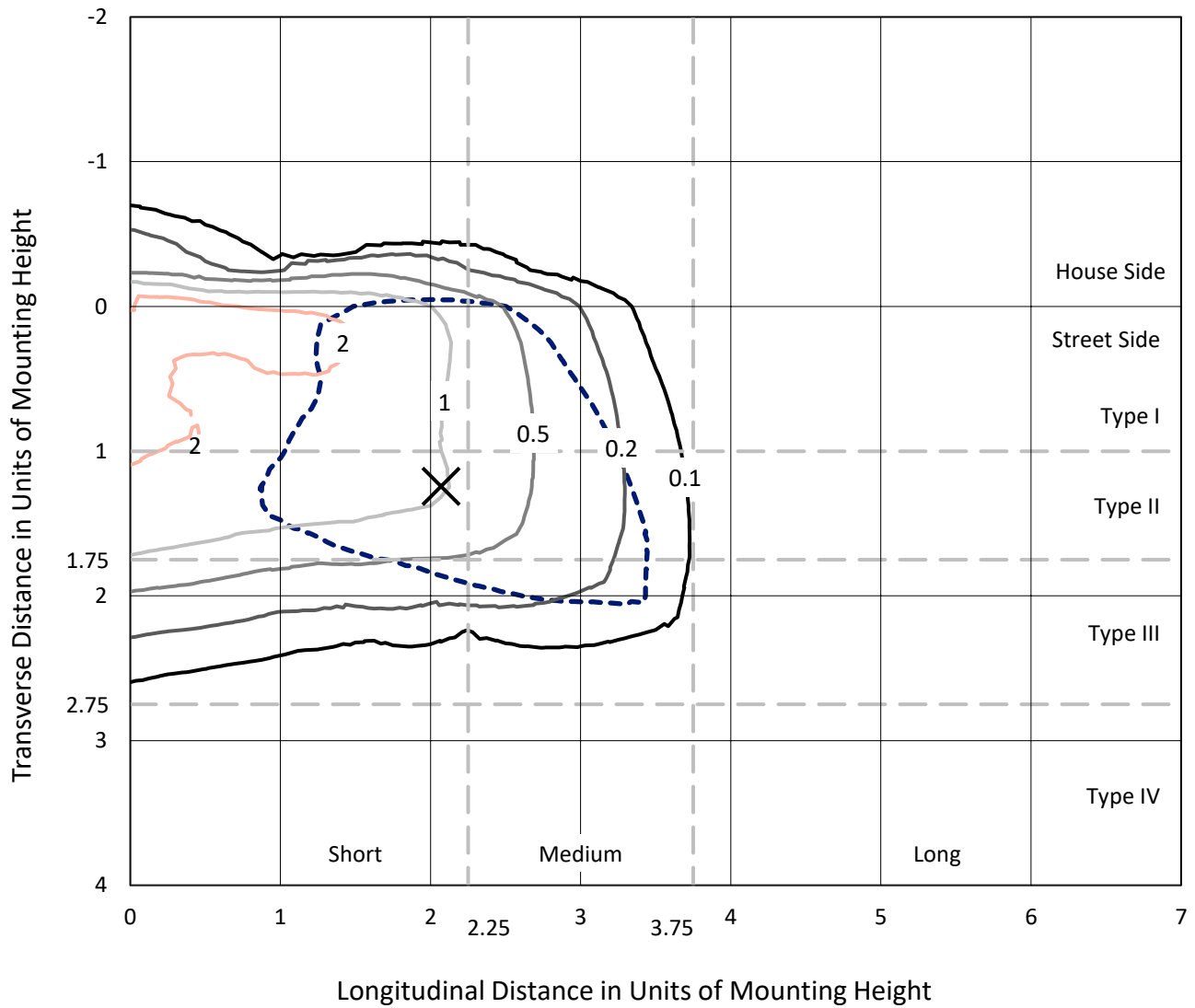
Input Watts (W): 129  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 28.75 FT



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### Iso-Footcandle Lines of Horizontal Illumination

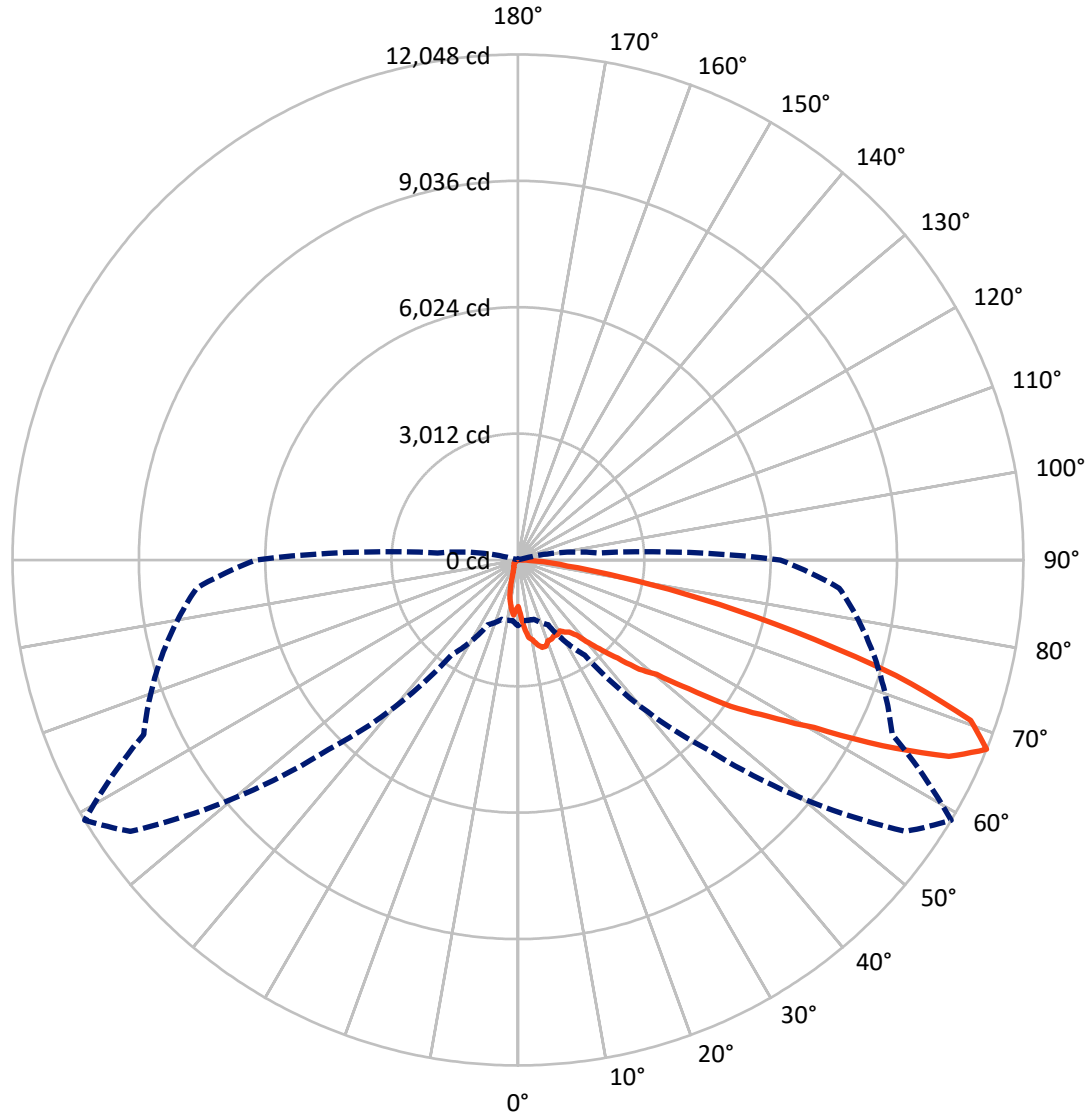
✕ Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc  
 Type III - Short - N/A

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### Luminous Intensity Polar Plot



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

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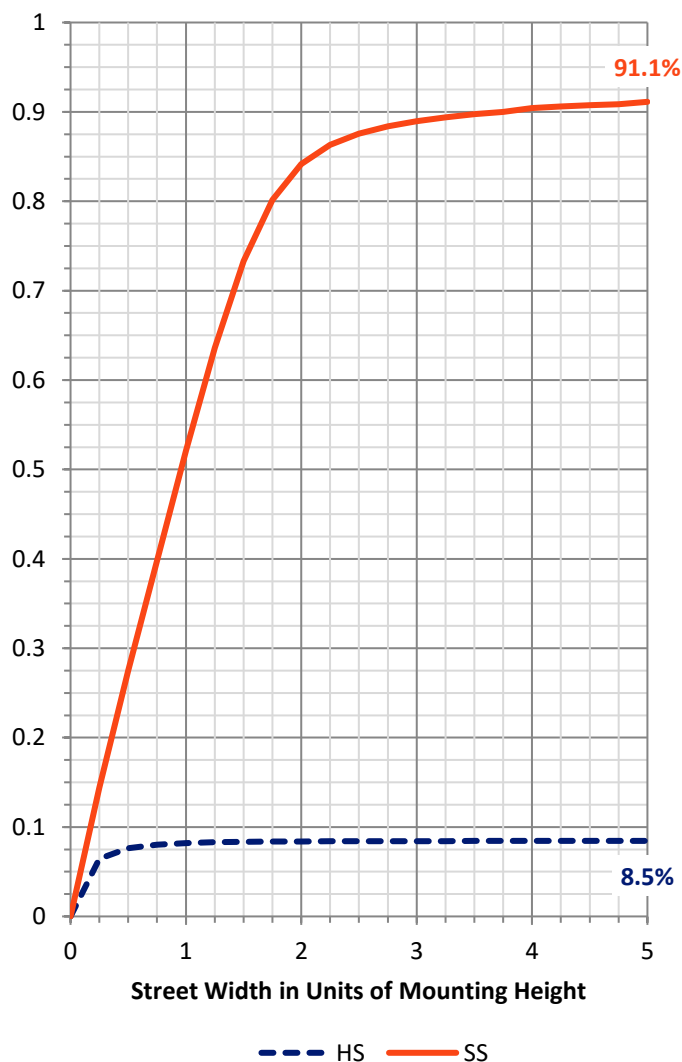
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	941.9	0.0	941.9
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	10134.1	0.0	10134.1
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	11076.0	0.0	11076.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	134.7	1.2
10°-20°	379.4	3.4
20°-30°	564.3	5.1
30°-40°	870.7	7.9
40°-50°	1553.8	14.0
50°-60°	2765.1	25.0
60°-70°	3220.3	29.1
70°-80°	1432.1	12.9
80°-90°	155.5	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°	11076.0	100.0
0°-180°	11076.0	100.0

