

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: P367769

Luminaire Tested: **MSA-SA3A-830-U-SL2-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367769
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-SA3A-830-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: 7640 lumens
Efficiency: N/A
Efficacy: 79.6 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G2

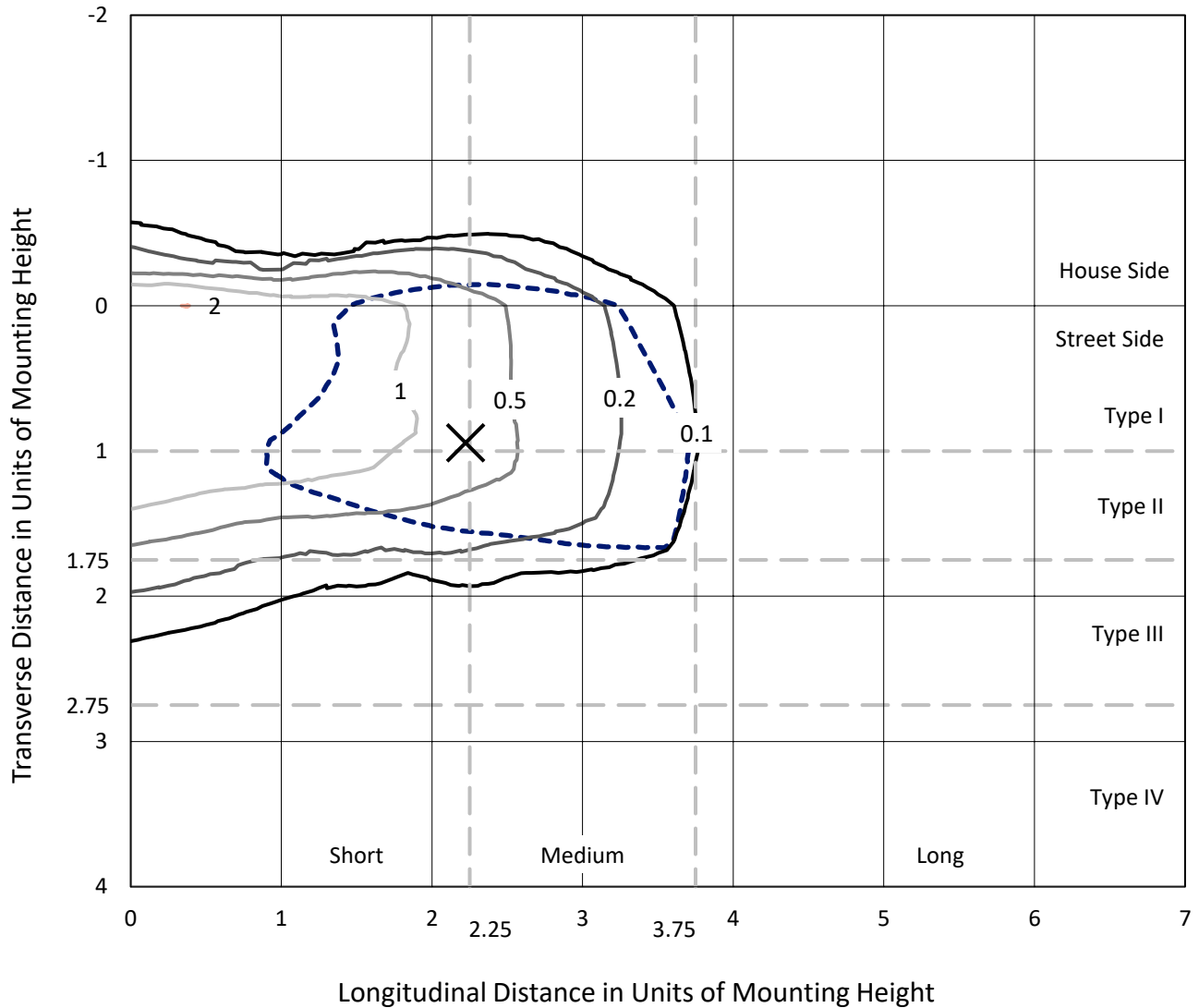
Input Watts (W): 96
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

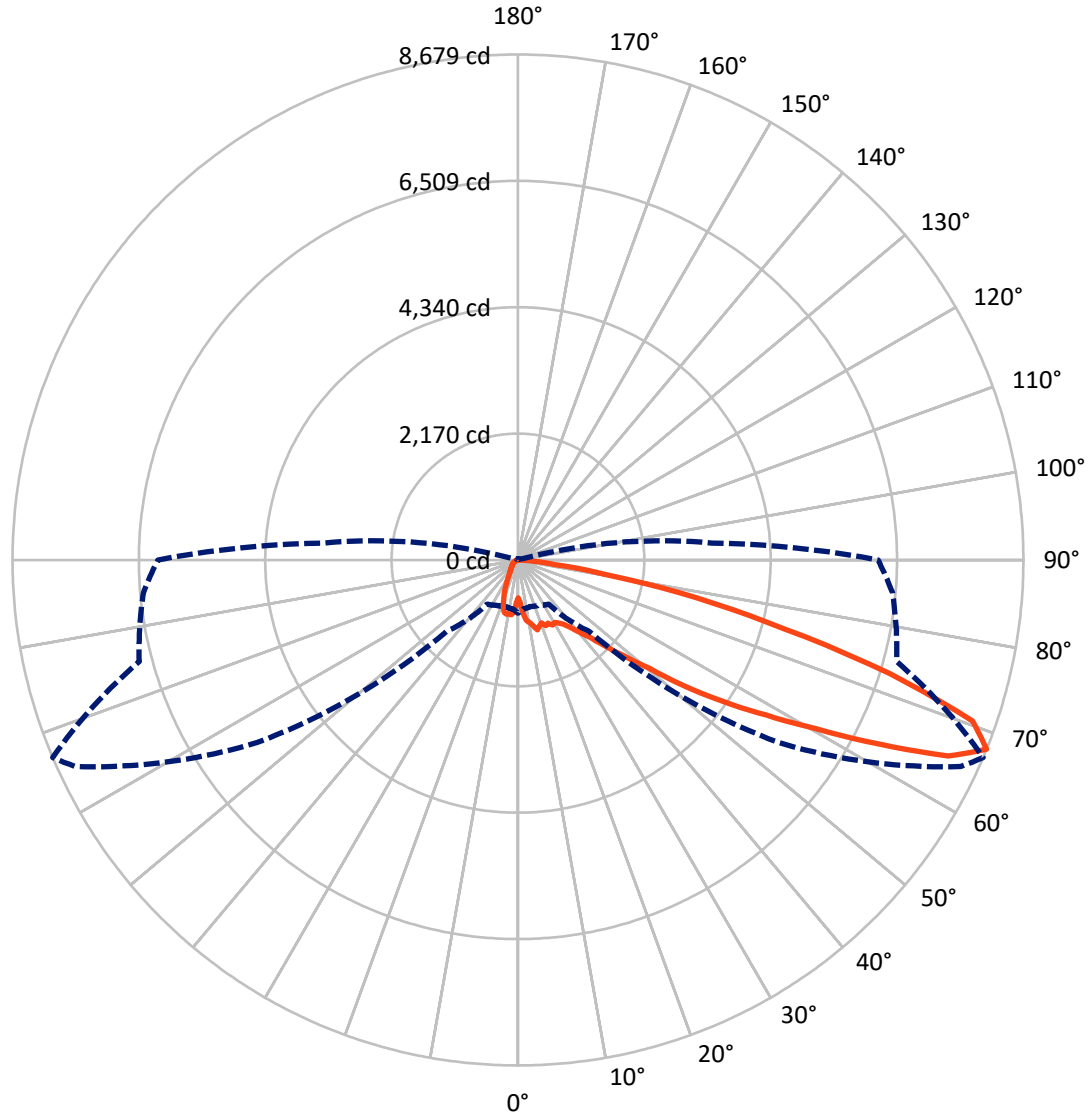
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2 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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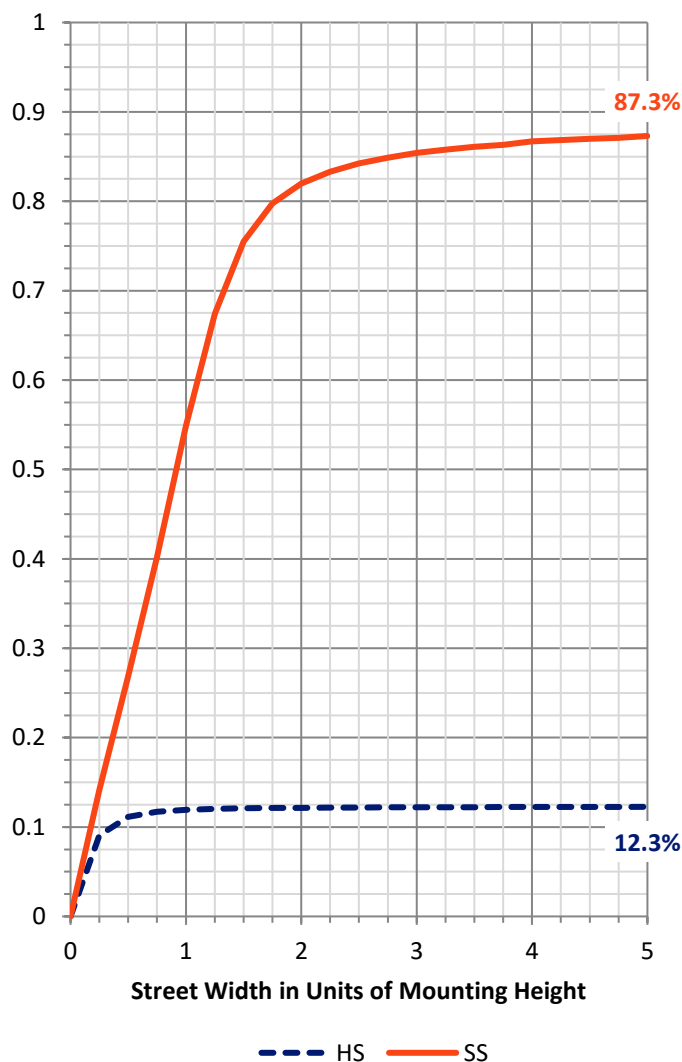
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	944.9	0.0	944.9
	% Fixture	12.4	0.0	12.4
Street Side	Lumens	6695.2	0.0	6695.2
	% Fixture	87.6	0.0	87.6
Total	Lumens	7640.0	0.0	7640.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	81.7	1.1
10°-20°	241.7	3.2
20°-30°	378.8	5.0
30°-40°	610.7	8.0
40°-50°	1122.2	14.7
50°-60°	1895.3	24.8
60°-70°	2095.3	27.4
70°-80°	1096.7	14.4
