

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: P368077

Luminaire Tested: **MSA-SA3D-730-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368077
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-17)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-730-U-SL2-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14857 lumens
Efficiency: N/A
Efficacy: 77.4 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B2 - U0 - G3

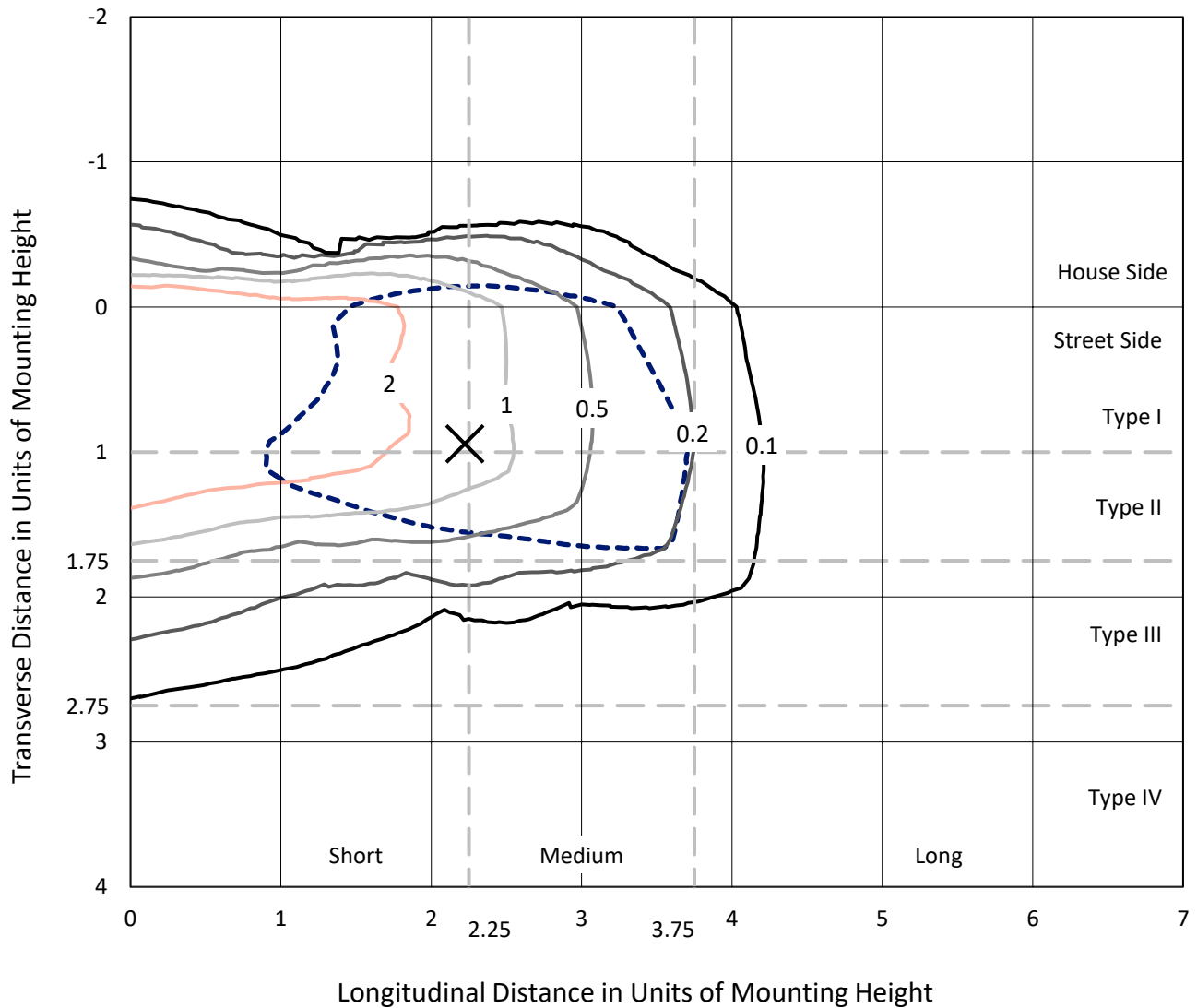
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

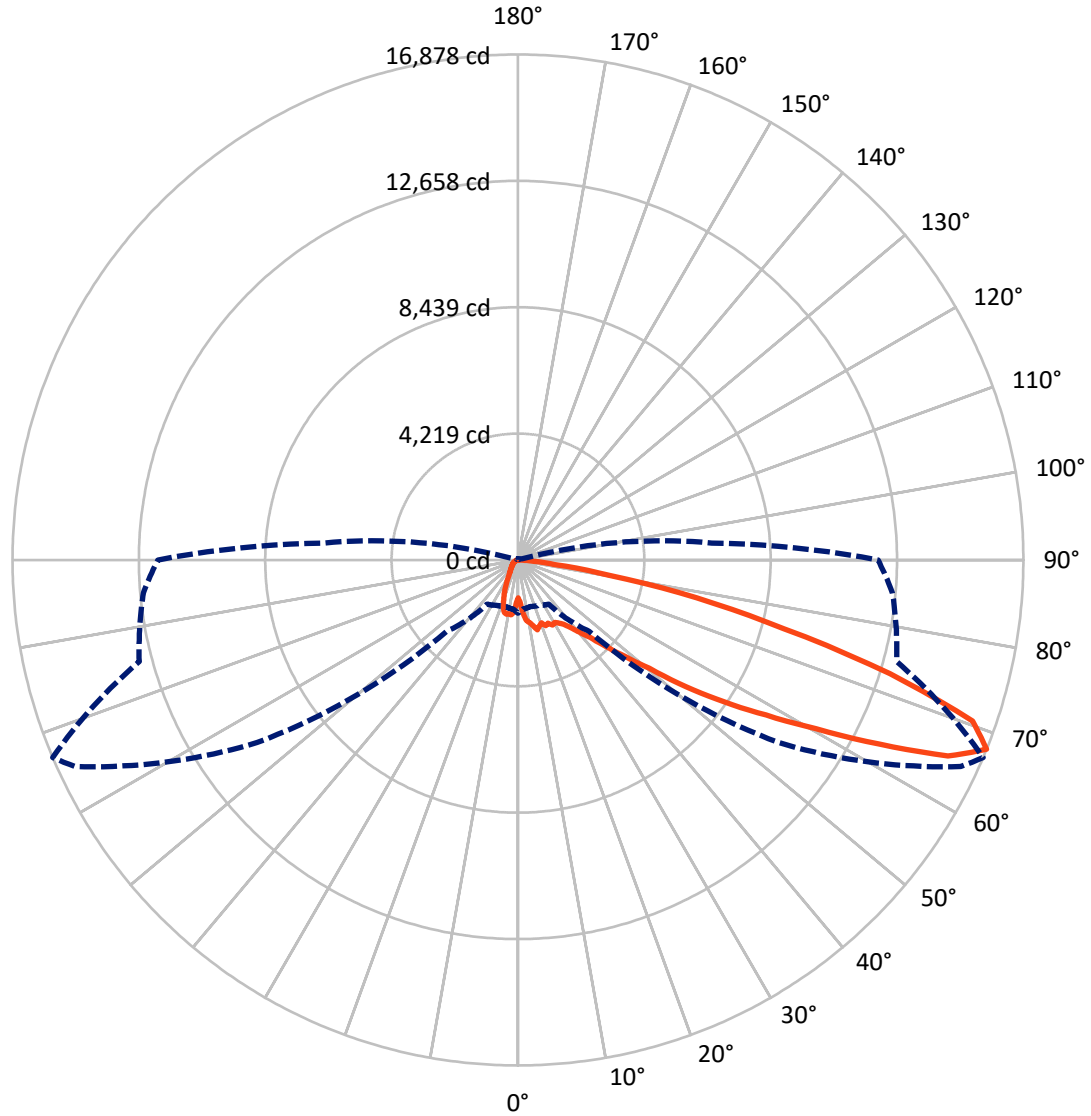
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.9 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 67.5-Deg Vertical

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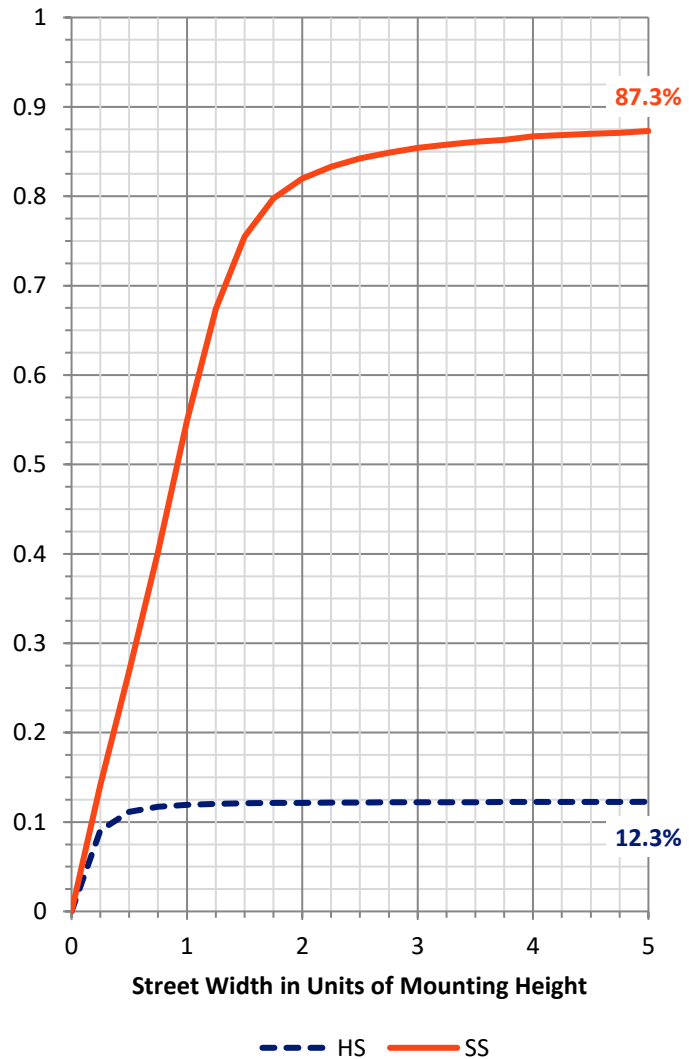
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1837.4	0.0	1837.4
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	13019.6	0.0	13019.6
	% Fixture	87.6	0.0	87.6
Total	Lumens	14857.0	0.0	14857.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	158.8	1.1
10°-20°	470.0	3.2
20°-30°	736.6	5.0
30°-40°	1187.6	8.0
40°-50°	2182.3	14.7
50°-60°	3685.6	24.8
60°-70°	4074.6	27.4
70°-80°	2132.6	14.4
80°-90°	229.0	1.5