**Coefficient of Utilization**



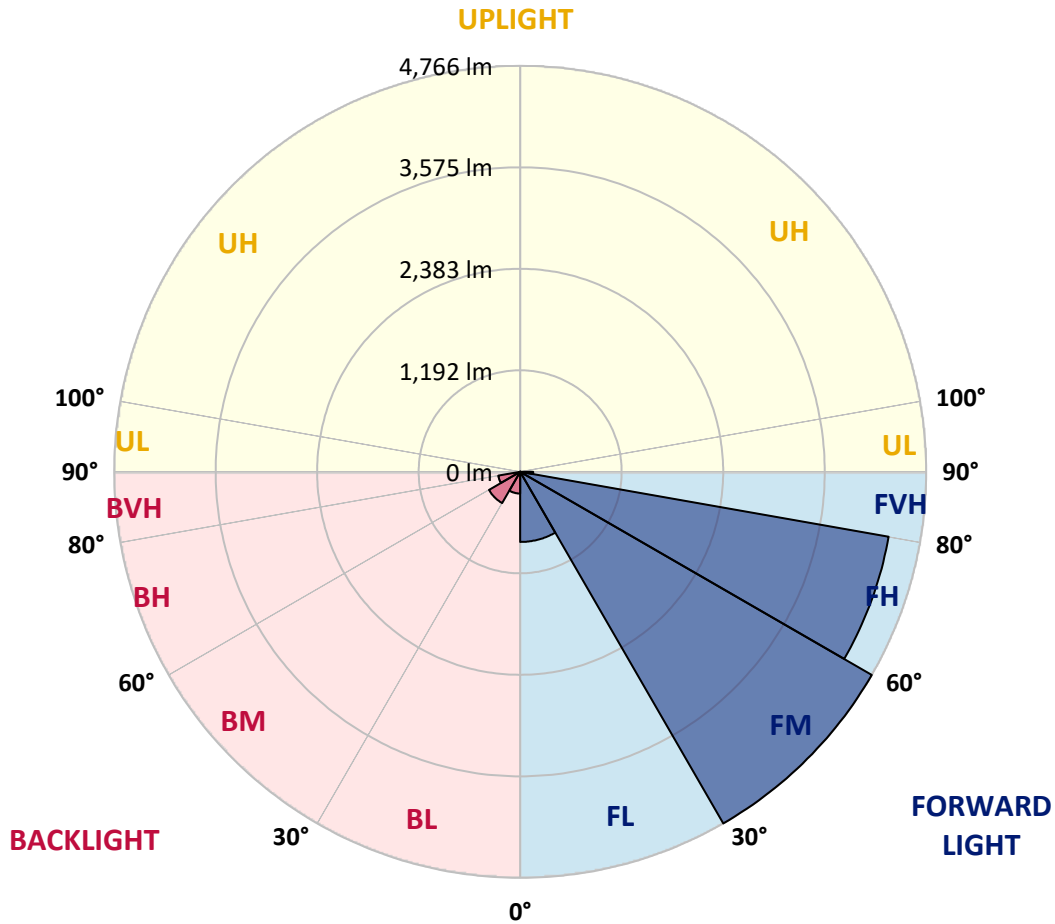
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	823.7	7.4			
FM (30°-60°)	4766.0	43.0			
FH (60°-80°)	4391.5	39.6			G2/5000
FVH (80°-90°)	152.8	1.4			G2/225
BL (0°-30°)	254.7	2.3	B1/500		
BM (30°-60°)	423.5	3.8	B1/1000		
BH (60°-80°)	260.9	2.4	B1/500		G1/500
BVH (80°-90°)	2.8	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 III Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2
2.5°	1444.7	1390.3	1312.9	1335.9	1356.6	1376.3	1343.7	1325.2	1316.3	1236.6	1336.4
5°	1773.9	1706.0	1670.7	1661.7	1639.3	1589.4	1672.4	1635.4	1647.7	1663.4	1695.9
7.5°	1874.3	1843.4	1792.4	1811.5	1726.2	1718.9	1833.9	1865.9	1907.9	1879.3	1918.6
10°	1822.7	1769.4	1793.5	1786.8	1783.4	1858.6	1939.3	1941.0	2003.8	2034.1	1901.2
12.5°	1720.6	1726.8	1813.1	1806.4	1918.6	2068.9	2087.4	2067.8	2170.4	2117.7	2097.5
15°	1788.5	1838.9	1791.3	1807.5	1847.4	2035.2	2100.8	2161.4	2258.4	2289.8	2153.6
17.5°	1870.3	1875.4	1788.5	1768.3	1868.7	1956.2	2110.9	2160.9	2170.4	2445.8	2279.8
20°	1826.0	1869.2	1765.5	1638.2	1794.1	1913.0	2070.0	2054.3	2118.2	2491.7	2308.4
22.5°	1943.8	1882.1	1749.2	1653.3	1706.0	1814.3	1947.2	2049.8	2145.7	2381.8	2345.4
