

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: P596537

Luminaire Tested: **MSA-SA1C-827-U-T4FT-HSS**

Issue Date: 5/27/2021

Test Information

Test Method: LM-79-08
Report Number: P596537
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-SA1C-827-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (1) 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: 3453 lumens
Efficiency: N/A
Efficacy: 58.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B0 - U0 - G1

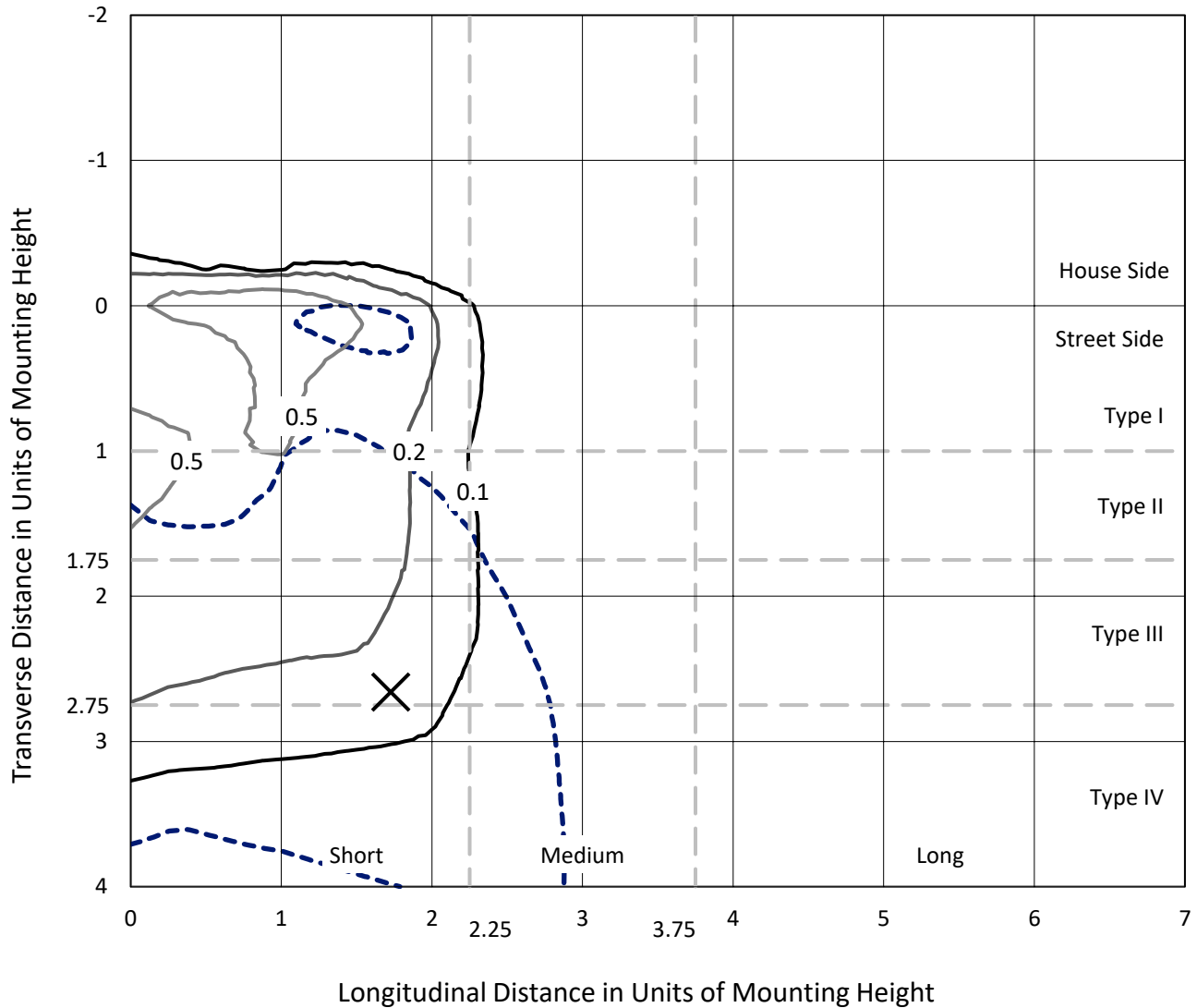
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

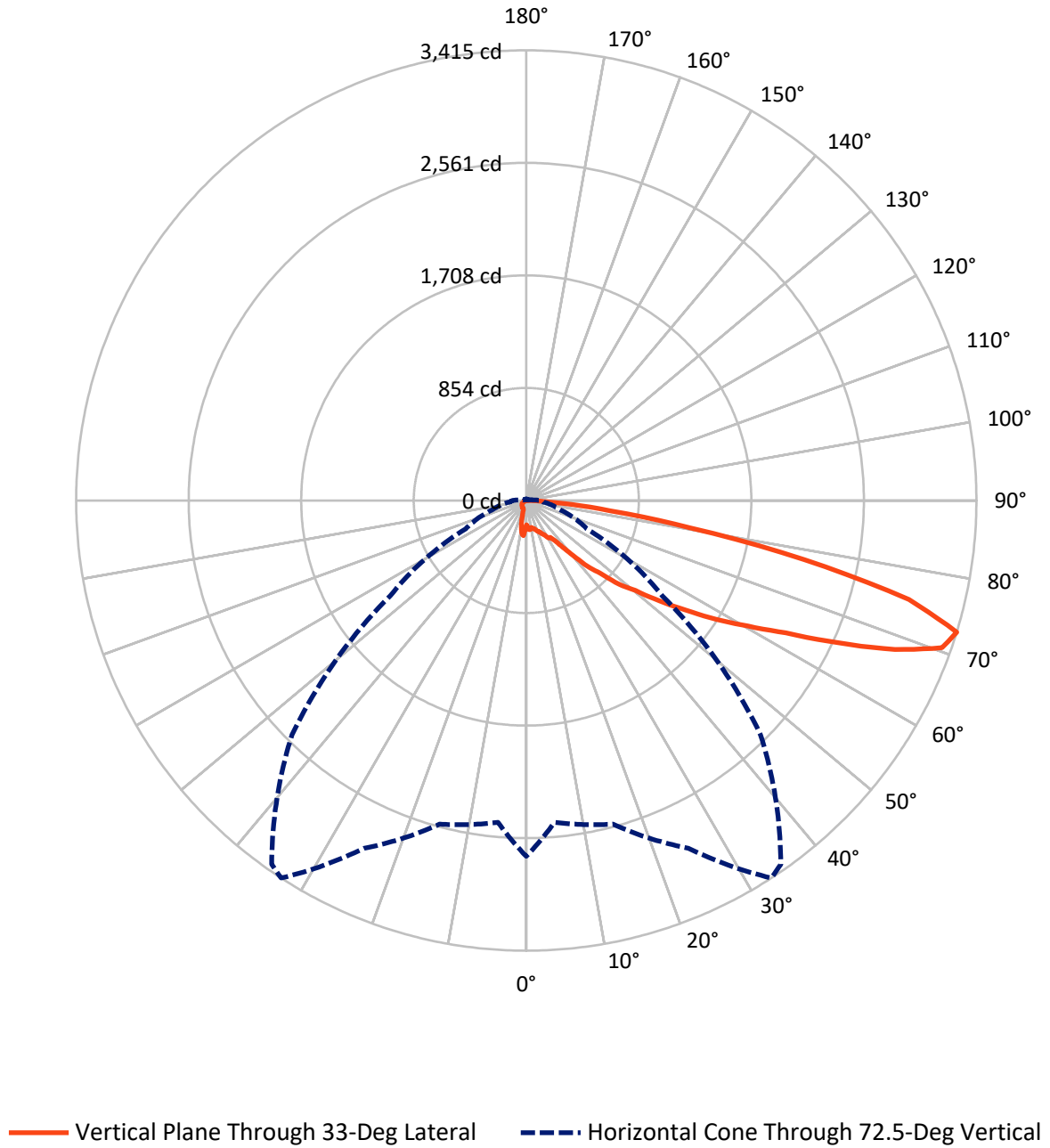
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.9 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



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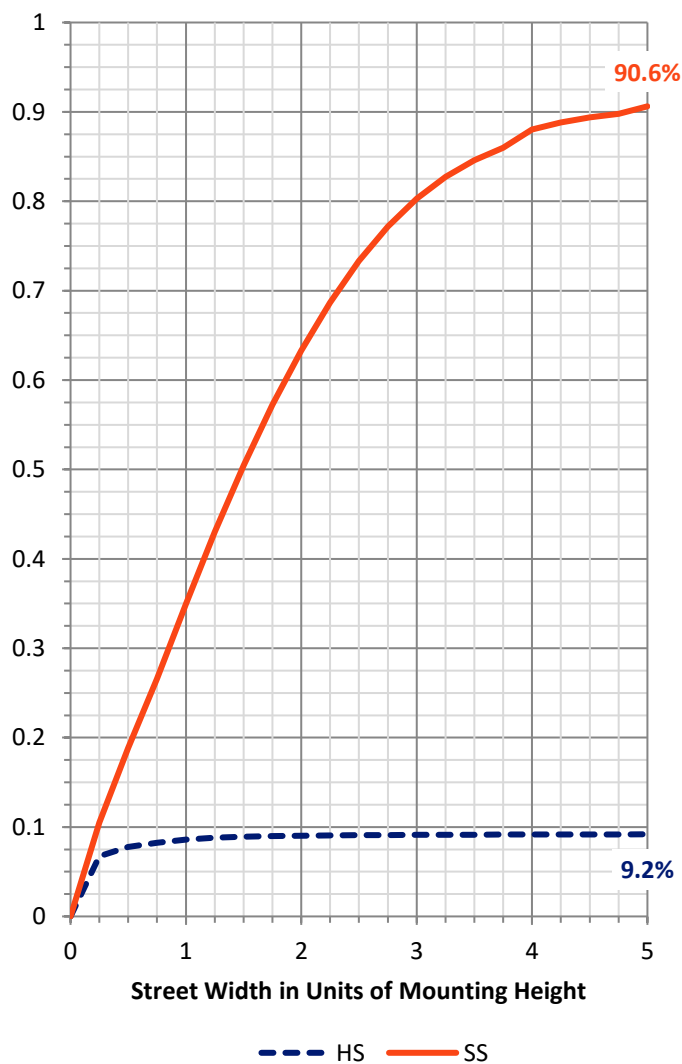
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	319.3	0.0	319.3
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	3133.7	0.0	3133.7
	% Fixture	90.8	0.0	90.8
Total	Lumens	3453.0	0.0	3453.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.8	0.7
10°-20°	70.8	2.1