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°	14857.0	100.0
0°-180°	14857.0	100.0

Coefficient of Utilization

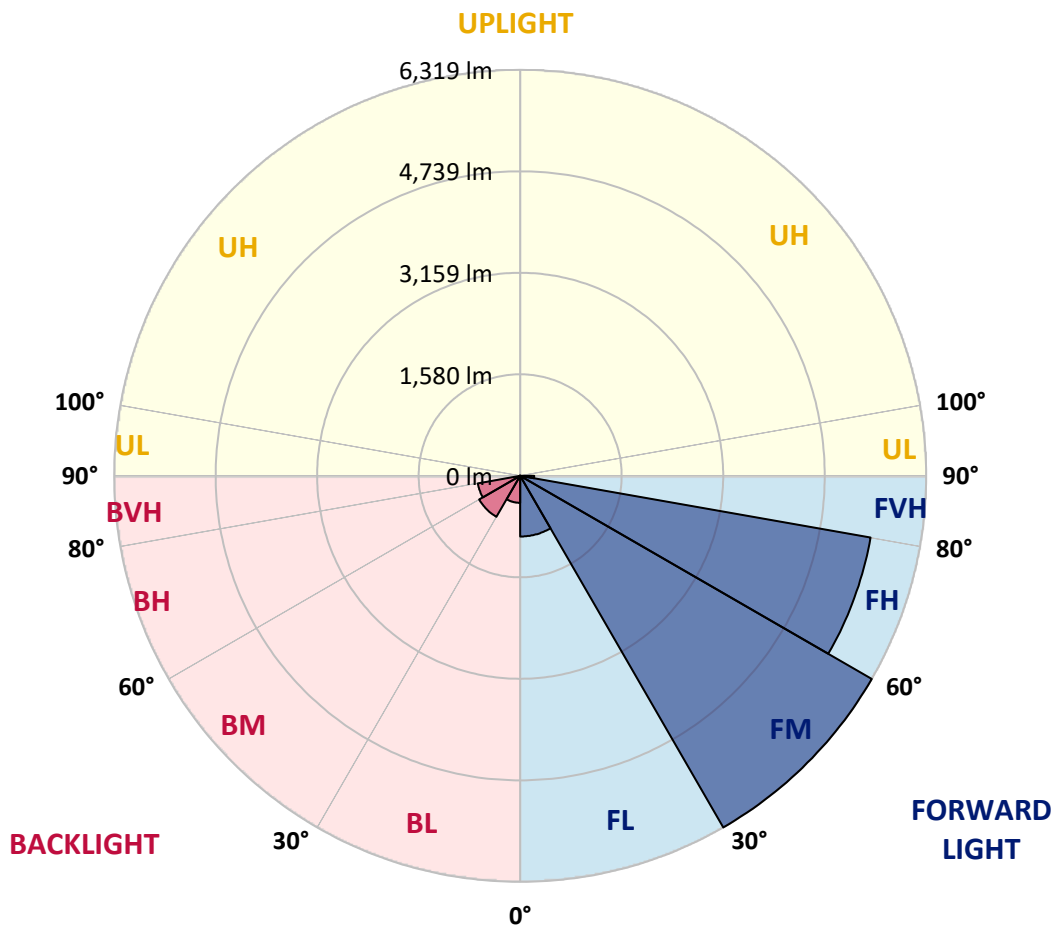


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	944.7	6.4			
FM (30°-60°)	6318.7	42.5			
FH (60°-80°)	5537.0	37.3			G3/7500
FVH (80°-90°)	219.3	1.5			G2/225
BL (0°-30°)	420.7	2.8	B1/500		
BM (30°-60°)	736.7	5.0	B1/1000		
BH (60°-80°)	670.2	4.5	B2/1000		G2/1000
BVH (80°-90°)	9.8	0.1			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3
 Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1265.4	1265.4	1265.4	1265.4	1265.4	1265.4	1265.4	1265.4	1265.4	1265.4	1265.4
2.5°	1493.8	1443.3	1357.3	1382.2	1432.0	1473.4	1453.8	1415.4	1416.1	1376.9	1517.9
5°	1737.9	1670.1	1620.4	1637.7	1635.4	1633.9	1726.6	1762.1	1777.1	1842.0	1937.7
7.5°	1808.0	1783.9	1731.9	1747.7	1695.7	1699.5	1862.3	2016.0	2040.2	2080.1	2250.4
10°	1780.9	1734.2	1753.0	1753.0	1753.8	1838.2	1947.5	2094.4	2123.8	2277.6	2295.7
12.5°	1751.5	1753.8	1828.4	1814.8	1917.3	2068.8	2105.7	2270.8	2256.5	2389.9	2588.1
15°	1860.8	1918.1	1869.8	1888.7	1898.5	2076.3	2135.9	2355.2	2418.5	2587.3	2716.2
17.5°	2048.5	2056.0	1955.8	1928.6	1999.5	2050.0	2169.8	2275.3	2317.5	2760.7	2943.1
