

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: P596105

Luminaire Tested: **MSA-SA4A-AMB-U-SL2**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596105
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-17)
Test Lab: INNOVATIONS CENTER
Issue Date: 4/29/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-AMB-U-SL2
Description: POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH
AND TYPE II SPILL LIGHT ELIMINATOR OPTICS.
Light Source: (64) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2943.1 lumens
Efficiency: N/A
Efficacy: 37.3 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G1

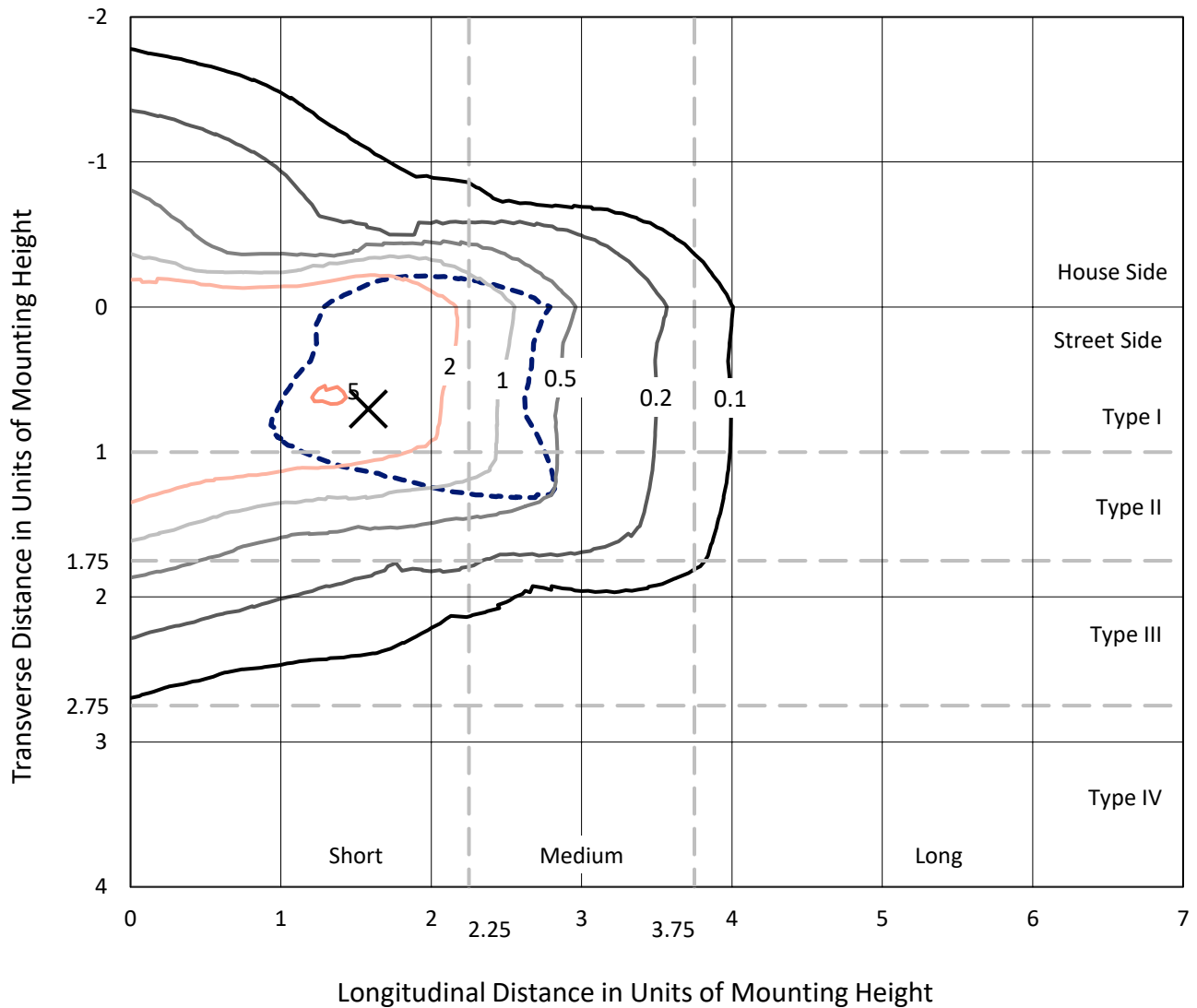
Input Watts (W): 79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

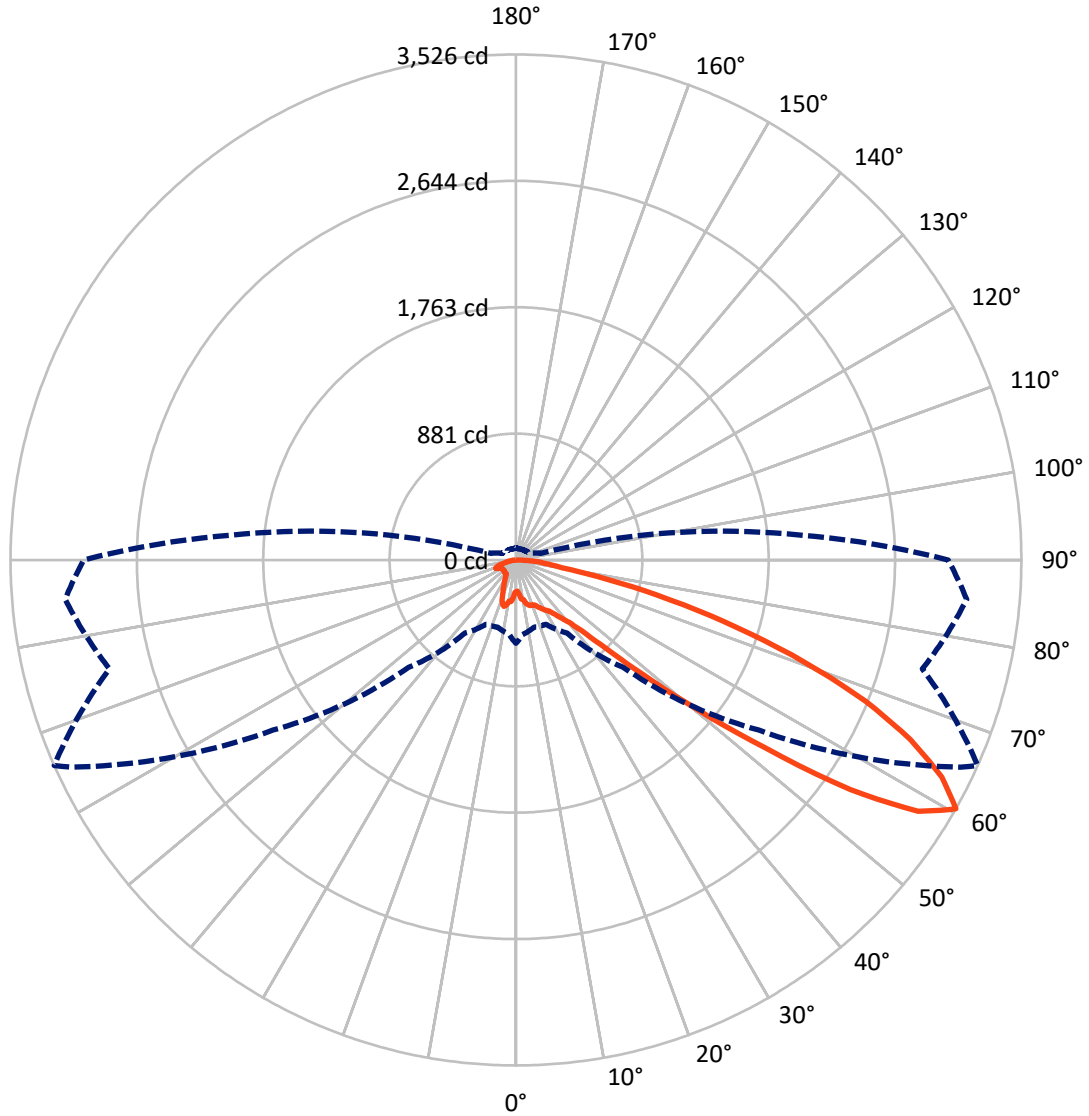
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.2 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical

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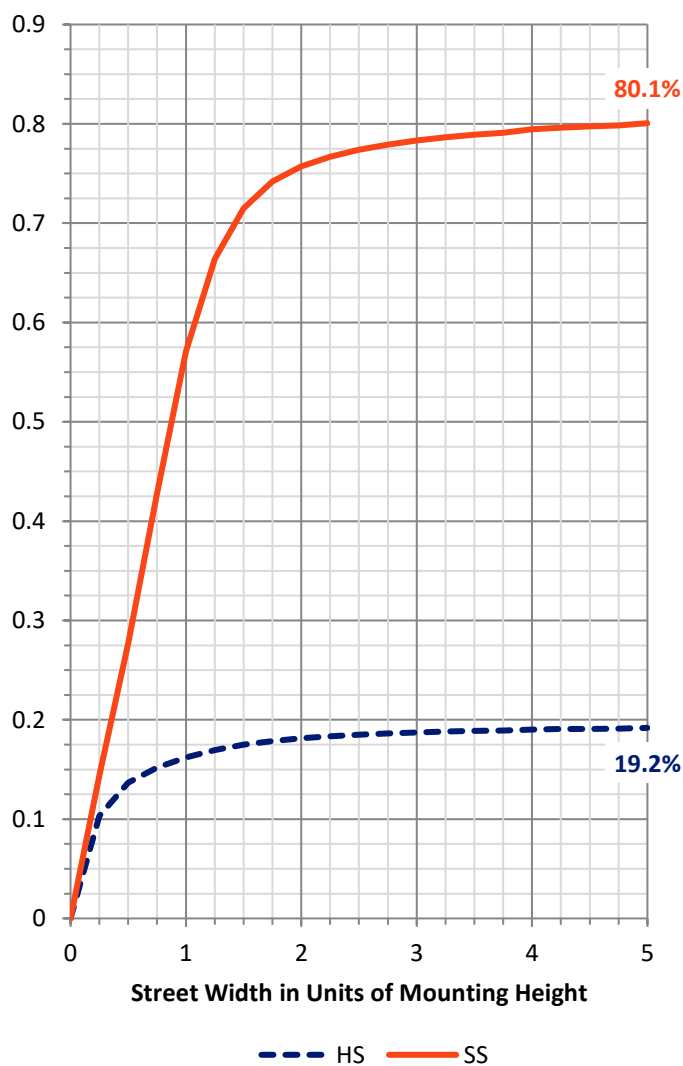
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	571.6	0.0	571.6
	% Fixture	19.4	0.0	19.4
Street Side	Lumens	2371.4	0.0	2371.4
	% Fixture	80.6	0.0	80.6
Total	Lumens	2943.1	0.0	2943.1
