

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: P596107

Luminaire Tested: **MSA-SA4A-AMB-U-SL3**

Issue Date: 4/29/2022

Test Information

Test Method: LM-79-08
Report Number: P596107
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-2109-400-19)
Test Lab: INNOVATIONS CENTER
Issue Date: 4/29/2022
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: MSA-SA4A-AMB-U-SL3
Description: POST TOP DECORATIVE LUMINAIRE. (4) LIGHTSQUARES WITH 16 LEDS EACH
AND TYPE III SPILL LIGHT ELIMINATOR OPTICS.
Light Source: (64) 1549K CCT, -21.5 CRI LEDS
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2922 lumens
Efficiency: N/A
Efficacy: 37.0 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
IES Classification: Type II - Short
BUG Rating: B1 - U0 - G1

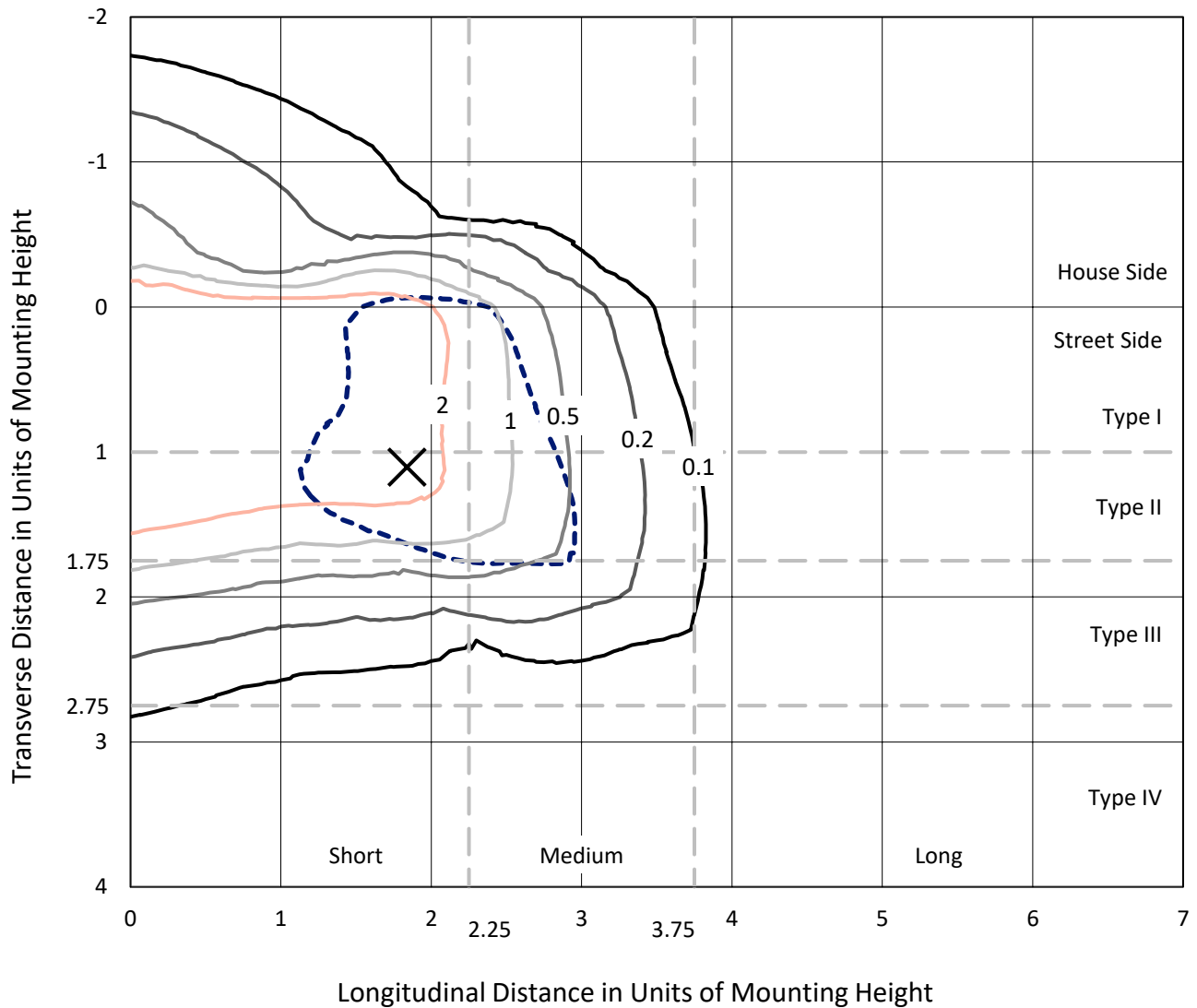
Input Watts (W): 79
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 28.75 FT