80°-90°	117.8	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°	7640.0	100.0
0°-180°	7640.0	100.0

Coefficient of Utilization

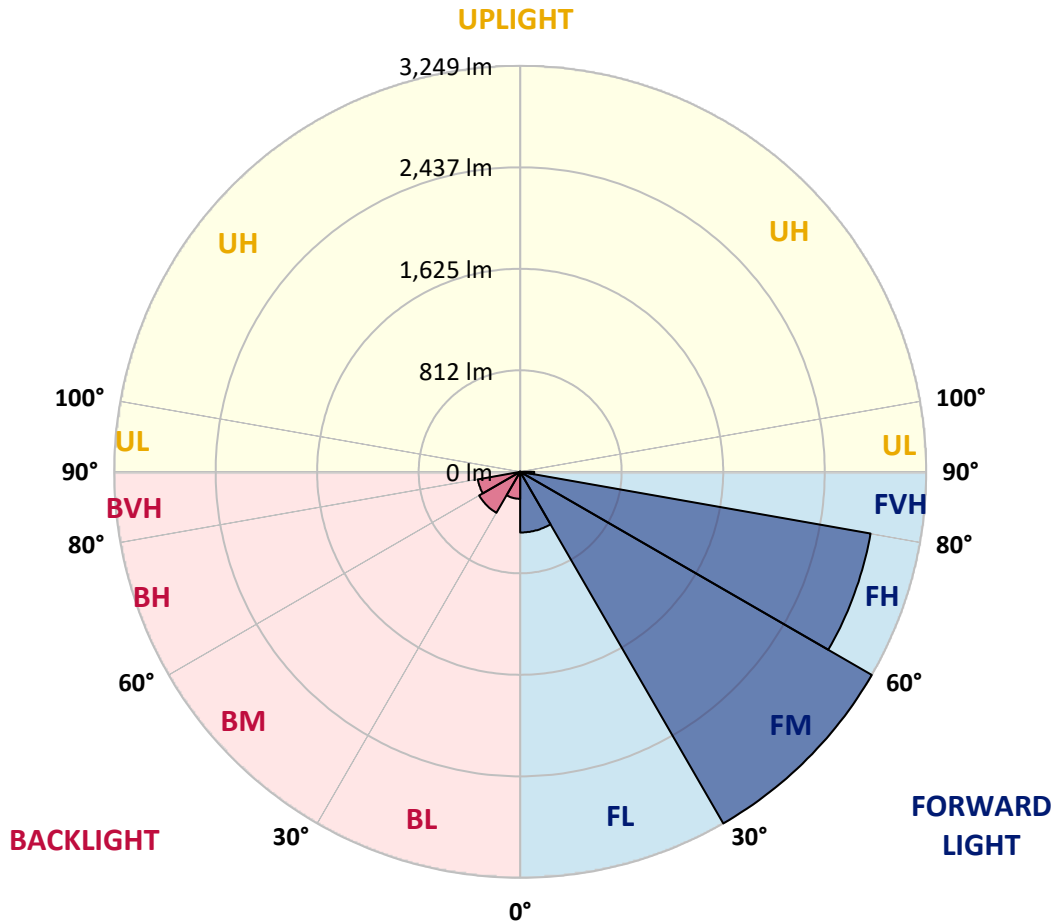


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	485.8	6.4			
FM (30°-60°)	3249.3	42.5			
FH (60°-80°)	2847.3	37.3			G2/5000
FVH (80°-90°)	112.8	1.5			G2/225
BL (0°-30°)	216.3	2.8	B1/500		
BM (30°-60°)	378.9	5.0	B1/1000		
BH (60°-80°)	344.6	4.5	B1/500		G1/500
BVH (80°-90°)	5.0	0.1			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 Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	650.7	650.7	650.7	650.7	650.7	650.7	650.7	650.7	650.7	650.7	650.7
2.5°	768.1	742.2	698.0	710.8	736.4	757.7	747.6	727.8	728.2	708.1	780.5
5°	893.7	858.8	833.3	842.2	841.0	840.2	887.9	906.1	913.9	947.2	996.4
7.5°	929.8	917.4	890.6	898.8	872.0	873.9	957.7	1036.7	1049.1	1069.7	1157.3
10°	915.8	891.8	901.5	901.5	901.9	945.3	1001.5	1077.0	1092.1	1171.2	1180.5
12.5°	900.7	901.9	940.2	933.2	986.0	1063.9	1082.8	1167.7	1160.4	1229.0	1330.9
15°	956.9	986.3	961.5	971.2	976.3	1067.7	1098.3	1211.1	1243.7	1330.5	1396.8
17.5°	1053.4	1057.3	1005.7	991.8	1028.2	1054.2	1115.8	1170.0	1191.7	1419.6	1513.4
