

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: P368093

Luminaire Tested: **MSA-SA3D-730-U-T4W-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P368093
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-15)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-730-U-T4W-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) 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: 13666 lumens
Efficiency: N/A
Efficacy: 71.2 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

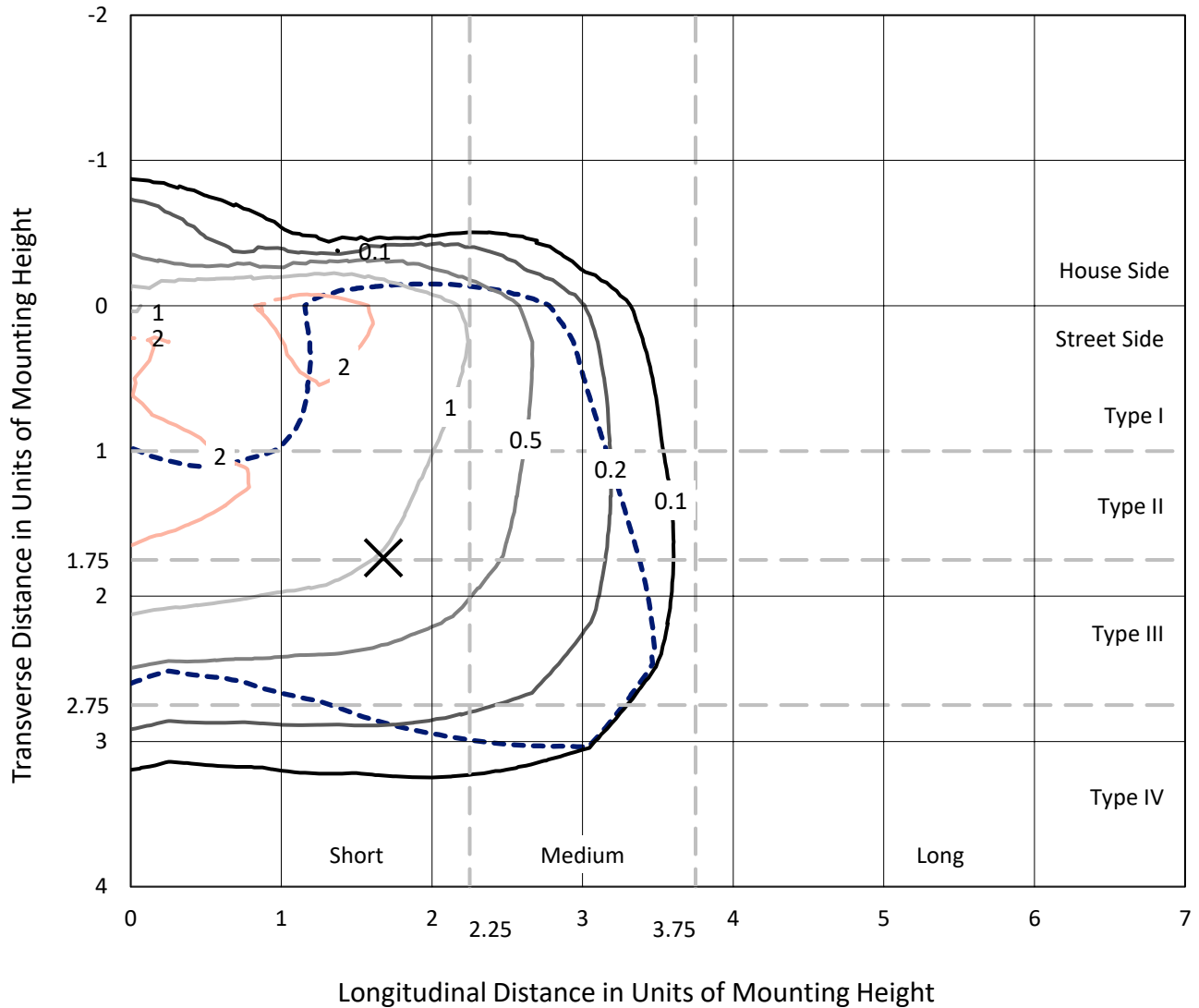
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

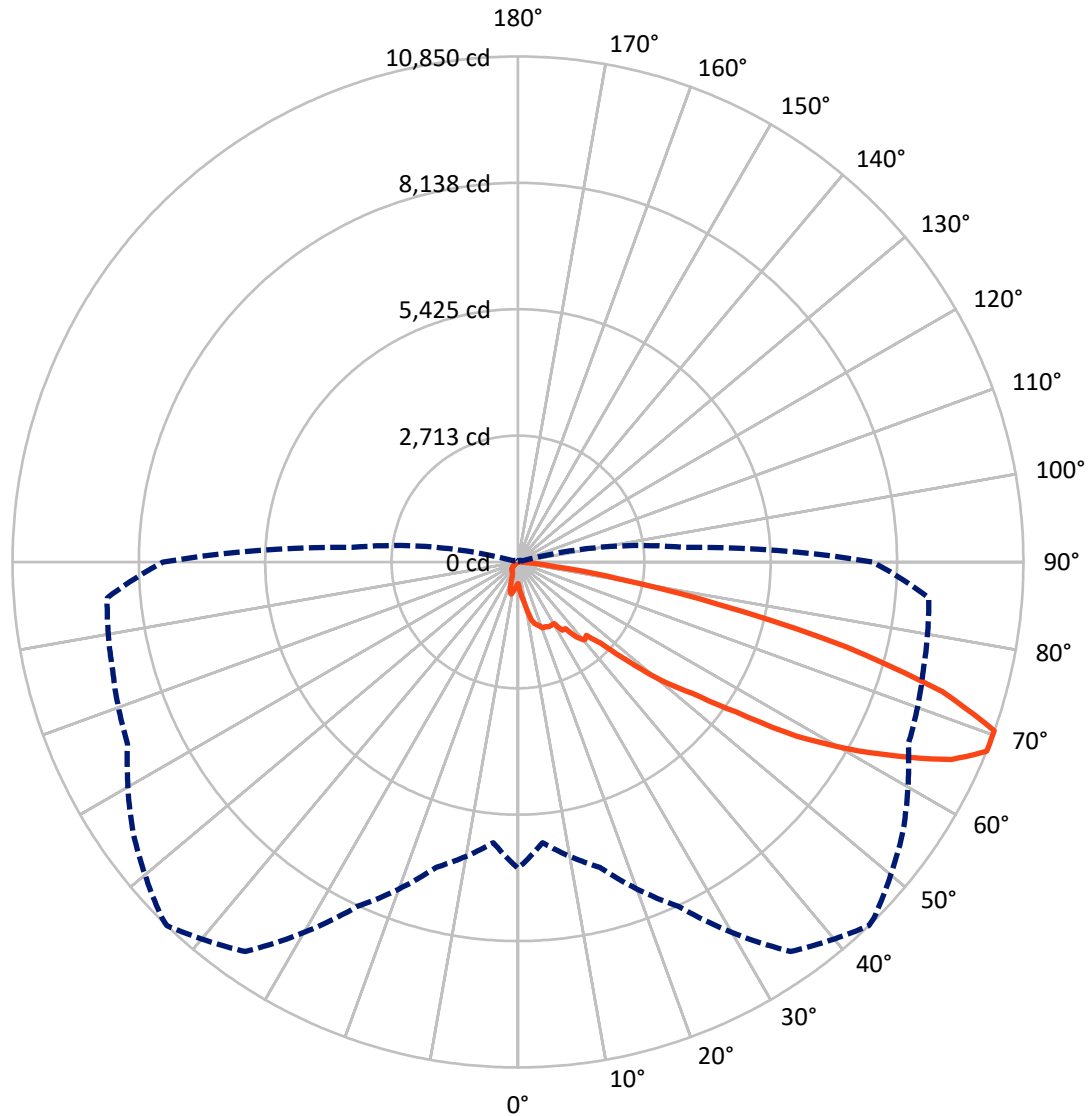
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 3.2 fc
 Type 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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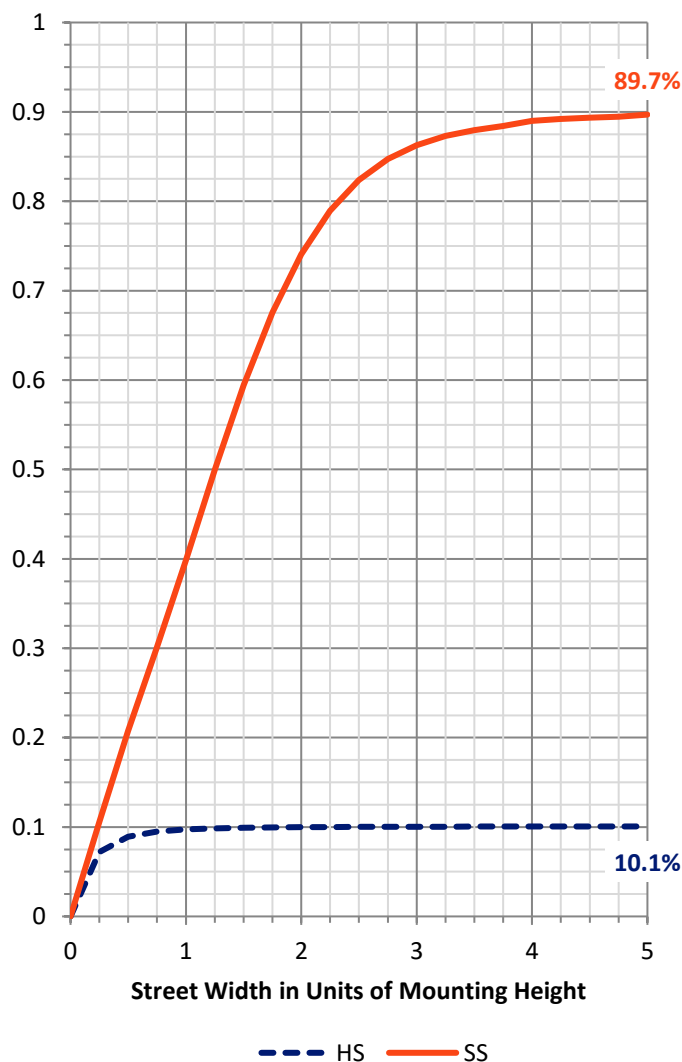
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1388.2	0.0	1388.2
	% Fixture	10.2	0.0	10.2
Street Side	Lumens	12277.8	0.0	12277.8
	% Fixture	89.8	0.0	89.8
Total	Lumens	13666.0	0.0	13666.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.2	0.5
10°-20°	285.7	2.1
20°-30°	506.1	3.7
30°-40°	822.7	6.0
40°-50°	1646.2	12.0
