

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: P366884

Luminaire Tested: **MSA-SA1C-727-U-T4W**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P366884
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-14)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA1C-727-U-T4W
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS.
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5318 lumens
Efficiency: N/A
Efficacy: 90.1 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

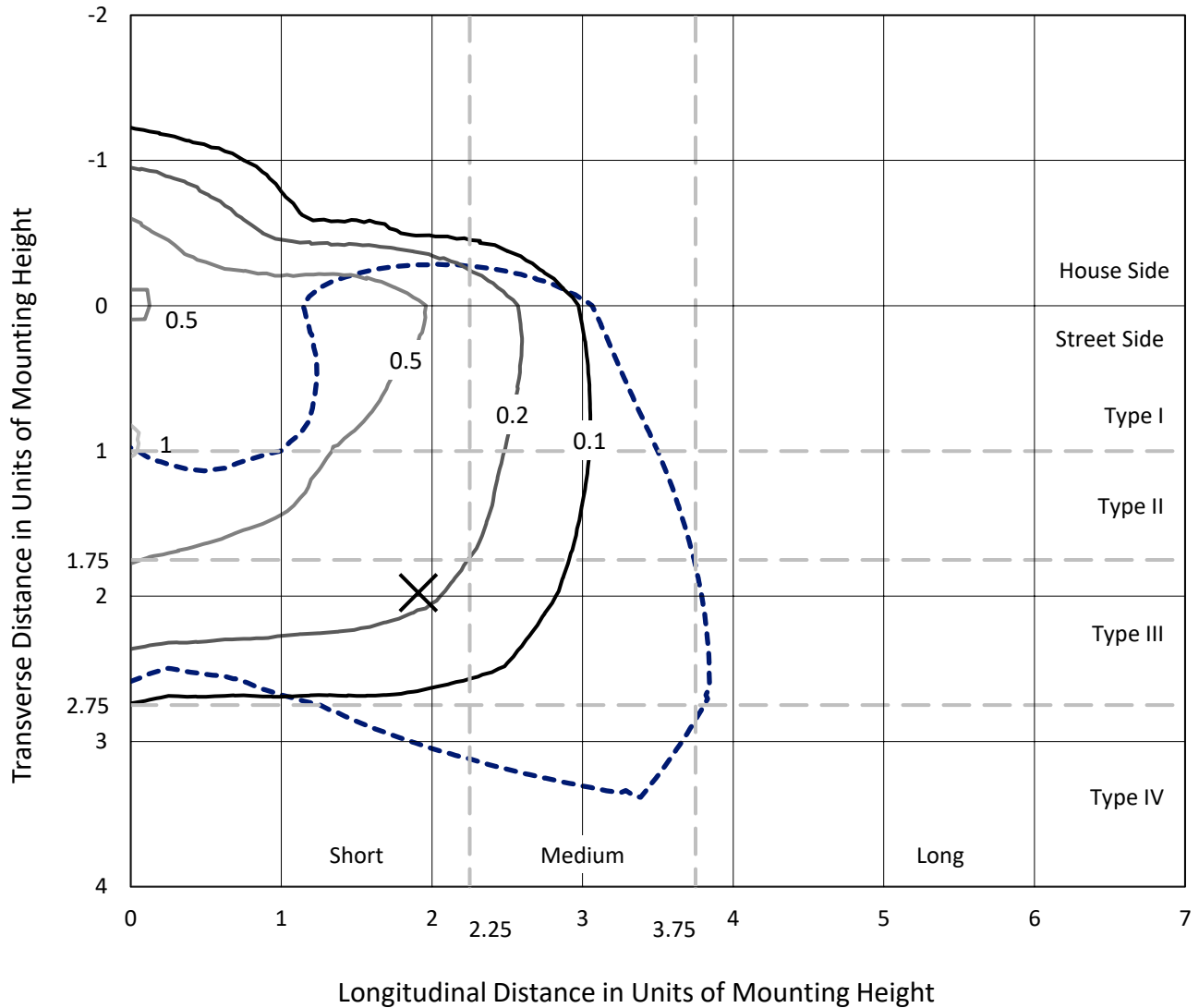
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

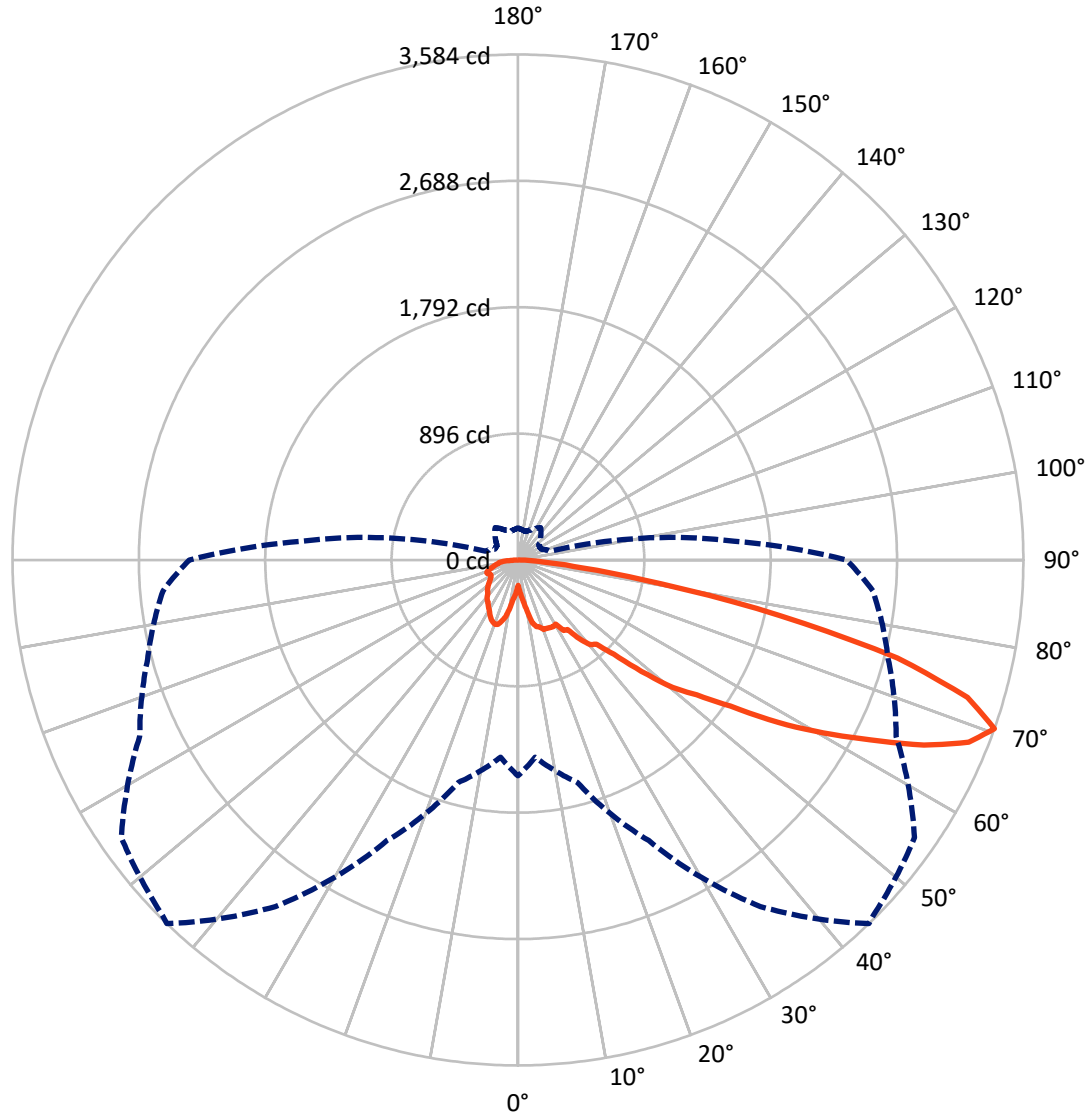
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 44-Deg Lateral - - - Horizontal Cone Through 70-Deg Vertical

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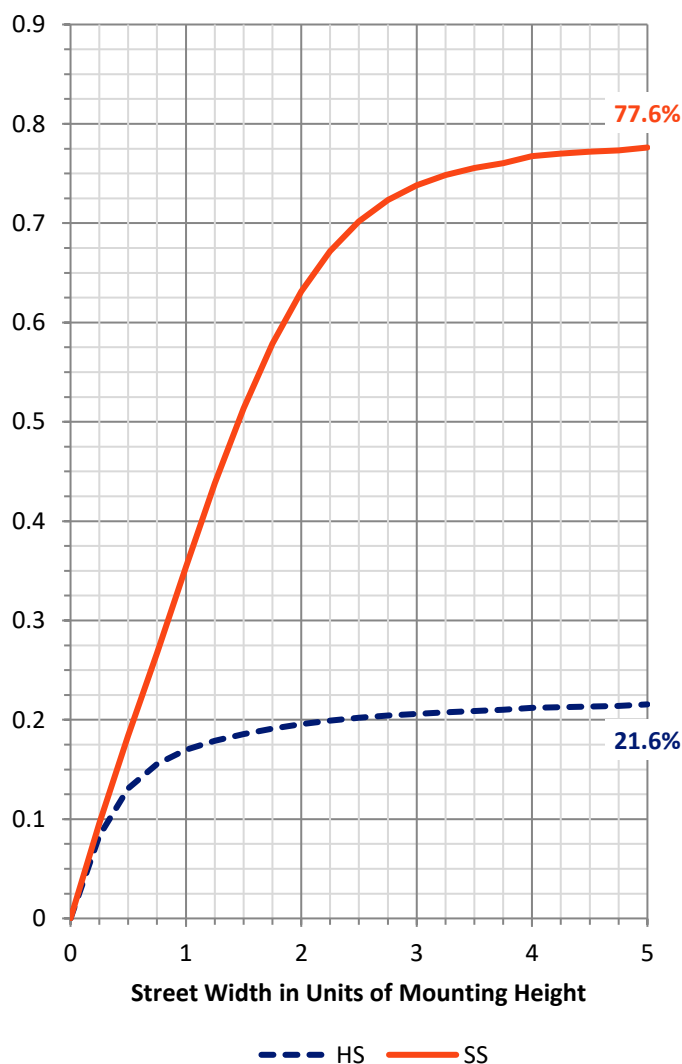
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1173.4	0.0	1173.4
	% Fixture	22.1	0.0	22.1
Street Side	Lumens	4144.6	0.0	4144.6
	% Fixture	77.9	0.0	77.9
Total	Lumens	5318.0	0.0	5318.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	28.3	0.5
10°-20°	130.5	2.5
20°-30°	243.9	4.6
30°-40°	391.5	7.4
40°-50°	660.8	12.4
50°-60°	1177.5	22.1