20°	1070.8	1095.6	1043.3	962.7	1039.8	1075.5	1118.5	1144.5	1153.8	1447.1	1579.3
22.5°	1175.9	1148.3	1064.6	1003.4	1025.5	1064.2	1091.0	1169.3	1225.1	1395.2	1642.5
25°	1229.7	1222.4	1142.5	1090.2	1067.7	1064.6	1125.9	1185.2	1203.0	1449.1	1658.0
27.5°	1358.8	1342.1	1187.5	1180.9	1106.9	1041.8	1127.0	1233.6	1266.9	1398.3	1716.1
30°	1534.4	1528.2	1322.4	1318.1	1200.3	1083.2	1189.8	1263.4	1243.3	1424.3	1754.9
32.5°	1711.1	1761.5	1551.0	1430.9	1342.5	1235.5	1172.0	1254.1	1290.2	1487.5	1826.2
35°	1924.6	1961.1	1746.7	1659.5	1463.0	1306.9	1290.2	1342.9	1358.4	1562.6	1907.2
37.5°	2298.2	2243.2	2060.7	1912.2	1809.1	1561.5	1479.3	1437.5	1473.5	1664.6	2072.7
40°	2574.2	2539.3	2314.5	2225.8	1988.6	1843.6	1628.9	1589.8	1630.1	1769.2	2187.8
42.5°	2907.1	2834.6	2623.0	2562.9	2318.8	2039.3	1821.5	1835.1	1809.9	1975.8	2389.7
45°	3208.2	3044.7	2926.9	2940.4	2810.2	2432.7	2142.8	2136.2	2115.3	2275.0	2602.1
47.5°	3410.9	3267.9	3153.2	3115.6	3100.1	3124.5	2607.1	2490.1	2474.6	2589.3	2936.5
50°	3519.8	3363.2	3221.4	3229.2	3543.9	3780.7	3086.1	2919.9	2925.7	3045.4	3393.9
52.5°	3446.6	3269.5	3119.9	3265.2	3888.0	4218.2	3879.1	3481.5	3616.3	3585.7	4007.4
55°	3108.2	2954.4	2848.2	3108.2	3925.6	4689.1	4855.4	4326.7	4296.5	4226.7	4632.9
