

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: P367519

Luminaire Tested: **MSA-SA2C-830-U-T4FT-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367519
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-13)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2C-830-U-T4FT-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) 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: 7341 lumens
Efficiency: N/A
Efficacy: 65.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

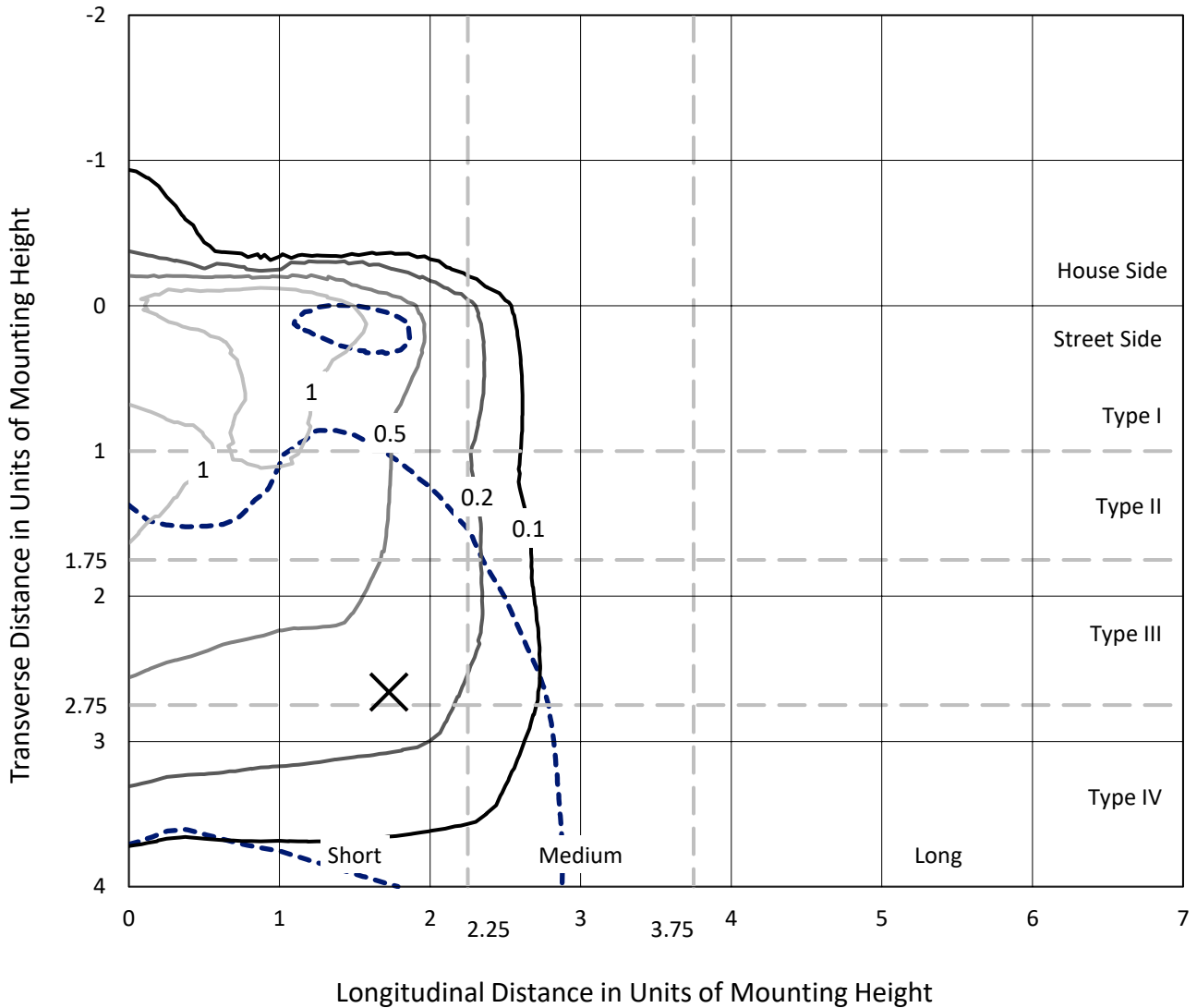
Input Watts (W): 113
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

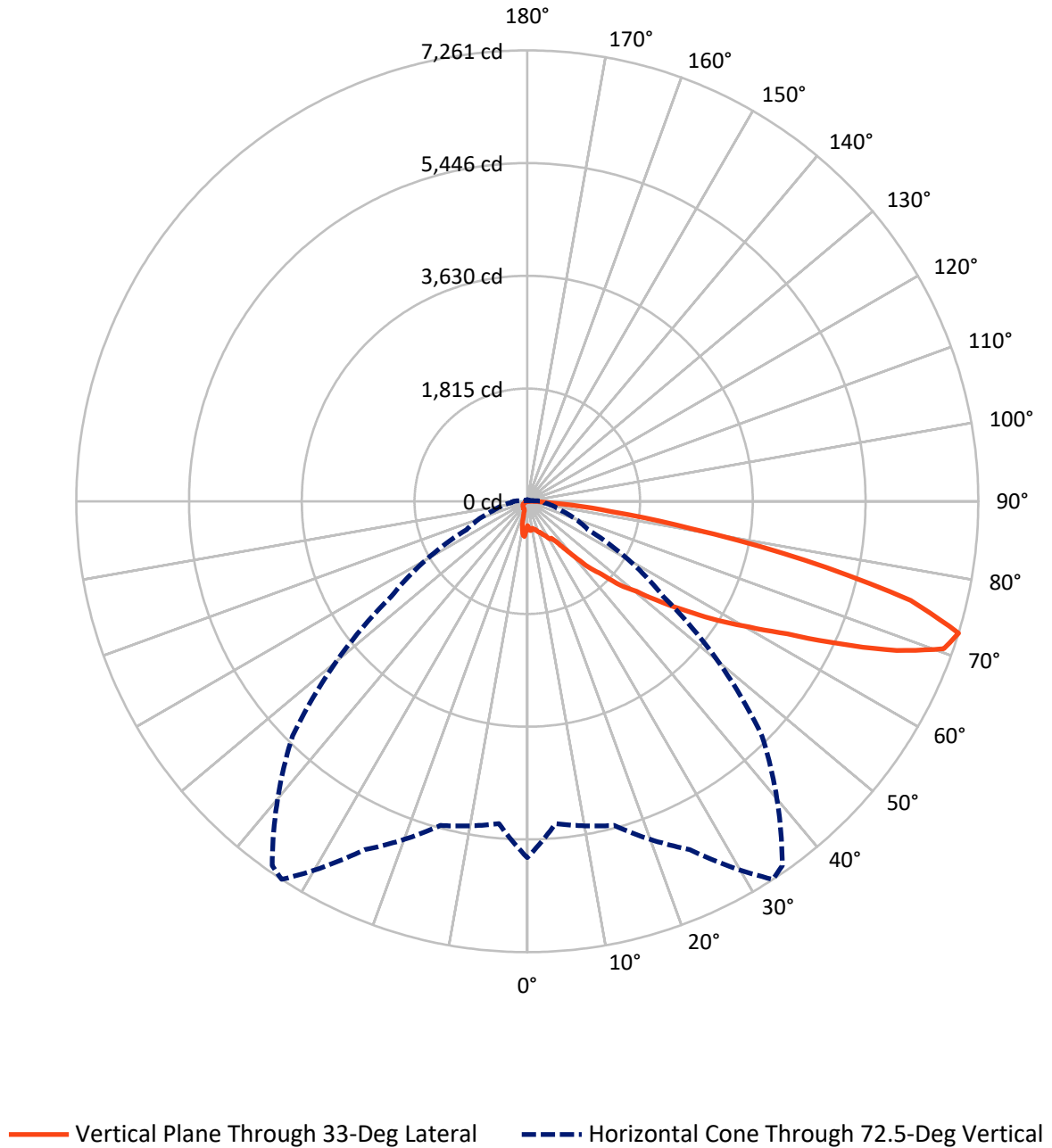
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.8 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	678.8	0.0	678.8
	% Fixture	9.2	0.0	9.2
Street Side	Lumens	6662.2	0.0	6662.2
	% Fixture	90.8	0.0	90.8
Total	Lumens	7341.0	0.0	7341.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	50.5	0.7
10°-20°	150.6	2.1
20°-30°	255.4	3.5
30°-40°	467.4	6.4
40°-50°	986.5	13.4
50°-60°	1650.4	22.5
60°-70°	2209.2	30.1
70°-80°	1443.1	19.7
80°-90°	127.9	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°	7341.0	100.0
0°-180°	7341.0	100.0

Coefficient of Utilization

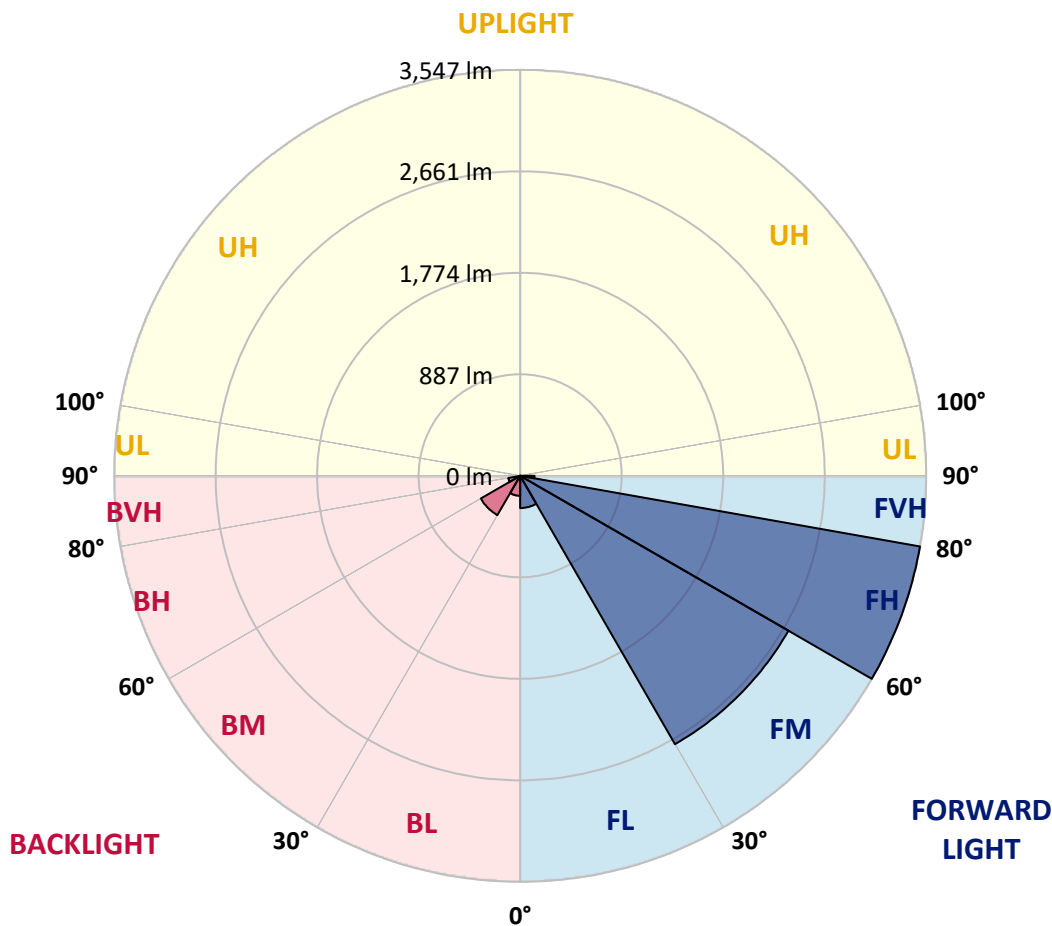


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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	281.8	3.8			