20°	2082.4	2130.6	2028.9	1872.1	2022.1	2091.4	2175.1	2225.6	2243.7	2814.2	3071.2
22.5°	2286.6	2233.1	2070.3	1951.2	1994.2	2069.6	2121.6	2273.8	2382.3	2713.2	3194.0
25°	2391.4	2377.1	2221.8	2120.1	2076.3	2070.3	2189.4	2304.7	2339.4	2817.9	3224.2
27.5°	2642.3	2609.9	2309.2	2296.4	2152.5	2025.8	2191.7	2398.9	2463.7	2719.2	3337.2
30°	2983.8	2971.7	2571.5	2563.2	2334.1	2106.5	2313.7	2456.9	2417.7	2769.7	3412.6
32.5°	3327.4	3425.4	3016.2	2782.5	2610.7	2402.7	2279.1	2438.9	2508.9	2892.6	3551.3
35°	3742.7	3813.5	3396.8	3227.2	2845.1	2541.4	2508.9	2611.4	2641.6	3038.8	3708.8
37.5°	4469.2	4362.2	4007.2	3718.6	3518.1	3036.5	2876.7	2795.3	2865.4	3237.0	4030.6
40°	5005.8	4938.0	4500.9	4328.3	3867.0	3585.2	3167.6	3091.5	3169.9	3440.5	4254.4
42.5°	5653.2	5512.3	5100.8	4984.0	4509.2	3965.8	3542.2	3568.6	3519.6	3842.2	4647.1
45°	6238.8	5920.8	5691.7	5718.0	5464.8	4730.7	4167.0	4154.2	4113.5	4424.0	5060.1
47.5°	6633.0	6354.9	6131.8	6058.7	6028.5	6076.0	5069.9	4842.3	4812.1	5035.2	5710.5
50°	6844.8	6540.3	6264.4	6279.5	6891.5	7352.0	6001.4	5678.1	5689.4	5922.3	6599.8
52.5°	6702.3	6357.9	6067.0	6349.6	7560.7	8202.9	7543.4	6770.2	7032.4	6972.9	7792.9
55°	6044.4	5745.2	5538.7	6044.4	7633.8	9118.6	9441.9	8413.9	8355.1	8219.4	9009.3