57.5°	2538.9	2406.4	2340.9	2615.3	3514.4	5068.5	5835.9	5282.1	5024.3	4732.1	5152.2
60°	1891.7	1794.0	1725.8	1870.8	2769.1	4699.9	6478.1	6182.4	5883.9	5219.3	5618.8
62.5°	1401.0	1321.6	1249.1	1262.3	1906.8	4042.3	6724.6	7136.1	6964.8	5733.6	6059.1
65°	1118.1	1045.6	994.9	965.8	1180.9	3041.2	6381.6	7917.9	8115.5	6218.0	6376.9
67.5°	913.1	851.9	826.7	860.0	926.3	1733.6	5465.4	8392.2	8679.0	6731.9	6455.2
70°	743.0	692.6	689.9	779.8	853.0	1056.9	4020.2	8064.7	8280.6	6819.5	5985.9
72.5°	517.8	495.7	531.0	658.5	845.3	880.1	2308.7	6673.8	6681.5	6023.1	4923.6
75°	293.0	289.5	345.3	525.1	823.2	871.2	1287.1	4716.2	4719.7	4555.4	3410.9
77.5°	161.2	150.8	201.1	355.0	706.9	851.1	830.2	3220.2	3137.7	2535.0	1558.0
80°	74.4	70.1	108.9	227.5	517.0	805.0	665.4	1770.0	1596.0	825.9	380.2
82.5°	30.6	29.1	50.0	146.1	326.7	648.4	560.8	785.2	630.2	157.0	117.4
85°	5.4	5.8	20.5	88.4	182.9	298.8	454.6	372.8	274.0	43.4	64.3
87.5°	0.0	0.0	4.3	21.3	44.2	81.8	184.5	104.3	71.7	12.8	19.0
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°	650.7	650.7	650.7	650.7	650.7	650.7	650.7	650.7	650.7	650.7	650.7
2.5°	794.9	788.3	721.6	724.7	729.4	725.1	724.4	705.7	688.7	744.9	744.1