FM (30°-60°)	2707.5	36.9			
FH (60°-80°)	3547.5	48.3			G2/5000
FVH (80°-90°)	125.5	1.7			G2/225
BL (0°-30°)	174.7	2.4	B1/500		
BM (30°-60°)	396.8	5.4	B1/1000		
BH (60°-80°)	104.8	1.4	B0/110		G0/110
BVH (80°-90°)	2.5	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-G2
 Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	390.5	390.5	390.5	390.5	390.5	390.5	390.5	390.5	390.5	390.5	390.5
2.5°	465.4	447.5	421.4	423.1	427.5	431.2	441.0	436.9	429.2	428.8	465.4
5°	493.2	473.2	471.6	474.0	472.8	479.3	471.2	497.6	520.1	547.0	590.2
7.5°	479.7	470.3	458.5	470.7	470.3	467.1	472.4	526.2	580.4	614.6	685.9
10°	441.0	430.4	439.4	443.4	440.6	454.9	490.3	534.3	599.1	670.9	705.5
12.5°	430.0	436.5	439.8	439.8	467.1	474.4	528.6	570.2	647.2	703.9	804.6
15°	472.8	485.4	463.0	458.1	466.7	470.7	531.1	581.2	679.8	783.4	867.7
17.5°	540.9	540.0	505.4	486.2	499.7	509.5	542.9	601.6	659.5	845.7	968.0
20°	587.7	588.5	526.2	486.2	530.7	536.4	573.5	620.3	666.0	877.1	1033.6
22.5°	648.0	626.4	557.6	518.8	549.0	554.3	595.1	632.1	699.4	873.4	1117.6
25°	697.4	683.5	596.7	569.8	596.7	589.4	626.4	682.3	735.3	931.7	1166.9
27.5°	774.0	750.3	624.4	629.3	627.7	633.0	641.5	727.1	798.4	934.6	1281.0
30°	845.3	831.5	686.4	686.4	702.3	692.1	698.2	801.7	859.6	1000.6	1409.4
32.5°	919.1	919.9	759.3	720.6	708.0	749.9	791.1	838.0	933.3	1113.9	1605.8
35°	1114.3	1098.0	899.1	802.5	792.3	789.9	855.9	982.7	1064.2	1261.4	1870.4