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.9	0.8
10°-20°	77.2	2.6
20°-30°	130.7	4.4
30°-40°	237.2	8.1
40°-50°	480.7	16.3
50°-60°	826.4	28.1
60°-70°	787.2	26.7
70°-80°	323.7	11.0
80°-90°	55.9	1.9
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°	2943.1	100.0
0°-180°	2943.1	100.0

Coefficient of Utilization



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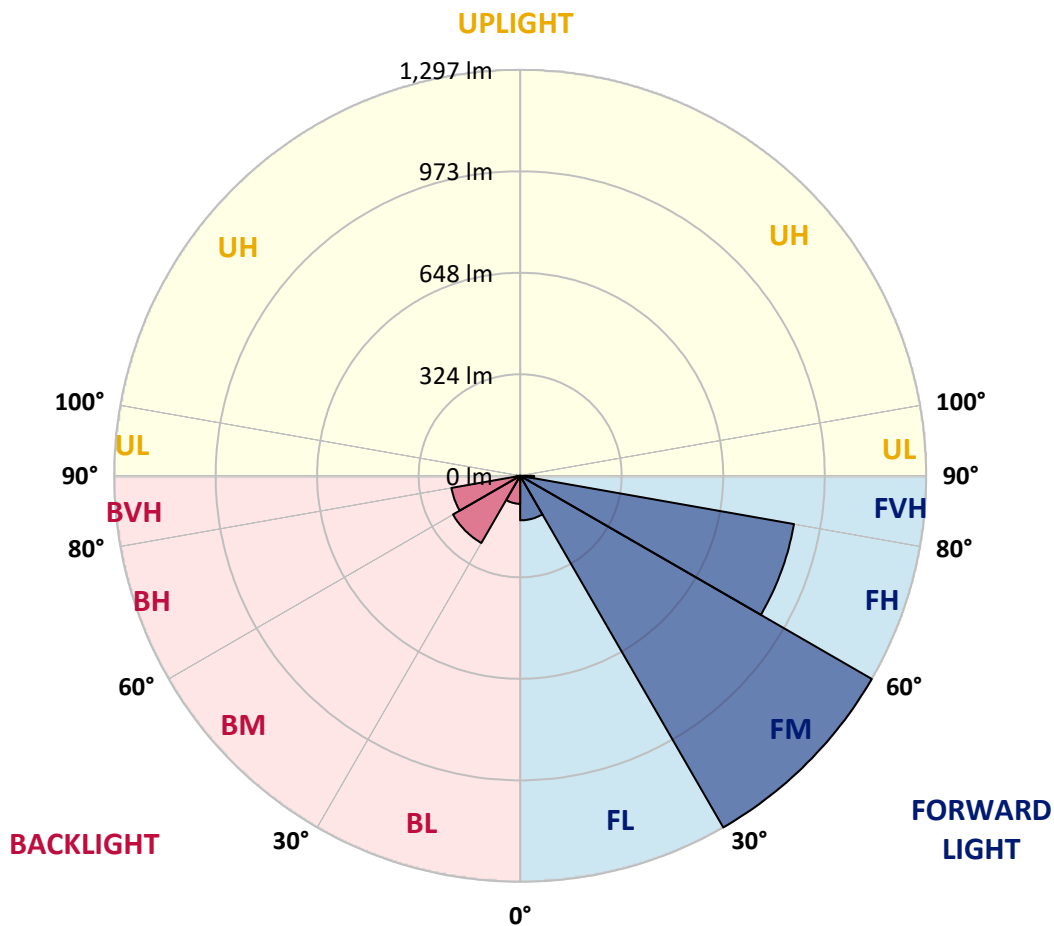
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	142.4	4.8			
FM (30°-60°)	1296.7	44.1			
FH (60°-80°)	888.0	30.2			G1/1800
FVH (80°-90°)	44.3	1.5			G1/100
BL (0°-30°)	89.5	3.0	B0/110		
BM (30°-60°)	247.7	8.4	B1/1000		
BH (60°-80°)	222.9	7.6	B1/500		G1/500
BVH (80°-90°)	11.6	0.4			G1/100
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	224.0	224.0	224.0	224.0	224.0	224.0	224.0	224.0	224.0	224.0	224.0
2.5°	247.0	218.0	209.0	195.0	199.0	211.0	211.0	214.0	218.0	234.0	253.0
5°	265.0	234.0	236.0	210.0	188.0	186.0	201.0	234.0	239.0	298.0	303.0
7.5°	266.0	245.0	244.0	220.0	192.0	196.0	229.0	275.0	275.0	314.0	349.0
10°	238.0	232.0	224.0	210.0	217.0	233.0	241.0	273.0	280.0	335.0	355.0
12.5°	221.0	220.0	235.0	229.0	251.0	270.0	277.0	310.0	310.0	347.0	379.9
