

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: P367377

Luminaire Tested: **MSA-SA2B-830-U-SL4-HSS**

Issue Date: 12/2/2019

Test Information

Test Method: LM-79-08
Report Number: P367377
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1910-543-21)
Test Lab: INNOVATION CENTER
Issue Date: 12/2/2019
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA2B-830-U-SL4-HSS
Description: MESA POST TOP DECORATIVE LUMINAIRE. (2) LIGHTSQUARES WITH 16 LEDS EACH AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6546 lumens
Efficiency: N/A
Efficacy: 77.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type IV - Short
BUG Rating: B1 - U0 - G2

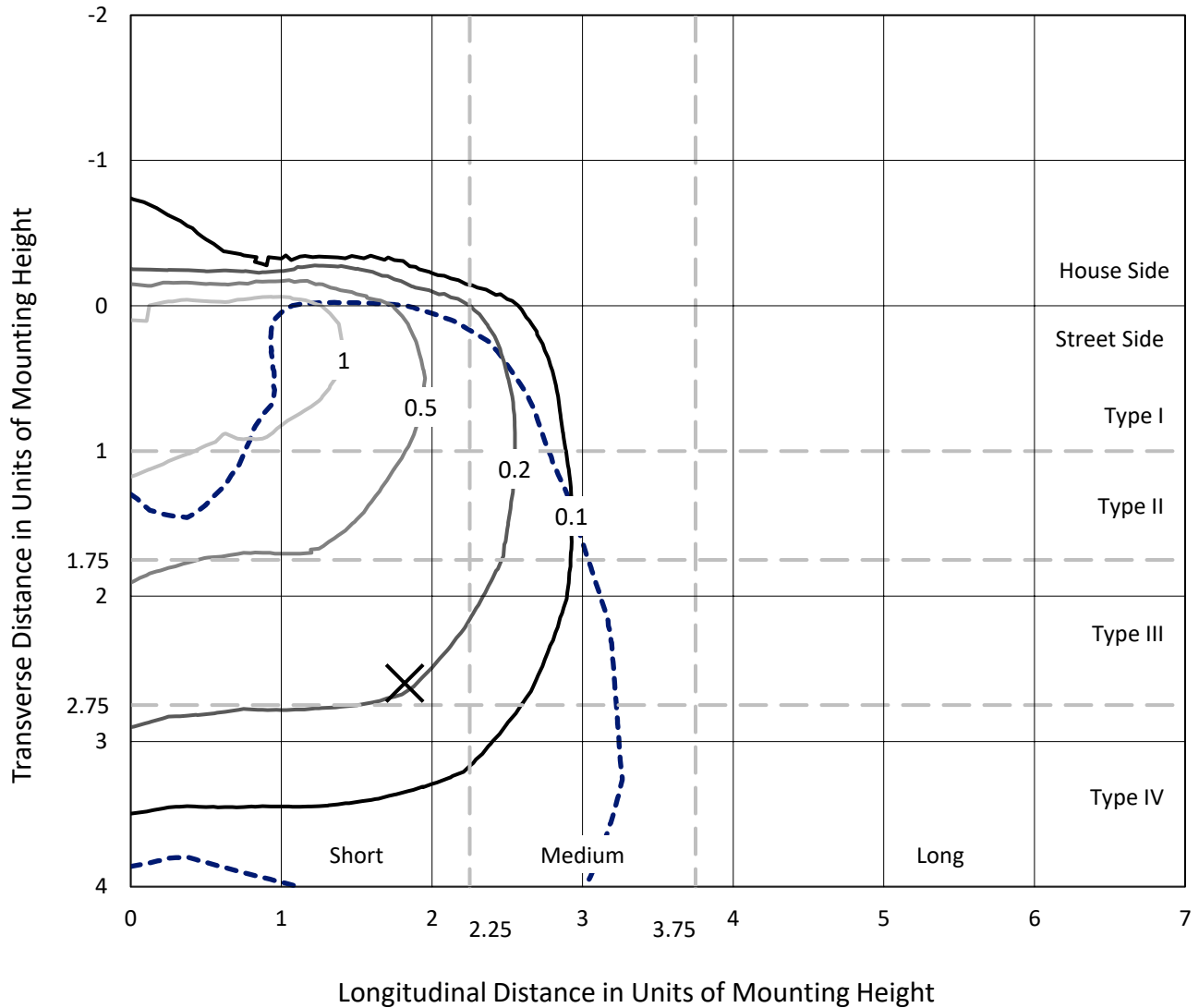
Input Watts (W): 85
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