25°	1955.0	1932.6	1814.3	1729.0	1720.0	1747.5	1932.6	1998.8	2149.1	2480.5	2314.0
27.5°	2081.2	2055.4	1813.1	1821.6	1737.4	1652.7	1861.9	2017.3	2210.2	2420.5	2380.7
30°	2243.9	2246.1	1933.7	1960.1	1840.1	1703.8	1919.7	1962.3	2251.7	2516.4	2430.1
32.5°	2408.7	2476.6	2172.1	2032.4	1994.9	1897.3	1847.9	2044.8	2206.3	2680.2	2553.4
35°	2659.4	2705.4	2368.4	2243.3	2095.8	1984.8	2043.1	2113.7	2369.5	2897.2	2715.5
37.5°	3084.0	3001.0	2720.6	2503.0	2467.6	2303.9	2333.0	2269.7	2536.0	3153.0	3036.3
40°	3322.9	3247.7	2956.1	2850.1	2624.7	2649.9	2557.9	2594.9	2777.8	3419.3	3328.5
42.5°	3571.9	3500.1	3244.4	3169.2	2954.4	2850.1	2808.6	2941.5	3148.5	3863.0	3747.4
45°	3822.0	3639.8	3531.5	3569.1	3472.6	3266.2	3218.0	3336.3	3553.4	4408.1	4189.4
47.5°	4032.9	3879.2	3797.9	3780.5	3742.9	4029.5	3833.2	3885.4	3981.3	4890.4	4740.1
50°	4413.1	4261.7	4134.4	4099.1	4281.9	4688.5	4385.6	4284.7	4476.5	5473.1	5378.3
52.5°	4962.2	4769.3	4566.8	4567.4	4912.3	5135.5	5279.0	5101.8	5137.7	6114.1	6072.0
55°	5403.5	5158.5	4990.8	5123.1	5637.4	5762.5	6310.4	6155.0	6108.5	6708.6	6657.0
57.5°	5464.1	5170.2	5090.6	5322.8	6026.6	6825.2	7414.7	7026.6	6955.3	7206.0	7308.7