20°-30°	120.1	3.5
30°-40°	219.8	6.4
40°-50°	464.0	13.4
50°-60°	776.3	22.5
60°-70°	1039.1	30.1
70°-80°	678.8	19.7
80°-90°	60.2	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°	3453.0	100.0
0°-180°	3453.0	100.0

Coefficient of Utilization



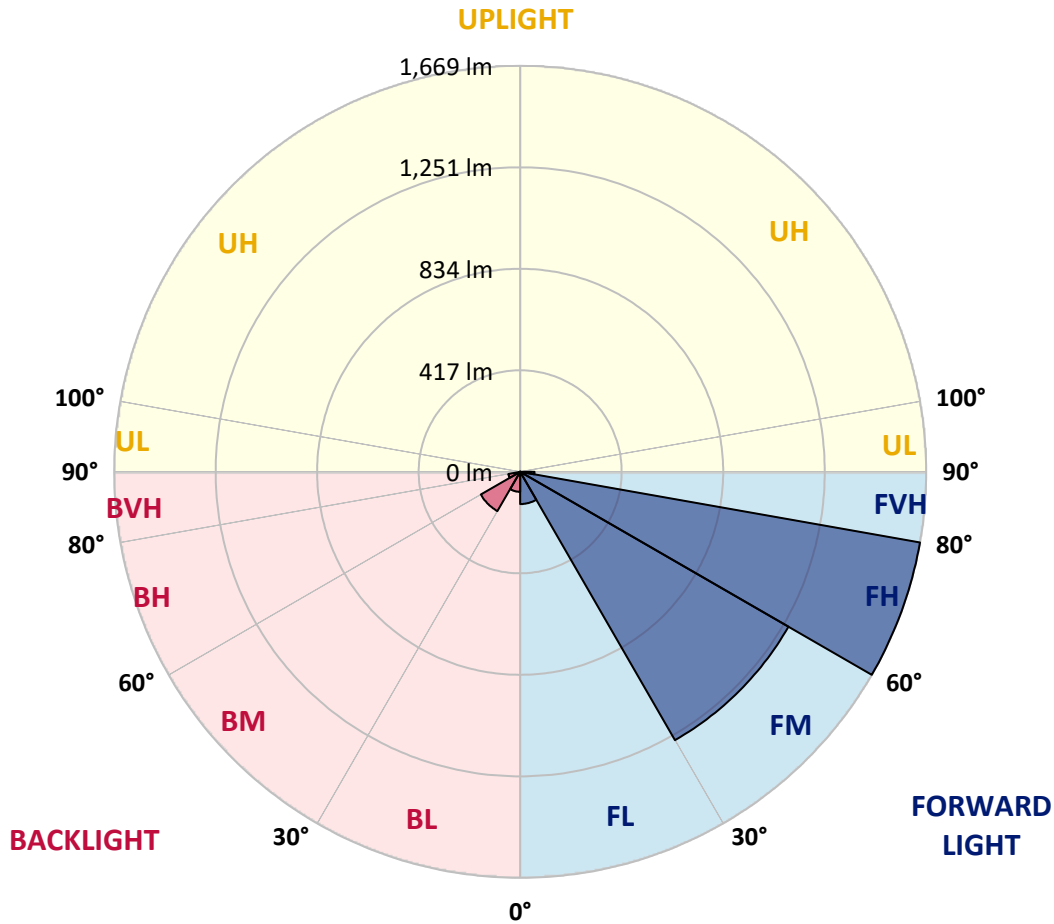
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	132.6	3.8			
FM (30°-60°)	1273.5	36.9			
FH (60°-80°)	1668.6	48.3			G1/1800
FVH (80°-90°)	59.0	1.7			G1/100
BL (0°-30°)	82.2	2.4	B0/110		
BM (30°-60°)	186.7	5.4	B0/220		
BH (60°-80°)	49.3	1.4	B0/110		G0/110
BVH (80°-90°)	1.2	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7
2.5°	218.9	210.5	198.2	199.0	201.1	202.8	207.4	205.5	201.9	201.7	218.9
5°	232.0	222.6	221.8	223.0	222.4	225.5	221.6	234.1	244.6	257.3	277.6
7.5°	225.6	221.2	215.7	221.4	221.2	219.7	222.2	247.5	273.0	289.1	322.7
10°	207.4	202.4	206.7	208.6	207.2	213.9	230.6	251.3	281.8	315.6	331.9
12.5°	202.3	205.3	206.9	206.9	219.7	223.2	248.6	268.2	304.4	331.1	378.4
15°	222.4	228.3	217.8	215.5	219.5	221.4	249.8	273.4	319.8	368.5	408.2
17.5°	254.4	254.0	237.7	228.7	235.0	239.6	255.4	283.0	310.2	397.8	455.3