50°-60°	3377.3	24.7
60°-70°	4639.4	33.9
70°-80°	2180.6	16.0
80°-90°	139.7	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°	13666.0	100.0
0°-180°	13666.0	100.0

Coefficient of Utilization



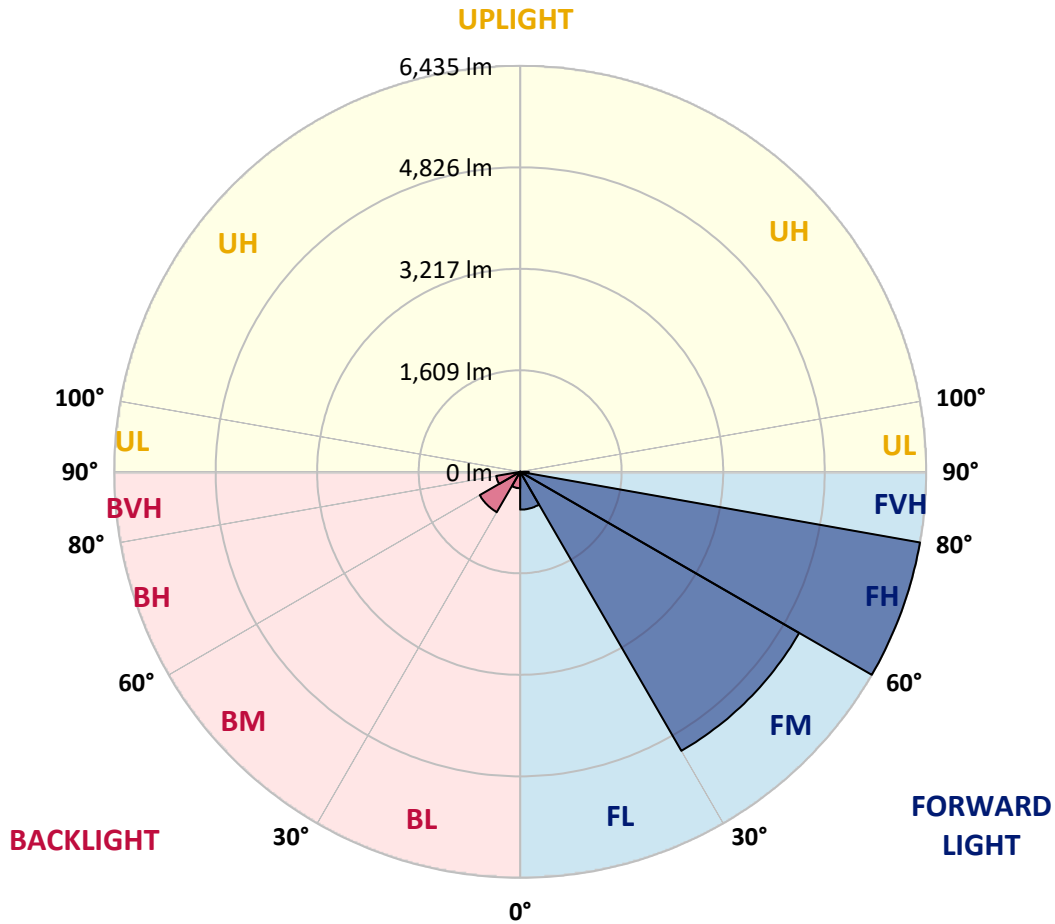
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	599.4	4.4			
FM (30°-60°)	5106.8	37.4			
FH (60°-80°)	6434.8	47.1			G3/7500
FVH (80°-90°)	136.8	1.0			G2/225
BL (0°-30°)	260.7	1.9	B1/500		
BM (30°-60°)	739.5	5.4	B1/1000		
BH (60°-80°)	385.2	2.8	B1/500		G1/500
BVH (80°-90°)	2.9	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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4
2.5°	585.5	566.7	539.6	545.6	548.6	556.9	557.6	547.1	517.0	508.7	545.6
5°	820.6	774.7	766.4	749.1	714.4	695.5	691.0	709.9	685.8	678.2	688.0
7.5°	1048.2	1009.0	966.1	942.7	870.4	825.9	823.7	831.2	835.7	809.3	822.9
10°	1199.7	1156.7	1147.7	1092.7	1030.1	1019.6	1015.1	986.4	963.1	943.5	877.9
12.5°	1336.8	1336.1	1352.7	1273.5	1263.7	1274.3	1270.5	1168.0	1144.7	1062.5	1043.7
15°	1519.2	1564.4	1492.8	1426.5	1342.1	1378.3	1368.5	1302.9	1287.1	1231.3	1150.7
17.5°	1708.4	1720.4	1600.6	1498.9	1477.0	1429.5	1439.3	1416.0	1336.1	1380.5	1300.7