60°-70°	1610.7	30.3
70°-80°	947.2	17.8
80°-90°	127.5	2.4
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°	5318.0	100.0
0°-180°	5318.0	100.0

Coefficient of Utilization

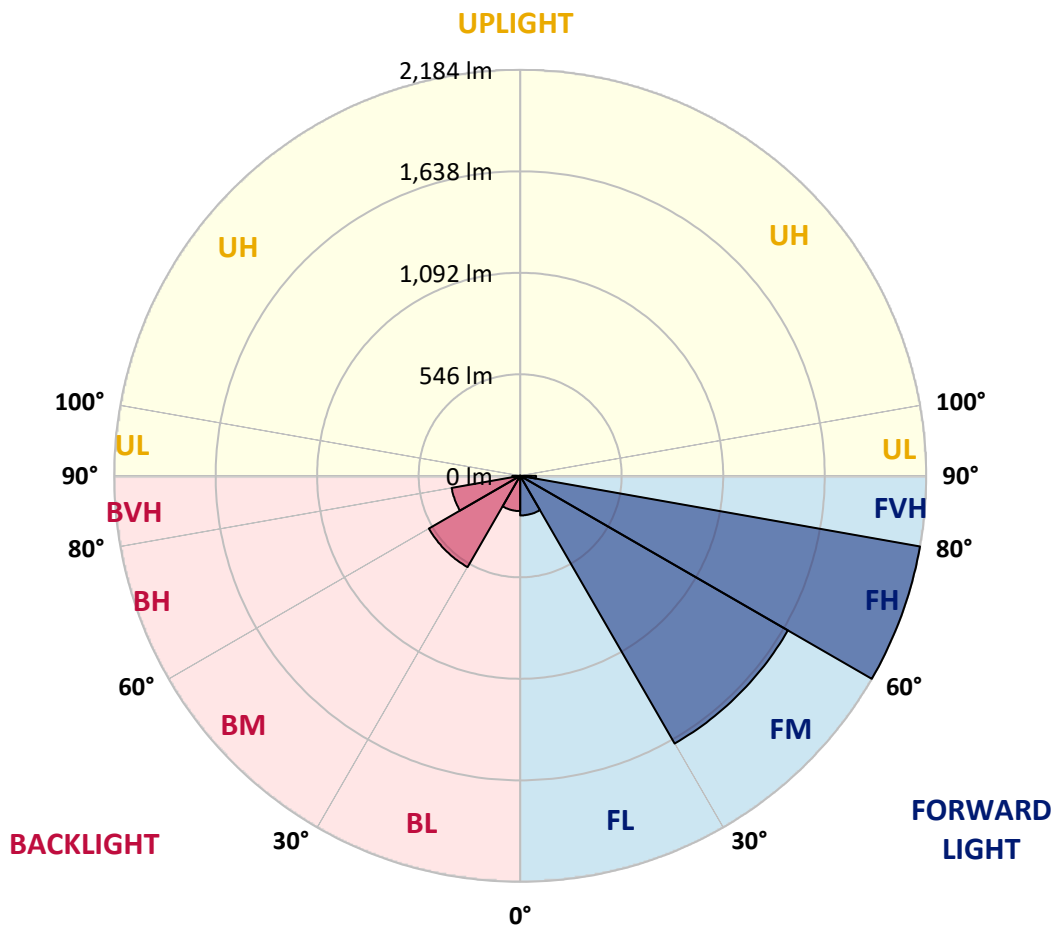


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	213.1	4.0			
FM (30°-60°)	1662.8	31.3			
FH (60°-80°)	2183.7	41.1			G2/5000
FVH (80°-90°)	85.0	1.6			G1/100
BL (0°-30°)	189.6	3.6	B1/500		
BM (30°-60°)	567.0	10.7	B1/1000		
BH (60°-80°)	374.2	7.0	B1/500		G1/500
BVH (80°-90°)	42.5	0.8			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	44°	45°	55°	65°	75°	85°
0°	180.8	180.8	180.8	180.8	180.8	180.8	180.8	180.8	180.8	180.8	180.8
2.5°	219.4	215.0	204.5	208.0	212.4	214.1	213.7	213.3	206.5	204.1	216.1
5°	298.1	288.5	280.9	277.8	267.8	259.9	255.1	267.8	265.8	269.1	277.4
7.5°	372.2	366.1	348.9	342.8	322.3	308.8	307.2	317.3	319.9	314.7	328.8
10°	420.0	409.5	406.0	391.4	377.2	375.1	373.7	369.2	362.8	362.4	349.8
12.5°	457.0	462.5	465.3	448.5	449.0	456.8	452.7	434.1	423.5	404.7	406.2
15°	523.5	531.4	508.9	498.3	477.8	489.5	488.0	472.5	471.0	458.8	444.6
17.5°	581.5	585.0	547.5	523.1	516.1	499.1	503.7	504.1	484.1	505.9	493.2