20°	276.4	276.8	247.5	228.7	249.6	252.3	269.7	291.8	313.3	412.6	486.2
22.5°	304.8	294.7	262.3	244.0	258.2	260.7	279.9	297.3	329.0	410.8	525.7
25°	328.0	321.5	280.7	268.0	280.7	277.2	294.7	320.9	345.8	438.3	548.9
27.5°	364.1	352.9	293.7	296.0	295.2	297.7	301.8	342.0	375.6	439.6	602.5
30°	397.6	391.1	322.8	322.8	330.3	325.5	328.4	377.1	404.3	470.7	662.9
32.5°	432.3	432.7	357.2	338.9	333.0	352.7	372.1	394.2	439.0	523.9	755.3
35°	524.1	516.5	422.9	377.5	372.7	371.5	402.6	462.2	500.6	593.3	879.8
37.5°	709.1	682.5	564.4	464.9	446.9	440.7	476.0	537.2	575.3	695.3	1085.5
40°	898.9	850.0	718.9	606.8	548.3	521.8	562.9	614.8	682.7	808.1	1275.8
42.5°	1065.5	1005.1	835.3	759.8	683.6	672.1	633.6	718.2	836.1	972.2	1462.4
45°	1227.9	1109.1	938.8	879.0	786.6	793.1	780.1	853.3	995.4	1152.0	1627.8
47.5°	1339.7	1232.9	1065.7	988.1	951.1	912.9	1016.5	1092.6	1137.2	1266.3	1770.8
50°	1460.1	1351.9	1174.8	1120.6	1071.9	1110.4	1244.8	1254.9	1251.3	1372.8	1868.2
52.5°	1615.6	1488.1	1300.0	1238.6	1266.3	1304.6	1459.7	1461.6	1352.7	1462.6	1938.4
55°	1759.3	1618.0	1466.8	1408.9	1466.6	1499.0	1671.0	1607.9	1411.8	1523.5	1972.9