REPORT NUMBER: P367377
 CATALOG NUMBER: MSA-SA2B-830-U-SL4-HSS

Iso-Footcandle Lines of Horizontal Illumination

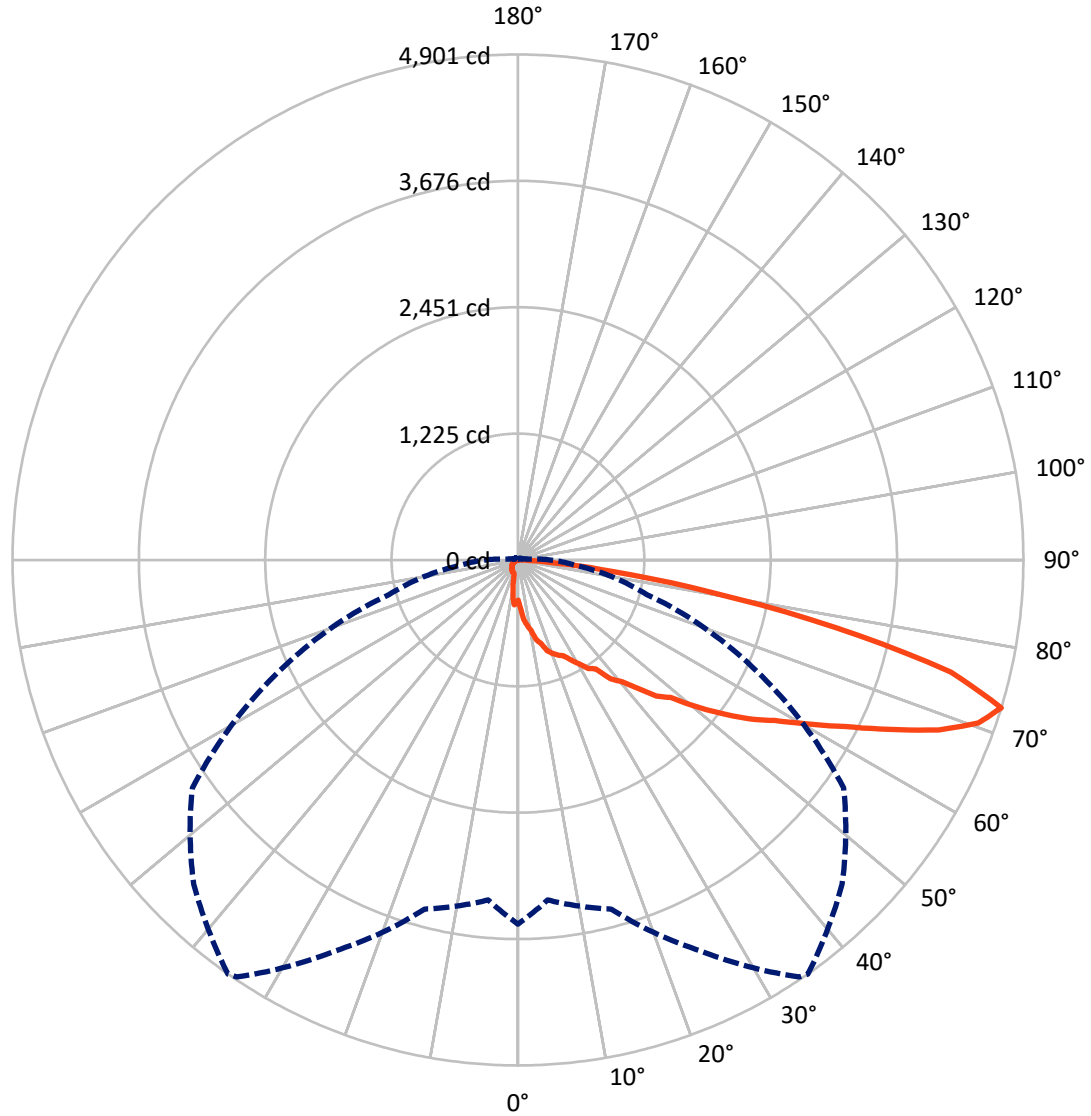
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 1.5 fc
 Type IV - Short - N/A