20°	1712.9	1739.3	1611.1	1443.1	1510.2	1507.9	1508.7	1486.1	1380.5	1484.5	1411.4
22.5°	1776.2	1711.4	1592.3	1485.3	1497.4	1508.7	1520.7	1492.8	1470.2	1495.8	1509.4
25°	1750.6	1724.9	1610.4	1539.6	1528.3	1537.3	1540.3	1575.7	1561.4	1623.2	1589.3
27.5°	1816.9	1779.9	1575.0	1587.8	1547.8	1537.3	1519.2	1637.5	1679.7	1630.7	1721.2
30°	1930.7	1925.4	1636.0	1654.9	1624.0	1531.3	1579.5	1734.0	1786.7	1756.6	1866.6
32.5°	2108.5	2126.6	1814.6	1692.5	1708.4	1749.8	1731.7	1734.0	1867.4	1934.4	2021.8
35°	2361.0	2351.2	1988.7	1835.7	1752.8	1759.6	1785.2	1908.1	2080.6	2076.1	2168.8
37.5°	2856.8	2749.8	2296.9	1981.9	2006.8	2040.7	2021.8	2186.9	2203.5	2209.5	2431.0
40°	3587.8	3445.3	2783.0	2290.1	2050.5	2200.4	2191.4	2232.1	2342.9	2384.3	2707.6
42.5°	4550.8	4359.4	3638.3	2856.8	2261.5	2158.2	2214.0	2290.9	2663.1	2781.4	3135.6
45°	5614.9	5227.6	4491.3	3664.6	2790.5	2470.2	2512.4	2655.6	3171.8	3367.7	3758.8
47.5°	6304.4	5963.8	5336.1	4380.5	3342.1	3174.1	3177.8	3208.7	3769.4	4132.6	4657.1
50°	6903.5	6541.0	5958.5	5128.8	4318.0	4000.0	3927.6	3785.2	4530.5	5027.1	5608.9
52.5°	7749.0	7325.5	6581.0	6006.7	5431.0	4682.0	4656.3	4704.6	5428.0	5950.2	6584.7
55°	8511.6	7996.9	7286.3	6924.6	6700.0	5684.2	5706.1	5786.7	6580.2	6856.8	7452.9