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Iso-Footcandle Lines of Horizontal Illumination

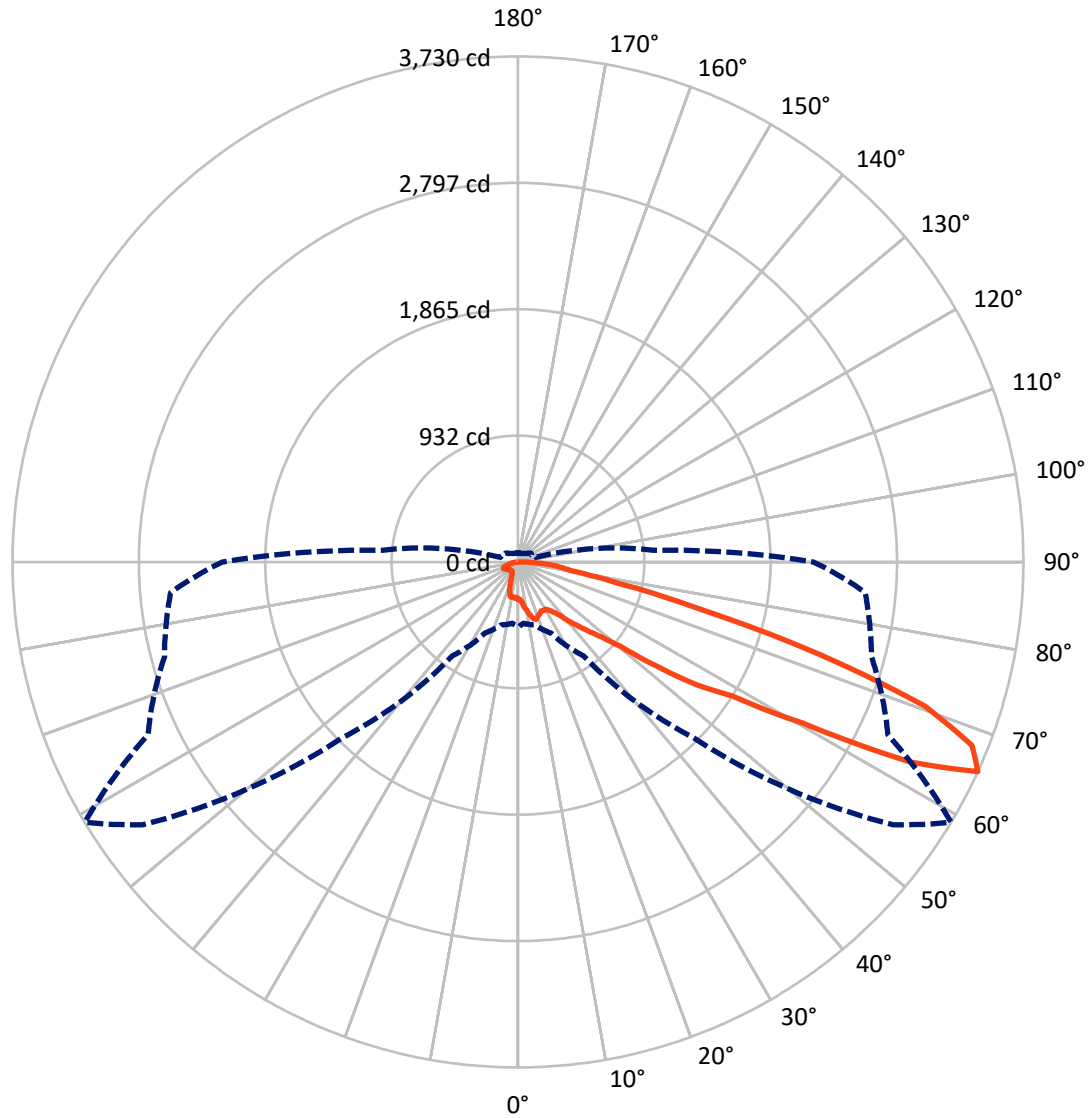
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.2 fc
 Type II - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 65-Deg Vertical