REPORT NUMBER: P367377
CATALOG NUMBER: MSA-SA2B-830-U-SL4-HSS

Luminous Intensity Polar Plot



— Vertical Plane Through 35-Deg Lateral - - - Horizontal Cone Through 72.5-Deg Vertical

REPORT NUMBER: P367377
 CATALOG NUMBER: MSA-SA2B-830-U-SL4-HSS

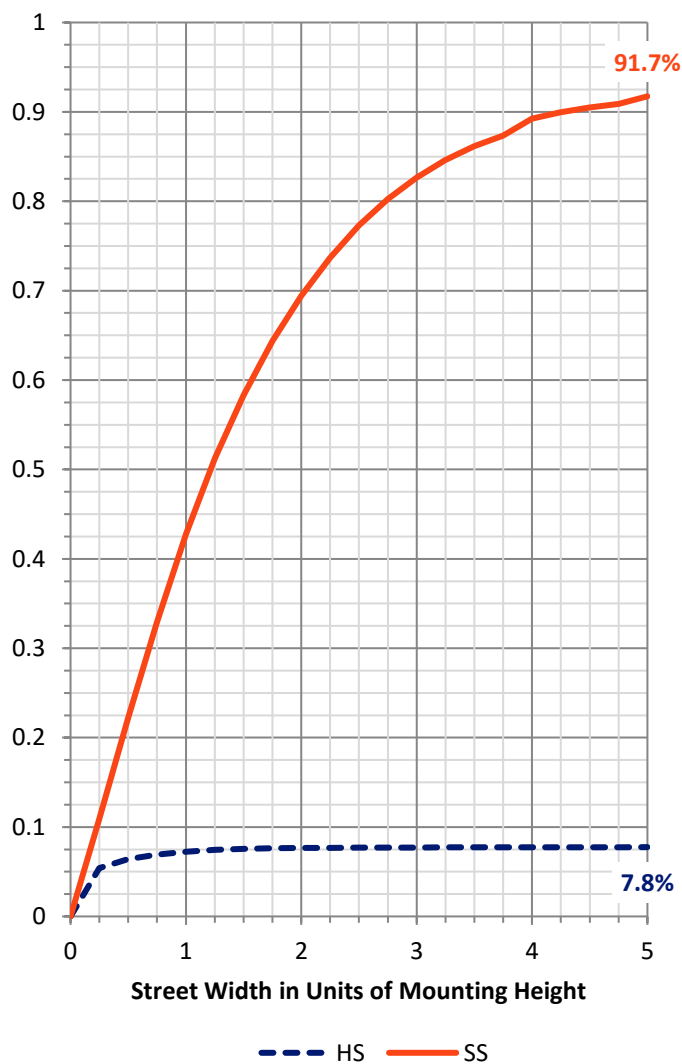
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	510.6	0.0	510.6
	% Fixture	7.8	0.0	7.8
Street Side	Lumens	6035.4	0.0	6035.4
	% Fixture	92.2	0.0	92.2
Total	Lumens	6546.0	0.0	6546.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.7	0.8
10°-20°	167.5	2.6
20°-30°	305.1	4.7
30°-40°	526.2	8.0
40°-50°	935.4	14.3
50°-60°	1395.9	21.3
60°-70°	1783.4	27.2
70°-80°	1240.8	19.0
80°-90°	141.9	2.2
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°	6546.0	100.0
0°-180°	6546.0	100.0