57.5°	1962.0	1798.4	1688.6	1586.6	1703.5	1672.5	1856.7	1763.0	1478.1	1564.0	1960.2
60°	2218.1	2025.6	1915.6	1807.6	1933.0	1954.1	2038.1	1840.4	1503.8	1577.2	1884.1
62.5°	2478.6	2285.0	2140.3	2067.0	2209.3	2278.7	2206.0	1879.0	1472.9	1551.3	1711.8
65°	2801.9	2554.0	2384.9	2341.9	2605.5	2707.5	2404.6	1888.4	1413.3	1408.9	1376.3
67.5°	3023.3	2781.9	2626.8	2698.7	3017.2	3025.4	2582.9	1891.2	1212.6	1103.1	903.3
70°	3075.8	2817.4	2748.0	2959.6	3345.6	3241.8	2640.4	1745.5	899.3	654.7	412.9
72.5°	2700.1	2451.2	2541.5	2910.4	3415.3	3367.8	2513.3	1259.4	506.3	261.9	126.7
75°	1656.2	1505.7	1906.6	2467.5	2998.0	2967.3	1960.8	650.7	204.0	104.7	47.4
77.5°	720.3	668.9	995.0	1637.2	2154.3	2126.8	1148.9	239.6	105.4	73.6	24.0
80°	238.3	231.2	376.9	775.3	1261.8	1237.7	484.1	99.7	75.2	59.0	13.4
82.5°	56.6	56.2	131.5	356.8	642.8	622.7	148.6	55.0	54.4	46.6	7.1
85°	14.2	14.6	36.4	145.9	261.1	230.2	38.7	27.4	38.3	31.6	3.6
87.5°	0.0	0.0	9.4	20.9	39.5	24.7	4.2	7.3	10.7	11.3	1.9
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°	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7	183.7