57.5°	4937.2	4679.5	4552.1	5085.7	6834.2	9856.4	11348.7	10271.7	9770.5	9202.2	10019.2
60°	3678.6	3488.7	3356.1	3637.9	5384.9	9139.7	12597.5	12022.4	11442.1	10149.6	10926.6
62.5°	2724.5	2570.0	2429.1	2454.7	3708.0	7860.7	13076.8	13877.2	13544.1	11149.7	11782.8
65°	2174.3	2033.4	1934.7	1878.1	2296.4	5914.0	12409.8	15397.3	15781.7	12091.8	12400.8
67.5°	1775.6	1656.6	1607.6	1672.4	1801.3	3371.1	10628.2	16319.8	16877.5	13091.1	12553.0
70°	1444.8	1346.8	1341.5	1516.4	1658.8	2055.2	7817.7	15683.0	16102.8	13261.4	11640.3
72.5°	1006.9	963.9	1032.5	1280.5	1643.7	1711.6	4489.6	12978.1	12993.1	11712.7	9574.5
75°	569.8	563.0	671.5	1021.2	1600.8	1694.2	2502.9	9171.3	9178.1	8858.6	6633.0
77.5°	313.5	293.2	391.2	690.4	1374.7	1655.0	1614.3	6262.2	6101.7	4929.7	3029.7
80°	144.7	136.4	211.8	442.4	1005.4	1565.4	1294.0	3442.0	3103.6	1606.1	739.3
82.5°	59.5	56.5	97.2	284.1	635.3	1260.9	1090.5	1526.9	1225.5	305.2	228.4
85°	10.6	11.3	39.9	171.8	355.7	581.1	884.0	725.0	532.8	84.4	125.1
87.5°	0.0	0.0	8.3	41.5	85.9	159.0	358.7	202.7	139.4	24.9	36.9
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°	1265.4	1265.4	1265.4	1265.4	1265.4	1265.4	1265.4	1265.4	1265.4	1265.4	1265.4
2.5°	1545.8	1532.9	1403.3	1409.3	1418.4	1410.1	1408.6	1372.4	1339.3	1448.5	1447.0