15°	239.0	240.0	242.0	248.0	260.0	284.0	299.0	322.0	326.0	378.9	406.9
17.5°	267.0	271.0	267.0	273.0	277.0	292.0	310.0	332.0	335.0	402.9	458.9
20°	301.0	301.0	291.0	276.0	292.0	299.0	319.0	336.0	334.0	412.9	486.9
22.5°	345.0	339.0	310.0	293.0	293.0	299.0	318.0	340.0	342.0	413.9	528.9
25°	380.9	376.9	350.0	334.0	318.0	315.0	327.0	360.0	364.0	436.9	540.9
27.5°	435.9	429.9	381.9	371.9	345.0	320.0	340.0	383.9	385.9	439.9	565.9
30°	503.9	508.9	447.9	433.9	393.9	343.0	370.9	400.9	405.9	457.9	602.9
32.5°	608.9	607.9	544.9	496.9	452.9	403.9	384.9	415.9	424.9	494.9	642.9
35°	754.9	745.9	677.9	622.9	537.9	448.9	434.9	459.9	461.9	533.9	663.9
37.5°	918.9	894.9	825.9	786.9	706.9	557.9	510.9	513.9	514.9	568.9	722.9
40°	1036.9	1005.9	924.9	913.9	843.9	717.9	573.9	569.9	569.9	611.9	777.9
42.5°	1141.8	1108.8	1021.9	1046.9	1006.9	909.9	701.9	667.9	671.9	675.9	890.9
45°	1203.8	1126.8	1092.9	1127.8	1155.8	1103.8	963.9	891.9	871.9	839.9	1047.9
47.5°	1136.8	1070.9	1042.9	1121.8	1248.8	1414.8	1336.8	1234.8	1194.8	1098.8	1248.8
50°	1056.9	984.9	947.9	989.9	1281.8	1569.8	1697.8	1684.8	1631.8	1404.8	1521.8
52.5°	985.9	903.9	838.9	882.9	1160.8	1592.8	2031.7	2198.7	2178.7	1782.8	1916.7