37.5°	1507.6	1451.0	1199.9	988.4	950.1	937.0	1012.0	1142.0	1223.1	1478.3	2307.7
40°	1911.1	1807.2	1528.4	1290.0	1165.7	1109.4	1196.6	1307.1	1451.4	1717.9	2712.4
42.5°	2265.3	2136.9	1775.8	1615.2	1453.4	1429.0	1347.0	1526.8	1777.4	2066.8	3109.0
45°	2610.5	2357.8	1995.9	1868.7	1672.3	1686.1	1658.4	1814.1	2116.1	2449.1	3460.7
47.5°	2848.1	2621.1	2265.7	2100.6	2022.0	1940.9	2161.0	2322.8	2417.7	2692.0	3764.8
50°	3104.1	2874.2	2497.6	2382.3	2278.7	2360.7	2646.4	2668.0	2660.2	2918.6	3971.8
52.5°	3434.6	3163.6	2763.8	2633.3	2692.0	2773.5	3103.3	3107.3	2875.8	3109.4	4121.0
55°	3740.3	3439.9	3118.3	2995.3	3117.9	3186.8	3552.4	3418.3	3001.4	3239.0	4194.3
57.5°	4171.1	3823.5	3589.9	3373.1	3621.7	3555.7	3947.4	3748.1	3142.4	3325.0	4167.4
60°	4715.6	4306.4	4072.5	3843.0	4109.6	4154.4	4332.9	3912.7	3197.0	3353.1	4005.6
62.5°	5269.5	4857.9	4550.2	4394.5	4696.9	4844.4	4690.0	3994.6	3131.4	3298.1	3639.2
65°	5956.7	5429.7	5070.2	4978.9	5539.3	5756.2	5112.2	4014.6	3004.6	2995.3	2926.0
67.5°	6427.4	5914.3	5584.6	5737.4	6414.4	6431.9	5491.2	4020.7	2577.9	2345.2	1920.5
70°	6539.1	5989.7	5842.2	6292.1	7112.6	6892.1	5613.5	3711.0	1911.9	1391.9	877.9
72.5°	5740.3	5211.2	5403.2	6187.4	7260.9	7159.9	5343.3	2677.4	1076.4	556.7	269.4
75°	3521.0	3201.1	4053.3	5245.9	6373.6	6308.4	4168.7	1383.3	433.7	222.5	100.7
77.5°	1531.3	1422.0	2115.3	3480.7	4579.9	4521.6	2442.6	509.5	224.2	156.5	50.9