20°	586.3	598.8	555.6	507.0	527.9	525.7	526.4	522.0	495.6	531.6	526.8
22.5°	609.9	590.9	552.1	516.6	522.0	525.3	528.3	523.1	521.6	541.6	556.3
25°	605.5	599.4	560.2	530.1	530.7	531.4	532.9	548.6	546.9	574.1	581.8
27.5°	646.3	636.9	562.6	555.2	538.2	534.4	524.0	556.7	582.2	581.5	623.6
30°	723.9	714.3	618.4	596.8	566.1	528.1	548.2	591.8	611.9	618.6	672.0
32.5°	845.2	860.9	728.3	641.3	603.1	594.8	592.7	588.3	638.0	671.4	720.0
35°	1019.2	1006.8	857.8	736.6	642.2	606.6	611.4	638.0	697.1	718.7	763.6
37.5°	1218.5	1192.7	1023.8	844.5	754.7	710.2	694.3	720.0	733.1	750.1	841.9
40°	1421.1	1358.3	1186.6	986.5	822.3	788.7	774.7	743.1	773.9	808.3	925.0
42.5°	1616.6	1568.0	1363.9	1155.9	936.1	816.4	808.8	777.8	873.1	909.5	1044.9
45°	1821.6	1708.9	1545.6	1347.1	1102.5	952.2	940.9	885.3	1007.4	1083.3	1214.1
47.5°	1959.4	1855.0	1711.9	1502.4	1241.8	1179.4	1157.9	1062.8	1173.6	1272.1	1475.6
50°	2089.8	1982.3	1832.1	1672.2	1494.1	1422.4	1376.3	1218.0	1380.5	1541.0	1810.7
52.5°	2276.5	2180.3	1971.6	1843.4	1765.1	1588.7	1554.5	1467.5	1622.5	1839.1	2177.0
55°	2476.0	2344.9	2155.9	2084.8	2053.2	1827.3	1799.4	1744.0	1944.8	2144.1	2533.1
57.5°	2564.1	2427.4	2323.1	2280.6	2278.0	2174.0	2141.9	2103.3	2274.3	2405.8	2868.3