55°	877.9	783.9	721.9	739.9	1006.9	1482.8	2255.7	2812.6	2828.6	2258.7	2412.7
57.5°	724.9	651.9	606.9	613.9	791.9	1286.8	2224.7	3301.5	3307.5	2677.6	2893.6
60°	581.9	522.9	485.9	494.9	620.9	1057.9	2067.7	3419.5	3525.5	2934.6	3155.6
62.5°	434.9	392.9	370.9	375.9	471.9	831.9	1799.8	3260.6	3334.5	2924.6	3142.6
65°	343.0	309.0	293.0	306.0	357.0	659.9	1465.8	2963.6	3023.6	2678.6	2845.6
67.5°	280.0	254.0	237.0	268.0	310.0	407.9	1177.8	2639.6	2632.6	2165.7	2270.7
70°	230.0	209.0	197.0	230.0	296.0	328.0	808.9	2144.7	2138.7	1617.8	1582.8
72.5°	171.0	158.0	157.0	192.0	283.0	316.0	442.9	1612.8	1611.8	1263.8	1139.8
75°	121.0	115.0	114.0	150.0	259.0	323.0	318.0	1102.8	1113.8	994.9	847.9
77.5°	94.0	87.0	84.0	102.0	215.0	313.0	285.0	633.9	641.9	570.9	423.9
80°	69.0	67.0	65.0	74.0	129.0	308.0	268.0	341.0	325.0	221.0	140.0
82.5°	37.0	37.0	45.0	53.0	83.0	262.0	258.0	231.0	211.0	73.0	71.0
85°	17.0	18.0	24.0	33.0	49.0	174.0	232.0	176.0	155.0	43.0	42.0
87.5°	3.0	5.0	6.0	9.0	12.0	41.0	69.0	63.0	54.0	15.0	11.0
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°	224.0	224.0	224.0	224.0	224.0	224.0	224.0	224.0	224.0	224.0	224.0