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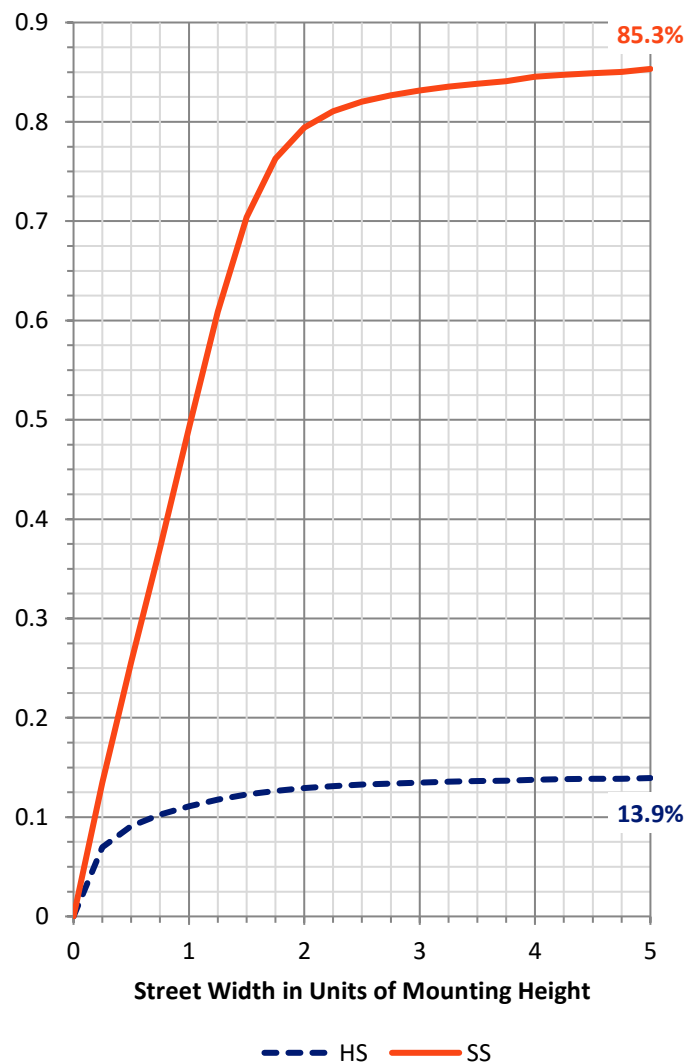
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	412.1	0.0	412.1
	% Fixture	14.1	0.0	14.1
Street Side	Lumens	2509.9	0.0	2509.9
	% Fixture	85.9	0.0	85.9
Total	Lumens	2922.0	0.0	2922.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	29.4	1.0
10°-20°	85.6	2.9
20°-30°	129.7	4.4
30°-40°	203.9	7.0
40°-50°	380.5	13.0
50°-60°	750.2	25.7
60°-70°	933.8	32.0
70°-80°	348.9	11.9
80°-90°	59.9	2.0
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°	2922.0	100.0
0°-180°	2922.0	100.0

