

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: P596735

Luminaire Tested: **MSA-SA3D-827-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596735
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATIONS CENTER
Issue Date: 5/27/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA3D-827-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (3) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10957 lumens
Efficiency: N/A
Efficacy: 57.1 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G3

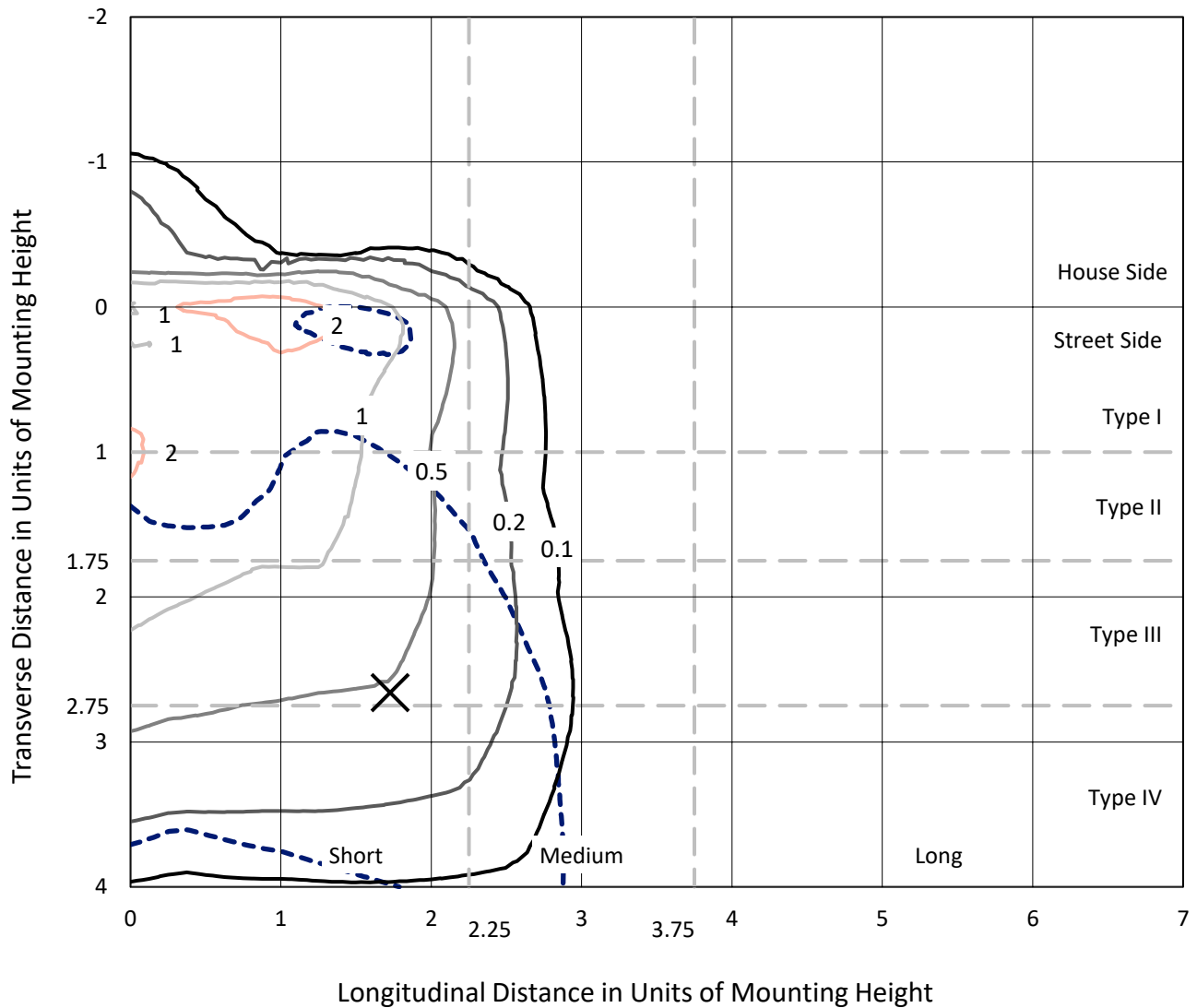
Input Watts (W): 192
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

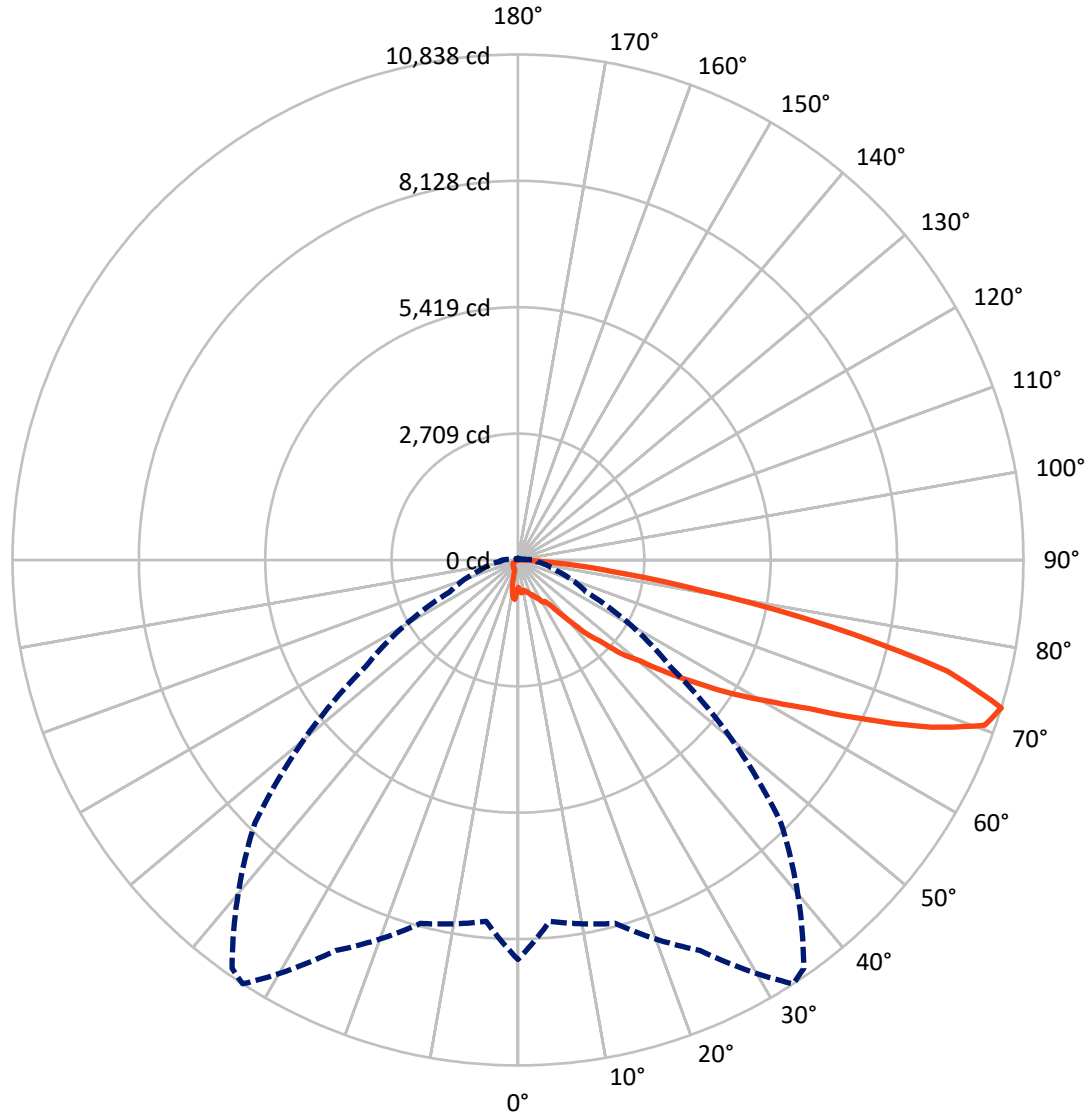
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 2.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

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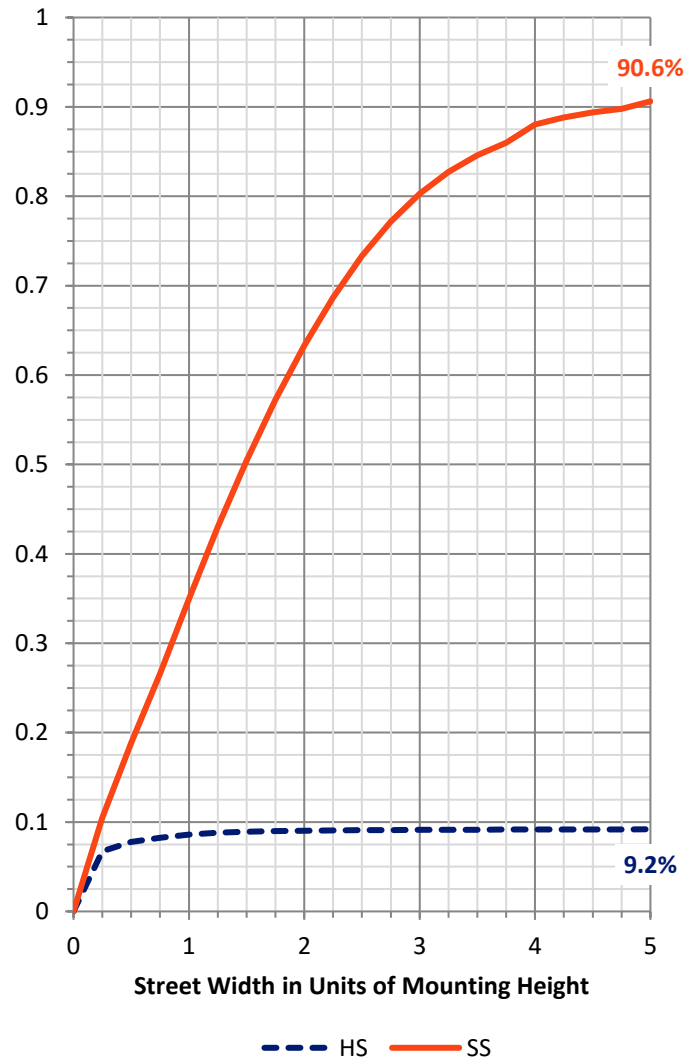
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1013.1	0.0	1013.1
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	9943.9	0.0	9943.9
	% Fixture	90.8	0.0	90.8
Total	Lumens	10957.0	0.0	10957.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.4	0.7
10°-20°	224.8	2.1
20°-30°	381.2	3.5
30°-40°	697.6	6.4