5°	1005.3	958.4	912.3	894.5	856.1	805.7	806.1	790.2	774.0	796.8	796.8
7.5°	1155.3	1090.6	1032.1	927.8	826.3	734.4	726.3	704.6	679.8	709.6	715.4
10°	1190.2	1134.0	1058.4	905.3	809.2	719.7	621.3	540.3	502.7	485.2	482.1
12.5°	1297.6	1255.7	1086.7	917.4	779.0	627.5	466.2	370.1	304.6	299.6	292.6
15°	1369.3	1339.8	1114.6	887.5	651.1	451.1	293.0	224.8	198.4	196.1	192.6
17.5°	1480.5	1429.3	1087.9	792.6	509.3	297.6	196.9	177.5	180.6	187.6	182.2
20°	1525.8	1425.8	1029.7	655.0	357.7	199.6	170.9	160.4	168.6	175.2	172.1
22.5°	1572.3	1435.9	978.2	539.9	233.7	165.1	152.3	146.9	147.7	154.2	154.6
25°	1571.9	1463.8	918.5	420.5	174.0	146.9	137.6	130.6	127.9	132.5	131.4
27.5°	1648.3	1431.6	809.6	312.0	153.1	131.4	122.5	113.9	104.3	108.9	108.9
30°	1648.7	1484.0	733.7	224.0	140.3	117.0	109.3	96.1	84.9	88.8	89.1
32.5°	1692.5	1438.6	663.5	171.3	130.2	108.5	91.5	79.4	72.9	75.2	75.2
35°	1742.5	1477.4	555.8	151.1	120.1	96.5	78.3	68.6	63.6	65.5	65.5
37.5°	1907.6	1469.2	481.0	140.7	113.6	87.2	71.3	60.5	58.1	59.3	60.8
40°	1967.3	1527.0	379.4	134.5	102.7	78.7	62.8	54.6	51.5	52.3	52.7
42.5°	2119.2	1539.8	303.1	129.4	93.0	68.2	55.8	50.0	46.1	46.1	47.3