60°	2634.1	2487.3	2445.7	2469.4	2555.8	2487.3	2445.7	2411.7	2542.5	2664.4	3141.7
62.5°	2621.2	2474.0	2495.4	2567.8	2788.2	2808.3	2776.2	2693.8	2808.3	2876.3	3298.5
65°	2413.6	2277.6	2402.1	2573.9	3004.3	3164.6	3162.9	2947.2	2986.9	2986.9	3281.9
67.5°	2049.9	1909.1	2112.9	2520.0	3153.7	3447.0	3447.4	3215.8	3003.2	2975.8	3025.5
70°	1530.7	1403.2	1632.3	2194.7	2999.5	3583.7	3563.9	3432.6	2958.3	2718.2	2527.2
72.5°	914.3	831.9	1042.7	1597.7	2558.6	3332.3	3385.1	3182.9	2708.2	2260.6	1806.6
75°	415.2	379.4	490.0	917.8	1826.6	2779.5	2836.9	2686.2	2151.1	1625.8	1044.0
77.5°	177.7	168.1	213.9	407.1	1007.2	1900.8	2018.3	1919.7	1457.5	944.8	461.8
80°	114.3	108.2	131.5	195.8	467.7	1027.0	1128.2	1091.4	742.5	367.4	162.7
82.5°	68.3	66.3	87.9	123.0	255.1	452.0	509.4	522.9	308.3	164.8	93.1
85°	37.3	37.7	48.2	74.6	153.1	176.0	188.4	205.0	145.2	95.5	45.1
87.5°	12.4	14.4	19.4	30.3	54.5	49.7	49.9	58.0	61.3	39.7	14.4
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°	180.8	180.8	180.8	180.8	180.8	180.8	180.8	180.8	180.8	180.8	180.8
2.5°	218.1	214.1	204.1	204.8	208.5	209.3	210.4	204.1	202.8	214.8	215.9
5°	278.7	265.8	259.9	258.0	252.3	250.3	260.8	265.6	270.4	279.8	284.3