2.5°	222.8	220.7	203.4	207.6	214.1	213.6	217.8	214.5	211.6	225.8	224.5
5°	283.3	271.8	266.5	274.0	269.9	260.5	268.4	267.1	264.8	269.5	273.2
7.5°	328.8	318.2	313.4	297.7	274.9	256.9	259.8	253.1	246.7	254.2	261.9
10°	343.7	338.0	337.4	306.7	285.3	259.2	228.3	201.7	194.6	185.2	189.4
12.5°	384.4	387.8	366.2	330.3	288.9	238.9	184.0	146.3	130.9	121.0	121.5
15°	417.7	429.8	398.4	334.0	254.2	182.1	122.5	88.6	79.0	76.5	75.7
17.5°	467.4	479.1	408.3	308.1	204.9	123.5	78.8	69.0	69.6	71.3	70.9
20°	504.2	502.5	399.7	262.3	151.1	80.9	65.9	64.6	67.7	72.7	71.5
22.5°	539.7	527.8	394.4	219.9	97.8	65.0	63.6	63.5	66.3	71.1	72.5
25°	565.0	566.9	385.3	172.2	71.1	60.4	61.5	63.3	66.1	71.3	70.5
27.5°	637.4	583.8	347.8	125.0	60.0	57.9	60.8	64.2	65.2	71.7	71.9
30°	684.4	647.4	323.2	84.2	55.4	53.5	59.2	63.8	65.0	73.4	74.0
32.5°	766.3	674.8	294.9	62.5	51.6	52.1	55.8	61.9	67.3	76.3	76.7
35°	868.1	762.8	243.5	56.2	50.2	49.3	51.0	58.1	66.9	76.7	78.6
37.5°	1061.9	815.5	193.1	54.4	50.2	48.5	50.2	54.4	65.8	80.5	84.5
40°	1191.7	922.9	139.2	54.1	49.3	47.7	48.3	52.5	62.5	78.2	84.2
42.5°	1351.6	968.1	102.6	53.1	48.3	46.0	46.4	51.8	59.2	73.4	77.8