60°	4898.8	4587.0	4647.0	5020.5	6153.4	7473.0	8428.6	8111.8	7659.2	7788.7	7859.4
62.5°	3653.8	3404.8	3573.0	4067.7	5664.9	7907.1	9602.4	9749.4	8475.7	8226.2	8211.0
65°	2370.6	2214.7	2325.2	2730.7	4286.9	7857.7	10651.2	11288.3	9119.0	8582.9	8321.5
67.5°	1568.1	1449.7	1465.4	1705.5	2772.2	6390.6	11278.2	12048.2	9842.5	8785.3	7688.3
70°	1168.8	1075.7	1081.3	1211.4	1645.5	4214.6	10403.9	11448.7	10106.6	8083.7	6205.5
72.5°	842.9	780.7	832.8	977.5	1311.2	2228.7	7754.5	9428.6	8812.8	6376.0	4180.9
75°	583.8	542.9	628.1	817.7	1196.8	1388.6	5124.3	6787.1	6176.9	4000.4	1890.0
77.5°	323.6	311.3	434.1	666.3	1086.3	1134.0	3138.9	4459.7	3426.1	1434.0	449.8
80°	141.3	136.8	210.3	500.3	913.0	1024.6	1767.2	2472.7	1347.7	255.7	145.3
82.5°	60.6	58.3	89.7	301.2	663.5	856.9	1089.7	1190.1	463.8	79.1	82.4
85°	10.7	11.8	35.9	158.7	403.8	435.2	789.1	704.4	233.3	37.6	58.9
87.5°	0.0	0.0	5.6	30.8	75.7	124.5	342.1	246.8	44.3	12.3	10.1
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°	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2	1108.2
2.5°	1350.5	1319.1	1199.6	1184.5	1168.2	1144.1	1135.1	1083.5	1076.8	1143.0	1143.0