5°	1955.0	1863.8	1774.1	1739.5	1664.8	1566.9	1567.6	1536.7	1505.1	1549.5	1549.5
7.5°	2246.7	2120.8	2007.0	1804.3	1606.8	1428.2	1412.4	1370.2	1321.9	1380.0	1391.3
10°	2314.5	2205.2	2058.3	1760.6	1573.6	1399.6	1208.1	1050.6	977.5	943.6	937.6
12.5°	2523.3	2441.9	2113.3	1783.9	1514.9	1220.2	906.7	719.7	592.4	582.6	569.0
15°	2662.7	2605.4	2167.5	1725.9	1266.2	877.3	569.8	437.1	385.9	381.4	374.6
17.5°	2879.0	2779.5	2115.5	1541.2	990.3	578.8	382.9	345.2	351.2	364.8	354.2
20°	2967.2	2772.7	2002.5	1273.7	695.6	388.1	332.4	312.0	327.8	340.7	334.6
22.5°	3057.6	2792.3	1902.2	1049.9	454.5	321.1	296.2	285.6	287.1	300.0	300.7
25°	3056.9	2846.6	1786.2	817.7	338.4	285.6	267.6	254.0	248.7	257.8	255.5
27.5°	3205.3	2784.0	1574.4	606.7	297.7	255.5	238.2	221.6	202.7	211.8	211.8
30°	3206.1	2885.8	1426.7	435.6	272.8	227.6	212.5	186.9	165.1	172.6	173.3
32.5°	3291.2	2797.6	1290.3	333.1	253.2	211.0	177.9	154.5	141.7	146.2	146.2
35°	3388.5	2873.0	1080.8	293.9	233.6	187.7	152.2	133.4	123.6	127.4	127.4
37.5°	3709.5	2857.1	935.3	273.6	220.8	169.6	138.7	117.6	113.0	115.3	118.3
40°	3825.6	2969.4	737.8	261.5	199.7	153.0	122.1	106.3	100.2	101.7	102.5
42.5°	4121.0	2994.3	589.4	251.7	180.9	132.6	108.5	97.2	89.7	89.7	91.9