Coefficient of Utilization



REPORT NUMBER: P367377

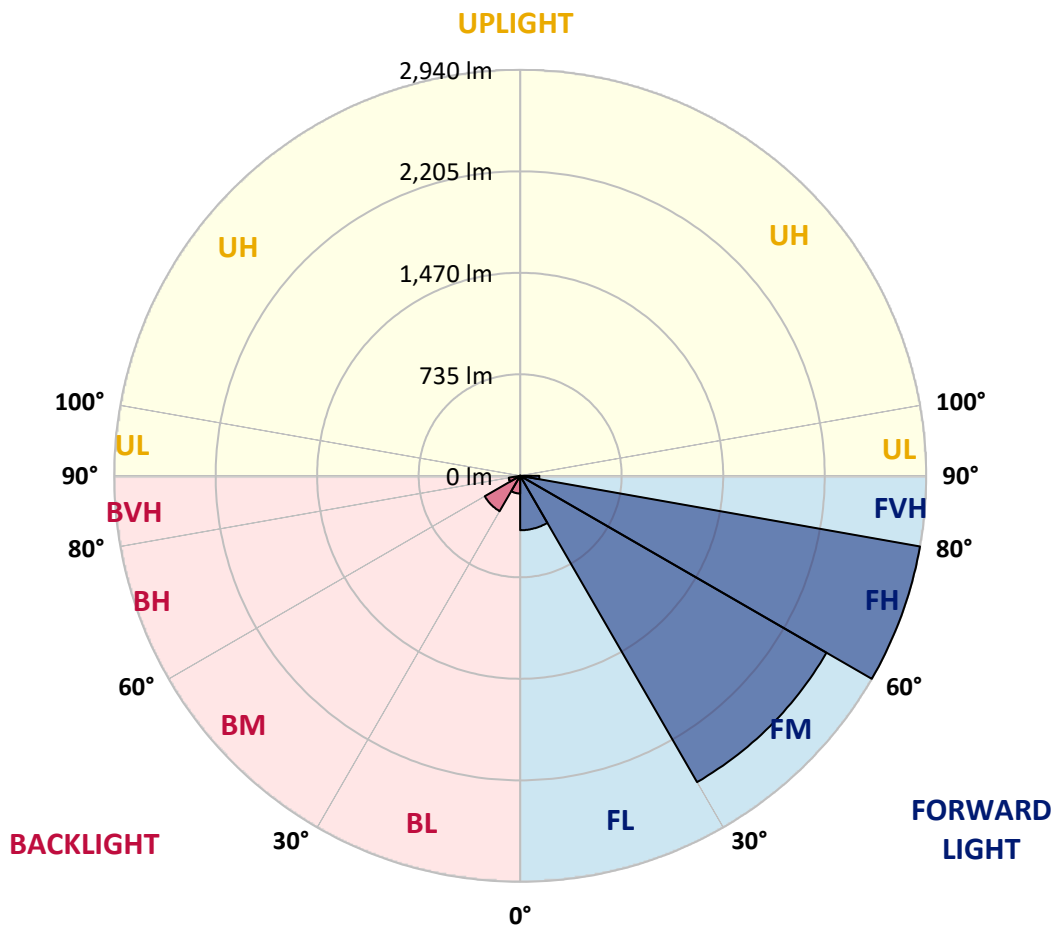
CATALOG NUMBER: MSA-SA2B-830-U-SL4-HSS

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	393.9	6.0			
FM (30°-60°)	2561.5	39.1			
FH (60°-80°)	2940.5	44.9			G2/5000
FVH (80°-90°)	139.6	2.1			G2/225
BL (0°-30°)	128.4	2.0	B1/500		
BM (30°-60°)	296.1	4.5	B1/1000		
BH (60°-80°)	83.7	1.3	B0/110		G0/110
BVH (80°-90°)	2.4	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