40°-50°	1472.4	13.4
50°-60°	2463.4	22.5
60°-70°	3297.4	30.1
70°-80°	2153.9	19.7
80°-90°	191.0	1.7
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°	10957.0	100.0
0°-180°	10957.0	100.0

Coefficient of Utilization

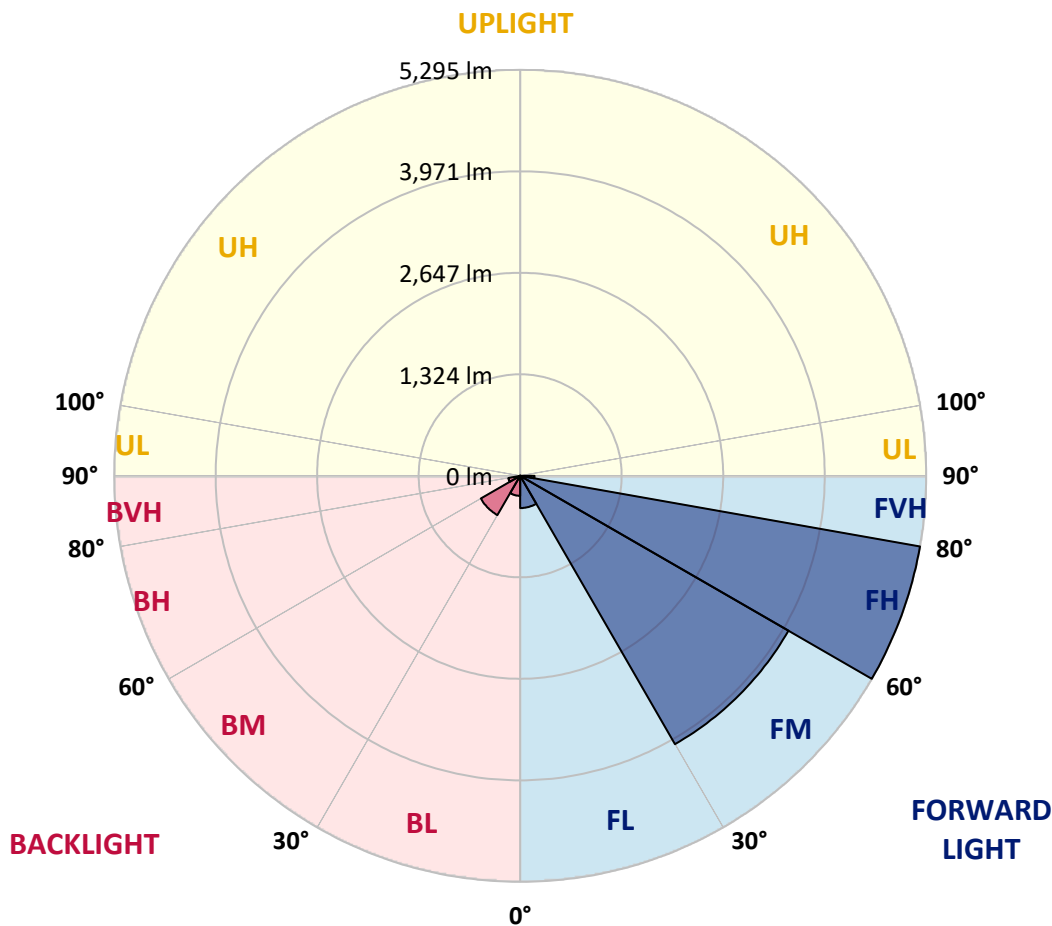


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	420.6	3.8			
FM (30°-60°)	4041.1	36.9			
FH (60°-80°)	5294.9	48.3			G3/7500
FVH (80°-90°)	187.3	1.7			G2/225
BL (0°-30°)	260.8	2.4	B1/500		
BM (30°-60°)	592.3	5.4	B1/1000		
BH (60°-80°)	156.4	1.4	B1/500		G1/500
BVH (80°-90°)	3.7	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°	33°	35°	45°	55°	65°	75°	85°
0°	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8
2.5°	694.7	668.0	629.0	631.5	638.1	643.6	658.2	652.1	640.6	640.0	694.7
5°	736.1	706.3	703.8	707.5	705.7	715.4	703.2	742.8	776.2	816.4	880.9
7.5°	716.0	702.0	684.4	702.6	702.0	697.2	705.1	785.4	866.3	917.4	1023.8
10°	658.2	642.4	655.8	661.9	657.6	678.9	731.8	797.5	894.3	1001.3	1053.0
12.5°	641.8	651.5	656.4	656.4	697.2	708.1	789.0	851.1	966.0	1050.6	1200.9
15°	705.7	724.5	691.1	683.8	696.5	702.6	792.7	867.5	1014.7	1169.2	1295.1
17.5°	807.3	806.0	754.3	725.7	745.8	760.4	810.3	897.9	984.3	1262.3	1444.8