Coefficient of Utilization



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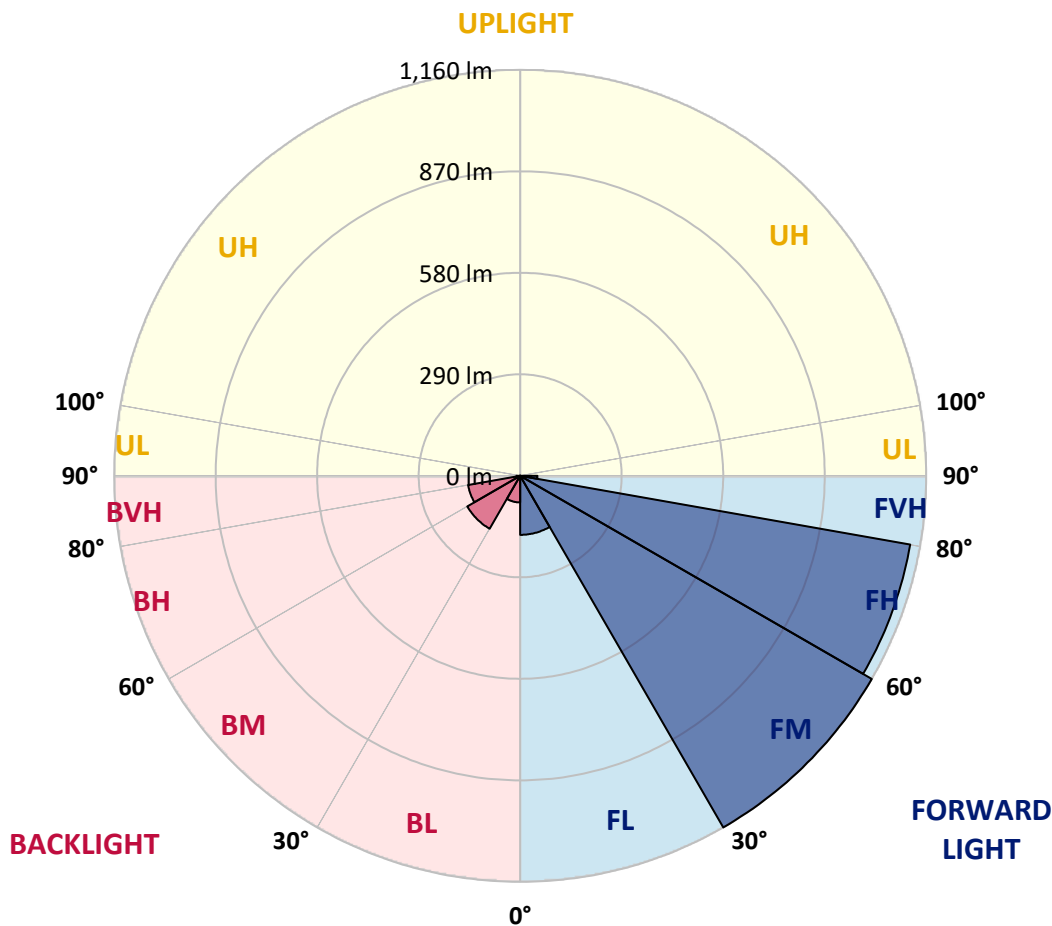
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	168.7	5.8			
FM (30°-60°)	1160.1	39.7			
FH (60°-80°)	1131.7	38.7			G1/1800
FVH (80°-90°)	49.4	1.7			G1/100
BL (0°-30°)	76.0	2.6	B0/110		
BM (30°-60°)	174.6	6.0	B0/220		
BH (60°-80°)	151.0	5.2	B1/500		G1/500
BVH (80°-90°)	10.4	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°	59°	65°	75°	85°
0°	280.0	280.0	280.0	280.0	280.0	280.0	280.0	280.0	280.0	280.0	280.0
2.5°	368.1	318.1	296.0	274.0	275.0	292.0	286.0	274.0	284.0	304.0	315.0
5°	410.1	356.1	361.1	322.1	286.0	277.0	280.0	296.0	324.1	386.1	378.1
7.5°	411.1	376.1	379.1	342.1	293.0	293.0	326.1	338.1	376.1	409.1	417.1
10°	358.1	347.1	341.1	316.1	331.1	351.1	356.1	364.1	383.1	424.1	416.1
12.5°	320.1	320.1	344.1	341.1	367.1	396.1	409.1	404.1	429.1	442.1	424.1
15°	323.1	326.1	333.1	349.1	372.1	408.1	430.1	435.1	451.1	474.1	440.1
17.5°	342.1	347.1	341.1	354.1	376.1	404.1	430.1	445.1	451.1	505.1	475.1
20°	362.1	363.1	353.1	338.1	366.1	388.1	422.1	424.1	444.1	509.1	491.1
22.5°	392.1	383.1	354.1	340.1	346.1	365.1	398.1	414.1	437.1	504.1	516.1
25°	409.1	403.1	378.1	360.1	353.1	362.1	386.1	399.1	445.1	537.1	514.1
27.5°	432.1	430.1	383.1	386.1	362.1	346.1	380.1	406.1	453.1	530.1	522.1
30°	470.1	470.1	414.1	407.1	384.1	349.1	393.1	404.1	456.1	549.1	545.1
32.5°	527.1	521.1	469.1	431.1	410.1	396.1	394.1	425.1	459.1	590.1	575.1
35°	578.1	580.1	515.1	482.1	443.1	417.1	438.1	455.1	494.1	642.1	603.1
37.5°	692.1	663.1	586.1	537.1	518.1	488.1	503.1	496.1	549.1	703.1	690.1
40°	765.1	736.1	669.1	626.1	560.1	566.1	550.1	568.1	600.1	791.1	798.1
42.5°	851.1	815.1	749.1	724.1	653.1	608.1	605.1	638.1	674.1	896.1	903.1
45°	920.1	869.1	823.1	806.1	786.1	726.1	715.1	724.1	770.1	1022.2	1029.2