2.5°	271.0	238.0	249.0	224.0	219.0	230.0	224.0	225.0	235.0	236.0	263.0
5°	338.0	305.0	293.0	267.0	231.0	207.0	218.0	244.0	268.0	273.0	294.0
7.5°	374.9	347.0	340.0	287.0	235.0	221.0	222.0	236.0	249.0	258.0	274.0
10°	365.9	357.0	340.0	286.0	271.0	252.0	222.0	202.0	207.0	204.0	206.0
12.5°	395.9	383.9	360.0	317.0	288.0	249.0	212.0	189.0	172.0	166.0	166.0
15°	414.9	413.9	381.9	329.0	274.0	219.0	181.0	157.0	142.0	135.0	131.0
17.5°	456.9	458.9	388.9	314.0	230.0	184.0	147.0	125.0	121.0	123.0	122.0
20°	492.9	478.9	387.9	275.0	191.0	143.0	115.0	108.0	112.0	117.0	118.0
22.5°	532.9	487.9	364.0	227.0	150.0	110.0	102.0	100.0	106.0	115.0	117.0
25°	545.9	503.9	341.0	191.0	121.0	94.0	93.0	95.0	102.0	112.0	113.0
27.5°	569.9	499.9	308.0	164.0	99.0	88.0	90.0	93.0	96.0	105.0	107.0
30°	573.9	529.9	276.0	143.0	92.0	86.0	87.0	89.0	93.0	101.0	103.0
32.5°	612.9	510.9	258.0	120.0	89.0	86.0	86.0	88.0	93.0	99.0	101.0
35°	620.9	529.9	239.0	107.0	89.0	85.0	85.0	87.0	93.0	100.0	101.0
37.5°	678.9	549.9	231.0	105.0	89.0	86.0	85.0	88.0	94.0	102.0	105.0
40°	738.9	584.9	230.0	104.0	90.0	87.0	87.0	89.0	96.0	104.0	108.0
42.5°	844.9	663.9	228.0	104.0	91.0	89.0	88.0	91.0	97.0	104.0	108.0
45°	971.9	718.9	215.0	103.0	91.0	92.0	90.0	92.0	96.0	103.0	108.0