20°	877.2	878.4	785.4	725.7	792.1	800.6	855.9	925.9	994.0	1309.1	1542.7
22.5°	967.3	935.0	832.2	774.4	819.4	827.3	888.2	943.5	1043.9	1303.7	1668.1
25°	1040.9	1020.2	890.6	850.5	890.6	879.7	935.0	1018.4	1097.4	1390.7	1741.7
27.5°	1155.2	1119.9	932.0	939.3	936.8	944.7	957.5	1085.3	1191.7	1394.9	1912.0
30°	1261.7	1241.0	1024.4	1024.4	1048.2	1033.0	1042.1	1196.6	1283.0	1493.5	2103.6
32.5°	1371.8	1373.0	1133.3	1075.5	1056.7	1119.3	1180.8	1250.7	1393.1	1662.6	2396.8
35°	1663.2	1638.9	1342.0	1197.8	1182.6	1179.0	1277.5	1466.7	1588.4	1882.8	2791.7
37.5°	2250.2	2165.7	1790.9	1475.2	1418.0	1398.6	1510.5	1704.6	1825.6	2206.4	3444.4
40°	2852.5	2697.4	2281.3	1925.4	1739.8	1655.9	1786.1	1950.9	2166.3	2564.1	4048.5
42.5°	3381.1	3189.5	2650.5	2410.8	2169.3	2132.8	2010.5	2278.8	2652.9	3084.9	4640.4
45°	3896.4	3519.2	2979.0	2789.2	2496.0	2516.7	2475.3	2707.7	3158.5	3655.5	5165.4
47.5°	4251.0	3912.2	3381.7	3135.4	3018.0	2896.9	3225.4	3466.9	3608.6	4018.1	5619.2
50°	4633.1	4290.0	3727.9	3555.7	3401.2	3523.5	3949.9	3982.2	3970.6	4356.3	5928.2
52.5°	5126.4	4721.9	4125.1	3930.5	4018.1	4139.7	4631.9	4637.9	4292.4	4641.0	6150.9
55°	5582.7	5134.3	4654.4	4470.7	4653.8	4756.6	5302.2	5102.1	4479.8	4834.4	6260.4