57.5°	8848.5	8290.8	7925.4	7762.6	7642.8	7053.5	6979.6	6931.4	7489.0	7594.5	8362.4
60°	9069.3	8538.8	8373.0	8410.7	8773.9	8148.4	8081.3	7801.0	8241.1	8327.8	9177.8
62.5°	8929.9	8446.1	8481.5	8795.7	9602.1	9190.6	8996.9	8528.2	8856.0	8926.1	9763.3
65°	8052.0	7547.8	8003.0	8763.3	10233.6	10223.8	10134.1	9199.6	9196.6	9286.3	9808.5
67.5°	6577.2	6048.2	6784.4	8155.9	10207.2	10850.0	10807.8	10090.4	9245.6	9006.0	8851.5
70°	4572.7	4113.8	4948.7	6735.5	9297.6	10845.5	10777.6	10688.7	8858.3	7752.0	6862.8
72.5°	2376.0	2123.6	2901.3	4641.3	7411.4	9529.0	9752.8	9606.6	7563.6	5632.2	4041.4
75°	807.1	724.2	1196.7	2463.4	4926.9	7276.5	7538.8	7390.3	5137.1	3021.8	1598.3
77.5°	312.7	290.9	428.8	1000.0	2471.7	4434.0	4718.9	4567.4	2755.1	1107.0	376.0
80°	177.8	171.8	236.6	450.6	1089.7	2205.7	2406.2	2182.4	993.2	373.0	98.0
82.5°	75.4	77.6	131.9	243.4	547.8	778.4	868.1	792.0	416.0	255.5	36.2
85°	16.6	20.3	62.5	135.6	229.8	222.3	232.9	258.5	255.5	187.6	15.8
87.5°	0.0	0.0	19.6	36.9	55.0	36.2	28.6	50.5	78.4	75.4	6.8
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°	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4	460.4