45°	1482.5	1001.1	80.7	52.7	46.0	45.2	46.0	51.2	56.2	63.1	67.1
47.5°	1582.0	1039.5	64.8	50.2	45.4	45.2	44.3	47.9	51.0	52.7	55.4
50°	1654.9	1030.8	53.7	46.4	43.5	44.7	42.9	43.5	44.3	43.3	46.4
52.5°	1699.5	999.8	44.7	41.8	41.2	42.2	40.1	38.3	37.0	36.2	38.2
55°	1715.8	937.5	38.0	35.9	37.2	37.6	35.9	32.8	30.5	29.3	30.9
57.5°	1685.0	842.6	33.0	29.7	32.8	32.8	30.5	27.2	24.5	22.6	24.2
60°	1606.7	737.7	29.3	24.7	28.0	28.2	25.5	22.0	19.9	18.0	19.0
62.5°	1461.0	623.4	25.7	21.5	24.2	24.3	21.1	17.8	16.3	14.2	15.0
65°	1169.6	476.8	21.9	19.0	20.9	20.3	17.4	15.1	13.2	11.3	11.7
67.5°	759.2	294.3	19.0	17.3	17.6	17.1	14.8	13.2	11.1	9.6	9.8
70°	339.9	126.7	16.7	15.5	15.3	14.4	12.5	12.3	10.9	9.6	9.6
72.5°	104.9	47.7	14.4	14.0	13.2	12.1	10.9	11.7	10.7	9.2	9.0
75°	41.4	21.9	11.9	11.9	11.5	10.0	9.8	10.5	10.0	8.4	8.1
77.5°	21.7	13.8	9.8	10.2	10.0	7.7	8.8	9.6	9.2	7.1	5.9
80°	12.8	8.4	7.3	8.2	8.1	5.4	6.7	6.1	4.4	2.1	0.6
82.5°	7.1	3.8	3.3	4.8	4.8	1.9	3.5	3.1	1.7	0.0	0.0
85°	3.5	2.7	2.5	2.7	1.9	0.6	1.7	1.7	1.0	0.0	0.0
87.5°	1.7	1.5	1.2	1.0	0.8	0.0	0.6	0.8	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)