57.5°	6225.7	5706.8	5358.2	5034.6	5405.7	5307.1	5891.7	5594.3	4690.3	4962.8	6220.2
60°	7038.4	6427.7	6078.5	5736.0	6133.8	6200.8	6467.2	5840.0	4771.8	5004.8	5978.7
62.5°	7865.2	7250.7	6791.5	6559.1	7010.5	7230.7	7000.1	5962.3	4673.8	4922.6	5431.8
65°	8890.8	8104.2	7567.7	7431.4	8267.9	8591.5	7630.3	5992.1	4484.6	4470.7	4367.2
67.5°	9593.4	8827.6	8335.4	8563.5	9574.0	9600.1	8196.1	6001.2	3847.7	3500.4	2866.5
70°	9760.1	8940.1	8719.9	9391.5	10616.1	10286.9	8378.6	5538.9	2853.7	2077.5	1310.4
72.5°	8567.8	7778.2	8064.7	9235.1	10837.5	10686.6	7975.3	3996.2	1606.6	831.0	402.1
75°	5255.4	4777.9	6049.9	7829.9	9513.1	9415.8	6222.1	2064.7	647.3	332.2	150.3
77.5°	2285.5	2122.5	3157.3	5195.2	6835.9	6748.9	3645.8	760.4	334.6	233.6	76.0
80°	756.2	733.7	1196.0	2460.1	4004.1	3927.4	1536.0	316.3	238.5	187.4	42.6
82.5°	179.5	178.2	417.3	1132.1	2039.7	1975.9	471.5	174.6	172.8	147.8	22.5
85°	45.0	46.2	115.6	462.9	828.6	730.6	122.9	87.0	121.7	100.4	11.6
87.5°	0.0	0.0	29.8	66.3	125.3	78.5	13.4	23.1	34.1	35.9	6.1
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°	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8	582.8
2.5°	706.9	700.2	645.4	658.8	679.5	677.7	691.1	680.7	671.6	716.6	712.4