45°	4447.4	3056.9	468.8	243.4	165.1	119.1	98.0	88.9	77.6	76.1	79.1
47.5°	4919.9	3296.5	382.1	226.9	146.2	110.8	90.4	76.9	67.8	64.8	67.8
50°	5710.5	3703.5	337.6	206.5	132.6	104.0	79.9	65.6	58.8	55.0	57.3
52.5°	6825.9	4406.7	314.3	187.7	120.6	93.5	71.6	57.3	50.5	47.5	49.0
55°	8064.9	5213.1	303.0	168.8	110.0	82.1	62.6	50.5	44.5	40.7	41.5
57.5°	9210.5	5971.3	291.7	150.7	99.5	73.1	55.0	44.5	38.4	34.7	35.4
60°	10339.5	6576.5	264.5	129.6	89.7	65.6	48.2	38.4	34.7	30.1	30.1
62.5°	11338.1	6938.2	225.3	112.3	80.6	58.0	43.0	34.7	31.7	27.1	27.1
65°	12017.9	6954.8	181.6	96.5	70.8	49.7	37.7	32.4	29.4	24.1	23.4
67.5°	12027.7	6502.6	145.5	85.9	62.6	43.7	33.9	30.9	27.1	22.6	21.1
70°	10765.3	5372.1	121.3	75.4	54.3	38.4	29.4	29.4	26.4	21.9	19.6
72.5°	8611.3	4105.2	101.7	65.6	48.2	33.2	27.1	27.9	25.6	21.9	19.6
75°	5788.1	2354.4	84.4	55.8	42.2	27.9	26.4	27.1	26.4	21.9	18.8
77.5°	2665.7	749.9	65.6	46.0	36.2	23.4	25.6	25.6	24.1	19.6	16.6
80°	600.7	184.6	47.5	33.9	29.4	17.3	23.4	21.1	18.8	13.6	9.8
82.5°	218.6	56.5	28.6	21.1	18.1	6.8	15.1	15.1	13.6	9.8	6.0
85°	125.1	29.4	15.8	13.6	9.8	3.0	8.3	9.0	7.5	6.8	3.0
87.5°	40.7	6.8	7.5	8.3	7.5	1.5	3.0	3.0	2.3	1.5	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)