7.5°	327.3	312.9	302.2	292.4	284.1	279.3	297.0	310.5	318.8	338.0	346.7
10°	349.5	337.1	333.2	325.3	331.7	346.0	349.3	349.8	368.1	367.6	371.3
12.5°	393.8	385.7	372.9	375.7	392.3	407.1	403.0	409.3	415.8	431.5	424.3
15°	434.1	432.0	420.0	421.9	425.2	443.7	446.1	452.5	462.5	474.9	466.4
17.5°	483.9	483.0	453.8	451.2	458.8	476.9	471.2	460.1	493.2	506.5	503.0
20°	517.7	511.1	473.6	462.5	481.9	484.3	477.8	460.1	488.9	517.9	525.7
22.5°	545.8	538.2	499.6	477.8	473.8	474.9	474.9	471.6	485.8	509.6	509.4
25°	568.5	575.7	526.6	505.7	484.7	458.6	455.3	458.1	466.2	512.0	510.5
27.5°	625.4	605.5	535.8	520.1	477.1	435.9	444.8	449.2	451.8	502.0	510.2
30°	662.4	668.6	568.5	528.6	466.0	410.6	413.6	426.3	441.6	500.9	503.3
32.5°	712.4	699.3	619.5	514.4	436.3	395.3	389.7	406.7	429.3	483.2	489.7
35°	758.8	774.3	641.1	511.8	415.6	372.4	378.5	384.4	408.0	463.6	471.2
37.5°	867.9	832.5	701.7	499.1	398.4	360.9	354.3	363.3	383.3	426.3	444.0
40°	950.7	952.9	714.8	483.2	365.5	344.3	330.4	339.3	347.8	382.0	389.7
42.5°	1106.2	1058.6	746.8	448.3	344.7	319.4	311.6	315.5	316.8	331.2	343.9
45°	1304.0	1192.5	759.5	401.4	317.5	309.2	293.3	291.3	284.1	286.1	297.2
47.5°	1577.6	1401.4	750.3	351.5	293.3	295.9	273.0	264.1	254.0	256.4	266.9