47.5°	1140.8	788.9	203.0	102.0	93.0	96.0	92.0	92.0	95.0	101.0	104.0
50°	1378.8	916.9	197.0	102.0	96.0	98.0	93.0	91.0	93.0	97.0	101.0
52.5°	1719.8	1126.8	192.0	103.0	99.0	98.0	93.0	90.0	90.0	94.0	98.0
55°	2213.7	1401.8	187.0	103.0	99.0	96.0	92.0	89.0	88.0	90.0	93.0
57.5°	2690.6	1780.8	182.0	105.0	98.0	94.0	90.0	86.0	84.0	86.0	90.0
60°	3015.6	1990.7	180.0	107.0	99.0	90.0	87.0	83.0	80.0	82.0	86.0
62.5°	2999.6	1947.7	184.0	116.0	100.0	86.0	83.0	79.0	76.0	78.0	81.0
65°	2751.6	1729.8	204.0	129.0	103.0	82.0	78.0	75.0	72.0	73.0	76.0
67.5°	2299.7	1465.8	226.0	143.0	104.0	77.0	73.0	69.0	67.0	69.0	71.0
70°	1740.8	1191.8	201.0	142.0	97.0	71.0	67.0	65.0	62.0	63.0	65.0
72.5°	1329.8	959.9	155.0	126.0	88.0	65.0	63.0	59.0	56.0	57.0	59.0
75°	898.9	640.9	120.0	98.0	73.0	56.0	57.0	53.0	50.0	51.0	52.0
77.5°	403.9	271.0	85.0	71.0	56.0	47.0	50.0	46.0	43.0	44.0	44.0
80°	123.0	94.0	54.0	50.0	43.0	37.0	40.0	38.0	35.0	35.0	36.0
82.5°	75.0	60.0	36.0	33.0	31.0	26.0	30.0	29.0	26.0	26.0	25.0
85°	42.0	35.0	23.0	21.0	18.0	13.0	17.0	17.0	16.0	16.0	15.0
87.5°	9.0	12.0	10.0	9.0	8.0	5.0	8.0	8.0	8.0	7.0	5.0
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)