5°	1680.8	1568.6	1454.8	1365.0	1284.8	1173.8	1142.4	1109.9	1083.5	1076.8	1097.5
7.5°	1855.2	1718.4	1539.5	1311.2	1126.1	965.2	897.9	850.8	798.1	813.8	822.2
10°	1845.7	1700.4	1472.2	1178.9	973.6	795.8	624.8	524.9	469.4	441.9	438.6
12.5°	1939.3	1802.5	1426.7	1073.4	811.5	565.9	393.1	321.9	281.0	281.5	278.2
15°	1993.7	1844.6	1374.0	939.9	571.5	364.0	272.6	256.9	251.2	257.4	254.1
17.5°	2089.6	1888.9	1254.6	740.8	393.1	274.8	250.7	244.5	251.8	264.7	261.3
20°	2082.3	1812.0	1084.6	522.1	290.5	247.3	237.2	227.7	242.8	256.3	254.1
22.5°	2075.6	1736.9	924.8	385.3	242.8	225.5	217.0	213.1	221.0	236.7	240.0
25°	2016.2	1699.9	762.7	289.4	219.8	204.7	200.8	197.4	200.2	213.1	212.6
27.5°	2089.1	1606.2	588.9	242.8	203.6	185.6	182.3	176.7	171.1	182.3	184.0
30°	2073.9	1619.1	461.6	213.7	187.3	163.2	164.3	152.5	142.4	152.5	152.5
32.5°	2128.9	1524.9	369.6	194.0	171.1	153.7	139.6	127.3	120.0	126.2	127.3
35°	2209.1	1528.8	289.4	181.7	157.0	136.8	120.0	107.7	100.9	103.8	105.4
37.5°	2477.7	1501.9	241.7	172.2	152.0	126.7	109.4	93.1	88.6	92.0	93.7
40°	2652.7	1573.7	213.1	167.1	139.1	116.7	93.7	81.9	78.0	79.6	82.4
42.5°	2982.5	1613.5	199.1	161.5	127.3	99.8	80.2	73.5	67.9	70.1	72.3