50°	1931.5	1668.3	749.7	309.2	276.7	278.5	259.7	243.6	233.5	238.5	247.7
52.5°	2328.6	1936.1	752.7	280.2	258.6	257.7	251.0	231.4	223.3	228.5	239.0
55°	2708.4	2166.4	775.4	261.9	239.9	241.4	244.0	227.4	218.5	223.3	234.2
57.5°	3039.0	2348.2	766.9	242.5	222.4	229.4	236.4	222.0	215.2	222.2	233.1
60°	3270.1	2432.6	699.7	223.9	209.5	219.1	232.7	221.3	220.5	235.5	248.6
62.5°	3354.5	2401.4	568.9	209.3	201.9	217.8	241.2	235.7	236.6	255.1	273.2
65°	3231.3	2237.4	424.3	200.0	196.0	224.2	260.8	244.2	232.2	247.5	264.1
67.5°	2880.9	1945.9	310.1	191.9	189.3	234.2	278.9	243.3	221.1	236.6	250.1
70°	2330.8	1536.0	240.1	181.6	180.3	227.4	280.6	236.8	209.1	219.1	226.8
72.5°	1597.0	1051.7	198.9	171.8	164.8	201.5	266.5	222.2	194.7	200.6	206.9
75°	892.5	590.3	167.2	159.6	144.4	179.5	249.9	213.5	184.0	185.8	194.5
77.5°	400.6	255.3	142.0	143.5	125.8	158.7	228.3	199.5	167.7	163.8	172.5
80°	151.5	124.5	115.1	121.2	105.8	137.6	205.8	186.9	150.5	145.4	150.5
82.5°	87.9	75.4	85.5	93.3	84.0	126.5	196.5	175.3	132.6	119.9	124.3
85°	40.8	39.0	51.2	60.6	58.7	98.6	168.1	131.9	94.4	79.8	88.3
87.5°	10.7	12.0	18.1	21.4	21.8	33.8	64.8	49.1	36.9	27.9	26.8
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)