REPORT NUMBER: P367377

CATALOG NUMBER: MSA-SA2B-830-U-SL4-HSS

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	34°	35°	45°	55°	65°	75°	85°
0°	389.9	389.9	389.9	389.9	389.9	389.9	389.9	389.9	389.9	389.9	389.9
2.5°	496.2	476.8	445.2	447.5	461.7	464.6	468.9	457.7	447.9	430.4	464.3
5°	635.8	607.8	590.0	584.4	576.2	576.9	556.8	564.0	562.0	574.9	590.3
7.5°	714.4	698.9	676.6	670.3	640.0	636.7	612.1	645.3	648.6	644.0	669.3
10°	745.7	725.3	727.9	704.5	689.4	693.3	697.3	699.9	704.2	708.5	677.5
12.5°	764.1	767.7	803.6	779.2	794.4	794.4	821.0	792.7	793.7	762.8	768.0
15°	847.0	867.1	851.0	850.6	834.2	838.5	869.4	847.0	858.5	849.3	813.8
17.5°	951.0	955.0	924.3	910.9	925.7	926.0	912.8	911.8	871.7	939.5	896.4
20°	984.2	1006.6	963.2	910.5	972.1	969.1	968.1	952.6	885.8	980.0	944.4
22.5°	1074.7	1042.8	1013.2	978.6	1002.7	1002.7	999.0	965.2	939.2	976.3	991.5
25°	1103.0	1107.0	1068.5	1057.3	1058.0	1028.3	1025.7	1011.2	986.2	1049.7	1019.4
27.5°	1200.4	1198.8	1106.3	1137.6	1097.8	1098.1	1025.4	1058.0	1062.2	1053.3	1087.2
30°	1296.2	1322.8	1183.3	1222.8	1181.0	1168.5	1097.4	1126.4	1134.0	1123.8	1166.5
32.5°	1418.3	1457.4	1321.9	1283.0	1219.2	1254.7	1205.7	1137.3	1174.8	1265.9	1289.9
35°	1547.6	1566.7	1422.2	1367.9	1295.9	1295.5	1293.9	1299.5	1340.9	1443.6	1464.0
37.5°	1779.9	1734.8	1604.2	1479.8	1495.9	1460.1	1435.1	1461.4	1504.5	1673.6	1760.8
40°	1909.6	1877.0	1693.0	1619.3	1539.4	1552.5	1620.3	1617.4	1732.2	1909.2	2039.9
42.5°	2035.6	2004.7	1823.7	1764.1	1661.5	1697.3	1726.9	1764.5	1999.7	2285.4	2357.1
45°	2147.8	2057.0	1929.3	1931.6	1878.3	1882.6	1934.9	1969.5	2309.7	2602.6	2652.9
47.5°	2215.6	2140.9	2018.5	2016.2	2012.9	1992.8	2239.3	2270.9	2556.9	2904.7	2909.3
50°	2311.0	2217.6	2110.3	2112.3	2188.3	2230.7	2524.9	2521.6	2795.4	3156.7	3050.5
52.5°	2429.8	2315.6	2197.5	2285.4	2402.8	2472.0	2710.9	2808.3	3051.8	3315.0	3105.7
55°	2581.9	2439.0	2325.2	2437.7	2694.1	2720.7	2892.8	3098.5	3331.1	3476.6	3123.5
57.5°	2760.2	2589.8	2497.6	2678.9	2934.6	2935.3	3157.7	3407.8	3502.6	3542.4	3103.4
60°	2952.4	2753.6	2660.8	2824.1	3199.8	3226.8	3452.2	3578.6	3676.7	3575.6	3067.6
62.5°	3121.5	2902.0	2830.0	3021.8	3490.7	3554.6	3708.9	3690.8	3802.4	3617.4	2976.4
65°	3322.9	3094.2	3046.8	3330.2	3870.5	3958.3	3997.2	3889.9	3844.5	3585.2	2739.2
67.5°	3522.3	3308.4	3307.1	3672.1	4368.4	4398.6	4357.8	4170.6	3795.5	3300.9	2304.5
70°	3662.8	3433.2	3519.7	4046.5	4820.8	4735.9	4564.2	4303.2	3441.4	2529.9	1505.5
72.5°	3530.9	3309.4	3504.6	4179.8	4876.8	4901.1	4444.7	3854.7	2556.9	1293.9	544.9
75°	2683.2	2547.6	3042.9	3708.3	4329.9	4335.5	3709.9	2718.8	1259.0	351.4	150.7
77.5°	1351.5	1308.4	1926.0	2632.5	3159.0	3149.8	2549.0	1456.5	405.1	116.8	76.0
80°	684.1	649.6	819.7	1420.3	1876.0	1889.8	1455.5	652.2	204.4	63.5	52.7
82.5°	420.2	398.8	448.5	642.7	910.5	932.6	552.2	413.0	126.7	37.5	48.0
85°	81.3	85.6	257.7	321.8	363.6	355.1	163.5	339.9	38.2	22.4	34.9
87.5°	0.0	1.3	59.6	105.0	105.3	93.5	37.2	75.4	5.3	6.3	4.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P367377
 CATALOG NUMBER: MSA-SA2B-830-U-SL4-HSS