45°	3335.2	1681.4	188.4	155.3	118.3	87.5	70.7	65.1	57.8	58.3	60.6
47.5°	3768.7	1842.9	176.1	144.7	106.0	79.6	62.8	54.4	47.7	47.1	49.9
50°	4350.9	2058.8	164.9	131.2	98.1	72.9	55.0	44.3	38.7	37.0	39.3
52.5°	4972.3	2338.1	153.1	121.7	88.6	63.9	47.1	35.9	30.8	29.7	31.4
55°	5588.1	2606.2	141.9	115.5	78.5	55.0	39.8	29.7	25.2	24.1	25.2
57.5°	6289.6	2896.1	127.3	103.2	69.0	47.7	33.1	24.7	20.8	19.6	20.2
60°	6817.9	2998.2	115.0	89.7	60.0	42.1	28.0	19.6	16.8	15.7	16.3
62.5°	7068.6	2831.6	103.2	78.0	52.7	36.5	23.6	16.3	14.0	12.9	12.9
65°	7003.6	2462.6	91.4	66.7	45.4	30.3	18.5	14.0	12.3	10.7	10.1
67.5°	6252.1	1927.0	78.0	56.1	38.1	24.7	15.7	13.5	11.2	10.1	8.4
70°	4958.2	1395.3	63.4	46.5	32.0	20.2	12.3	12.3	10.7	10.1	7.9
72.5°	3250.0	878.3	51.6	37.6	26.4	15.7	9.5	11.2	10.1	10.1	7.3
75°	1408.2	314.1	41.5	30.3	21.9	10.7	8.4	10.1	10.7	10.1	8.4
77.5°	329.8	97.6	32.5	24.1	17.9	7.3	8.4	10.1	10.7	9.5	7.3
80°	123.9	41.5	21.3	15.7	14.0	4.5	7.3	6.2	5.6	3.9	1.1
82.5°	75.2	17.4	11.2	7.9	6.7	1.1	3.4	2.2	1.1	1.1	0.0
85°	53.3	8.4	6.2	5.6	3.4	0.0	0.6	0.0	0.0	0.6	0.0
87.5°	7.3	2.2	2.8	2.8	2.2	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)