5°	899.1	862.6	845.6	869.3	856.5	826.7	851.7	847.4	840.1	855.3	866.9
7.5°	1043.3	1009.8	994.6	944.7	872.4	815.2	824.3	803.0	782.9	806.7	831.0
10°	1090.7	1072.5	1070.7	973.3	905.2	822.5	724.5	640.0	617.5	587.7	601.0
12.5°	1219.7	1230.7	1161.9	1048.2	916.8	758.0	584.0	464.2	415.5	383.9	385.7
15°	1325.6	1363.9	1264.1	1059.7	806.7	577.9	388.7	281.1	250.6	242.7	240.3
17.5°	1483.1	1520.2	1295.8	977.6	650.3	391.8	250.0	219.0	220.8	226.3	225.1
20°	1599.9	1594.4	1268.4	832.2	479.4	256.7	209.3	205.0	214.7	230.6	226.9
22.5°	1712.5	1674.7	1251.3	697.8	310.3	206.2	202.0	201.4	210.5	225.7	230.0
25°	1792.8	1798.8	1222.8	546.3	225.7	191.6	195.3	200.8	209.9	226.3	223.9
27.5°	2022.7	1852.4	1103.5	396.6	190.4	183.7	192.8	203.8	206.8	227.5	228.1
30°	2171.8	2054.3	1025.7	267.1	175.8	169.7	188.0	202.6	206.2	233.0	234.8
32.5°	2431.5	2141.3	935.6	198.3	163.6	165.5	177.0	196.5	213.5	242.1	243.3
35°	2754.5	2420.6	772.6	178.2	159.4	156.3	161.8	184.3	212.3	243.3	249.4
37.5°	3369.6	2587.9	612.6	172.8	159.4	153.9	159.4	172.8	208.7	255.5	268.3
40°	3781.4	2928.5	441.7	171.6	156.3	151.5	153.3	166.7	198.3	248.2	267.1
42.5°	4288.8	3072.1	325.5	168.5	153.3	146.0	147.2	164.3	188.0	233.0	247.0