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	389.9	389.9	389.9	389.9	389.9	389.9	389.9	389.9	389.9	389.9	389.9
2.5°	469.9	465.0	423.8	419.2	420.2	413.3	411.0	396.5	392.9	415.3	419.2
5°	583.8	550.9	512.7	498.9	477.5	441.3	436.0	426.8	416.6	420.5	417.6
7.5°	653.5	609.8	569.0	496.2	436.0	383.4	374.8	359.0	343.2	343.5	353.7
10°	664.7	627.9	571.6	483.1	414.3	348.5	291.2	249.8	231.0	214.2	219.2
12.5°	729.5	695.3	591.7	479.1	382.7	280.0	205.0	164.5	146.8	140.8	140.2
15°	781.5	754.6	625.9	466.9	312.6	197.1	146.8	134.9	131.6	137.2	135.6
17.5°	858.9	810.2	622.3	416.6	238.2	149.7	135.2	133.6	137.5	140.8	141.8
20°	892.8	822.7	597.6	337.6	178.4	137.2	132.0	128.7	135.9	145.8	143.8
22.5°	927.0	844.1	568.6	276.4	143.5	131.3	128.3	125.7	131.3	140.8	143.1
25°	942.4	878.3	536.4	215.9	133.3	124.4	122.4	123.4	128.0	136.6	135.6
27.5°	1020.4	882.2	474.8	170.5	129.0	119.5	119.5	121.8	121.8	133.3	132.3
30°	1069.1	949.0	424.8	143.5	124.1	112.5	116.5	117.5	115.8	128.3	129.3
32.5°	1154.7	967.5	376.1	131.6	116.2	111.6	110.9	111.6	112.9	125.0	125.4
35°	1286.3	1058.3	309.7	127.0	112.2	106.6	102.0	105.6	108.9	117.8	119.5
37.5°	1543.7	1151.4	252.4	123.4	110.2	102.0	100.4	99.7	105.6	115.8	119.1
40°	1752.0	1316.3	205.3	120.4	106.3	99.4	95.1	95.4	100.7	108.3	113.2
42.5°	2046.8	1435.4	174.1	115.8	100.7	93.8	88.8	91.8	94.1	102.0	105.3
45°	2292.9	1527.9	153.3	112.9	95.1	88.5	84.6	87.9	85.6	89.5	94.1
47.5°	2488.7	1608.5	137.9	105.6	91.5	85.6	80.6	79.6	75.7	76.7	81.0
50°	2596.3	1595.0	125.0	98.4	86.9	82.6	75.7	68.8	63.5	63.2	65.8
52.5°	2634.5	1522.9	114.5	92.1	81.3	76.0	68.1	58.6	53.3	51.7	54.0
55°	2645.0	1419.3	105.0	85.2	76.0	67.8	59.6	49.4	43.8	41.1	43.4
57.5°	2610.8	1259.7	95.8	78.6	69.8	59.9	51.0	40.5	35.2	31.9	33.9
60°	2526.2	1057.0	87.5	70.4	63.2	53.0	43.1	32.6	27.0	24.0	25.0
62.5°	2339.0	828.6	78.6	62.9	56.3	46.4	36.2	25.7	20.4	17.8	18.1
65°	2054.0	617.7	68.4	55.6	50.0	40.1	29.0	19.7	15.5	13.2	12.8
67.5°	1636.4	418.6	58.2	48.0	44.4	33.9	23.0	15.5	12.2	10.5	9.9
70°	961.9	210.9	48.4	41.5	38.2	28.3	18.1	12.5	11.2	9.9	9.2
72.5°	317.2	91.2	37.8	34.2	31.6	22.7	14.1	11.5	10.9	9.5	8.9
75°	110.6	52.7	28.0	26.3	25.0	17.1	11.8	10.5	10.5	9.2	8.2
77.5°	72.4	40.8	20.7	19.1	18.8	12.5	10.2	9.9	9.2	7.6	6.3
80°	60.2	23.0	14.5	13.5	13.2	7.9	8.2	7.2	5.6	3.3	1.3
82.5°	55.6	13.8	7.6	8.2	7.6	3.0	4.6	3.9	3.0	1.3	0.0
85°	32.6	6.3	4.3	4.3	3.3	0.7	2.3	2.3	1.3	0.3	0.0
87.5°	3.6	3.0	2.3	2.3	1.6	0.0	1.0	0.7	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)