80°	506.6	491.5	801.3	1648.2	2682.7	2631.3	1029.1	211.9	159.8	125.5	28.5
82.5°	120.2	119.4	279.6	758.5	1366.6	1323.8	315.9	117.0	115.8	99.0	15.1
85°	30.2	31.0	77.4	310.2	555.1	489.5	82.3	58.3	81.5	67.2	7.7
87.5°	0.0	0.0	20.0	44.4	84.0	52.6	9.0	15.5	22.8	24.0	4.1
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°	390.5	390.5	390.5	390.5	390.5	390.5	390.5	390.5	390.5	390.5	390.5
2.5°	473.6	469.1	432.4	441.4	455.3	454.0	463.0	456.1	450.0	480.1	477.3
5°	602.4	577.9	566.5	582.4	573.9	553.9	570.6	567.8	562.9	573.0	580.8
7.5°	699.0	676.6	666.4	633.0	584.5	546.1	552.3	538.0	524.5	540.4	556.7
10°	730.8	718.6	717.3	652.1	606.5	551.0	485.4	428.8	413.7	393.7	402.7
12.5°	817.2	824.5	778.5	702.3	614.2	507.8	391.3	311.0	278.4	257.2	258.4
15°	888.1	913.8	846.9	710.0	540.4	387.2	260.4	188.3	167.9	162.6	161.0
17.5°	993.7	1018.5	868.1	655.0	435.7	262.5	167.5	146.7	147.9	151.6	150.8
20°	1071.9	1068.3	849.8	557.6	321.2	172.0	140.2	137.4	143.9	154.5	152.0
22.5°	1147.3	1122.1	838.4	467.5	207.9	138.2	135.3	134.9	141.0	151.2	154.1
25°	1201.1	1205.2	819.2	366.0	151.2	128.4	130.8	134.5	140.6	151.6	150.0
27.5°	1355.2	1241.1	739.3	265.7	127.6	123.1	129.2	136.5	138.6	152.4	152.8
30°	1455.0	1376.4	687.2	178.9	117.8	113.7	125.9	135.7	138.2	156.1	157.3
32.5°	1629.1	1434.7	626.8	132.9	109.6	110.9	118.6	131.6	143.1	162.2	163.0
35°	1845.5	1621.7	517.6	119.4	106.8	104.7	108.4	123.5	142.2	163.0	167.1