2.5°	552.4	544.8	497.4	494.3	497.4	489.1	488.3	471.0	472.5	511.7	514.7
5°	688.0	650.3	609.6	596.8	584.8	557.6	572.7	572.7	572.7	597.6	605.1
7.5°	810.8	760.4	703.1	654.9	608.1	574.2	597.6	614.2	624.0	656.4	671.4
10°	866.6	816.9	765.6	697.1	660.9	648.1	620.9	606.6	624.0	617.2	625.5
12.5°	985.7	940.5	852.3	781.5	754.3	710.6	630.7	575.0	538.1	532.0	530.5
15°	1101.7	1073.8	955.5	860.6	766.4	665.4	529.0	455.2	416.0	409.2	409.9
17.5°	1248.7	1208.7	1034.7	898.3	738.5	556.9	408.4	345.1	342.1	358.7	360.2
20°	1346.6	1281.1	1074.6	867.4	646.6	421.2	319.5	304.4	328.6	358.7	355.7
22.5°	1440.1	1369.2	1127.3	840.2	501.1	319.5	293.9	295.4	315.7	348.2	356.4
25°	1501.9	1476.3	1192.2	776.9	382.1	276.6	281.1	292.4	309.7	340.6	340.6
27.5°	1688.0	1568.2	1184.6	654.1	293.9	257.7	268.3	282.6	291.6	328.6	332.3
30°	1801.0	1761.9	1223.8	529.0	257.7	233.6	254.0	266.8	272.8	315.0	316.5
32.5°	1939.7	1853.0	1271.3	390.4	239.6	232.1	227.6	237.4	254.7	291.6	293.9
35°	2108.5	2082.9	1203.5	306.7	233.6	217.0	208.0	213.3	224.6	249.4	254.7
37.5°	2452.9	2300.7	1162.8	263.0	233.6	211.8	202.0	188.4	189.9	207.2	217.0
40°	2743.0	2696.3	1049.0	255.5	223.1	204.2	180.1	163.5	152.2	157.5	161.3
42.5°	3275.8	3059.5	902.0	251.7	213.3	184.6	153.0	135.6	118.3	119.8	125.8