45°	4704.3	3176.7	256.1	167.3	146.0	143.6	146.0	162.4	178.2	200.1	212.9
47.5°	5020.0	3298.4	205.6	159.4	144.2	143.6	140.5	152.1	161.8	167.3	175.8
50°	5251.1	3271.0	170.3	147.2	138.1	141.7	136.3	138.1	140.5	137.5	147.2
52.5°	5392.9	3172.5	141.7	132.6	130.8	133.8	127.1	121.7	117.4	115.0	121.1
55°	5444.6	2974.8	120.5	113.8	118.0	119.2	113.8	104.0	96.7	93.1	97.9
57.5°	5346.7	2673.6	104.6	94.3	104.0	104.0	96.7	86.4	77.9	71.8	76.7
60°	5098.5	2340.9	93.1	78.5	88.8	89.4	80.9	70.0	63.3	57.2	60.2
62.5°	4636.1	1978.3	81.5	68.1	76.7	77.3	66.9	56.6	51.7	45.0	47.5
65°	3711.5	1512.9	69.4	60.2	66.3	64.5	55.4	48.1	42.0	35.9	37.1
67.5°	2409.0	933.8	60.2	54.8	56.0	54.1	46.8	42.0	35.3	30.4	31.0
70°	1078.6	402.1	52.9	49.3	48.7	45.6	39.5	38.9	34.7	30.4	30.4
72.5°	332.8	151.5	45.6	44.4	42.0	38.3	34.7	37.1	34.1	29.2	28.6
75°	131.4	69.4	37.7	37.7	36.5	31.6	31.0	33.5	31.6	26.8	25.6
77.5°	68.7	43.8	31.0	32.2	31.6	24.3	28.0	30.4	29.2	22.5	18.9
80°	40.8	26.8	23.1	26.2	25.6	17.0	21.3	19.5	14.0	6.7	1.8
82.5°	22.5	12.2	10.3	15.2	15.2	6.1	11.0	9.7	5.5	0.0	0.0
85°	11.0	8.5	7.9	8.5	6.1	1.8	5.5	5.5	3.0	0.0	0.0
87.5°	5.5	4.9	3.7	3.0	2.4	0.0	1.8	2.4	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)