45°	2287.0	1571.9	241.1	125.2	84.9	61.2	50.4	45.7	39.9	39.1	40.7
47.5°	2530.0	1695.2	196.5	116.7	75.2	57.0	46.5	39.5	34.9	33.3	34.9
50°	2936.5	1904.5	173.6	106.2	68.2	53.5	41.1	33.7	30.2	28.3	29.5
52.5°	3510.1	2266.1	161.6	96.5	62.0	48.1	36.8	29.5	26.0	24.4	25.2
55°	4147.3	2680.8	155.8	86.8	56.6	42.2	32.2	26.0	22.9	20.9	21.3
57.5°	4736.4	3070.6	150.0	77.5	51.2	37.6	28.3	22.9	19.8	17.8	18.2
60°	5316.9	3381.9	136.0	66.7	46.1	33.7	24.8	19.8	17.8	15.5	15.5
62.5°	5830.5	3567.9	115.9	57.7	41.5	29.8	22.1	17.8	16.3	14.0	14.0
65°	6180.0	3576.4	93.4	49.6	36.4	25.6	19.4	16.7	15.1	12.4	12.0
67.5°	6185.1	3343.9	74.8	44.2	32.2	22.5	17.4	15.9	14.0	11.6	10.9
70°	5535.9	2762.5	62.4	38.8	27.9	19.8	15.1	15.1	13.6	11.2	10.1
72.5°	4428.3	2111.0	52.3	33.7	24.8	17.1	14.0	14.3	13.2	11.2	10.1
75°	2976.5	1210.7	43.4	28.7	21.7	14.3	13.6	14.0	13.6	11.2	9.7
77.5°	1370.8	385.6	33.7	23.6	18.6	12.0	13.2	13.2	12.4	10.1	8.5
80°	308.9	95.0	24.4	17.4	15.1	8.9	12.0	10.9	9.7	7.0	5.0
82.5°	112.4	29.1	14.7	10.9	9.3	3.5	7.8	7.8	7.0	5.0	3.1
85°	64.3	15.1	8.1	7.0	5.0	1.6	4.3	4.7	3.9	3.5	1.6
87.5°	20.9	3.5	3.9	4.3	3.9	0.8	1.6	1.6	1.2	0.8	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)