37.5°	2257.6	1733.8	410.4	115.8	106.8	103.1	106.8	115.8	139.8	171.2	179.7
40°	2533.5	1962.1	295.9	114.9	104.7	101.5	102.7	111.7	132.9	166.3	178.9
42.5°	2873.4	2058.2	218.1	112.9	102.7	97.8	98.6	110.0	125.9	156.1	165.5
45°	3151.8	2128.4	171.6	112.1	97.8	96.2	97.8	108.8	119.4	134.1	142.7
47.5°	3363.3	2209.9	137.8	106.8	96.6	96.2	94.1	101.9	108.4	112.1	117.8
50°	3518.2	2191.5	114.1	98.6	92.5	95.0	91.3	92.5	94.1	92.1	98.6
52.5°	3613.1	2125.5	95.0	88.9	87.6	89.7	85.2	81.5	78.7	77.0	81.1
55°	3647.8	1993.0	80.7	76.2	79.1	79.9	76.2	69.7	64.8	62.4	65.6
57.5°	3582.2	1791.3	70.1	63.2	69.7	69.7	64.8	57.9	52.2	48.1	51.4
60°	3415.9	1568.3	62.4	52.6	59.5	59.9	54.2	46.9	42.4	38.3	40.3
62.5°	3106.1	1325.4	54.6	45.6	51.4	51.8	44.8	37.9	34.6	30.2	31.8
65°	2486.6	1013.6	46.5	40.3	44.4	43.2	37.1	32.2	28.1	24.0	24.9
67.5°	1614.0	625.6	40.3	36.7	37.5	36.3	31.4	28.1	23.6	20.4	20.8
70°	722.6	269.4	35.5	33.0	32.6	30.6	26.5	26.1	23.2	20.4	20.4
72.5°	222.9	101.5	30.6	29.8	28.1	25.7	23.2	24.9	22.8	19.6	19.2
75°	88.0	46.5	25.3	25.3	24.5	21.2	20.8	22.4	21.2	17.9	17.1
77.5°	46.1	29.3	20.8	21.6	21.2	16.3	18.7	20.4	19.6	15.1	12.6
80°	27.3	17.9	15.5	17.5	17.1	11.4	14.3	13.0	9.4	4.5	1.2
82.5°	15.1	8.2	6.9	10.2	10.2	4.1	7.3	6.5	3.7	0.0	0.0
85°	7.3	5.7	5.3	5.7	4.1	1.2	3.7	3.7	2.0	0.0	0.0
87.5°	3.7	3.3	2.4	2.0	1.6	0.0	1.2	1.6	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)