45°	3922.4	3455.9	770.9	247.9	206.5	165.0	128.9	108.5	90.4	91.2	97.2
47.5°	4786.0	4033.9	611.9	236.6	194.4	146.9	104.0	82.9	72.3	74.6	79.9
50°	5767.1	4541.0	483.8	219.3	180.1	129.6	84.4	67.1	63.3	65.6	71.6
52.5°	6643.5	4914.8	399.4	203.5	159.8	105.5	70.8	59.5	58.0	59.5	64.1
55°	7422.7	5131.8	333.8	185.4	137.2	85.2	64.1	55.0	54.3	53.5	56.5
57.5°	8153.7	5194.4	260.7	156.7	111.5	73.9	59.5	51.2	49.7	47.5	49.7
60°	8686.5	5087.4	191.4	125.8	91.2	67.1	55.8	46.0	43.7	39.9	41.4
62.5°	8943.4	4794.2	144.7	101.0	77.6	61.0	49.7	39.9	36.9	32.4	33.2
65°	8699.3	4311.2	113.8	85.2	66.3	51.2	42.2	33.9	30.1	25.6	25.6
67.5°	7617.9	3576.5	96.5	73.9	55.8	43.7	34.7	30.9	24.9	21.1	20.3
70°	5591.5	2572.7	82.9	64.8	48.2	37.7	29.4	27.9	24.1	20.3	18.8
72.5°	3156.0	1455.9	70.8	57.3	40.7	31.7	24.9	25.6	23.4	18.8	17.3
75°	1204.2	490.6	58.8	47.5	33.2	24.1	21.1	21.1	21.1	15.8	13.6
77.5°	298.4	125.1	46.7	38.4	26.4	15.8	17.3	18.1	18.1	13.6	9.8
80°	82.1	42.2	27.9	27.9	18.8	9.0	12.1	12.1	9.8	4.5	0.0
82.5°	30.1	15.8	9.8	12.1	8.3	3.0	4.5	3.0	2.3	0.0	0.0
85°	12.8	8.3	6.0	6.8	3.8	0.0	0.8	1.5	0.0	0.0	0.0
87.5°	5.3	3.8	3.0	3.0	1.5	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)