47.5°	991.2	942.1	900.1	892.1	875.1	908.1	832.1	824.1	874.1	1179.2	1157.2
50°	1123.2	1049.2	1016.2	988.2	1033.2	1085.2	1009.2	974.2	997.2	1332.2	1342.2
52.5°	1317.2	1238.2	1201.2	1191.2	1211.2	1210.2	1318.2	1264.2	1213.2	1492.2	1557.2
55°	1362.2	1294.2	1277.2	1350.2	1468.2	1439.2	1645.3	1597.3	1524.2	1695.3	1825.3
57.5°	1304.2	1235.2	1222.2	1309.2	1520.2	1826.3	1955.3	1867.3	1819.3	1998.3	2209.4
60°	999.2	938.1	976.2	1152.2	1477.2	1980.3	2489.4	2413.4	2198.3	2408.4	2604.4
62.5°	733.1	679.1	702.1	783.1	1211.2	2044.3	3129.5	3252.5	2684.4	2683.4	2707.4
65°	480.1	454.1	481.1	578.1	844.1	1833.3	3380.5	3729.6	3011.5	2700.4	2571.4
67.5°	350.1	318.1	305.0	347.1	548.1	1259.2	3264.5	3613.6	3131.5	2509.4	2160.3
70°	279.0	262.0	238.0	260.0	355.1	766.1	2644.4	3185.5	2706.4	1935.3	1445.2
72.5°	228.0	208.0	199.0	217.0	308.0	404.1	1653.3	2317.4	1979.3	1284.2	869.1
75°	180.0	168.0	168.0	193.0	286.0	325.1	943.1	1374.2	1203.2	745.1	378.1
77.5°	135.0	125.0	131.0	166.0	264.0	311.0	476.1	770.1	604.1	314.0	138.0
80°	93.0	90.0	95.0	134.0	229.0	299.0	340.1	411.1	273.0	124.0	81.0
82.5°	55.0	51.0	64.0	95.0	168.0	272.0	304.0	315.0	168.0	68.0	51.0
85°	27.0	26.0	36.0	54.0	108.0	220.0	252.0	236.0	104.0	38.0	28.0
87.5°	4.0	6.0	7.0	12.0	24.0	54.0	82.0	88.0	35.0	12.0	8.0
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°	280.0	280.0	280.0	280.0	280.0	280.0	280.0	280.0	280.0	280.0	280.0
2.5°	335.1	286.0	297.0	265.0	256.0	261.0	259.0	258.0	271.0	267.0	288.0
5°	409.1	364.1	343.1	295.0	252.0	229.0	241.0	263.0	292.0	293.0	323.1
7.5°	438.1	392.1	366.1	296.0	236.0	218.0	228.0	239.0	258.0	259.0	274.0
10°	409.1	387.1	345.1	278.0	254.0	233.0	205.0	186.0	188.0	186.0	187.0
12.5°	415.1	388.1	339.1	282.0	250.0	209.0	174.0	157.0	138.0	130.0	132.0
15°	419.1	397.1	340.1	276.0	218.0	177.0	143.0	122.0	111.0	105.0	104.0
17.5°	435.1	415.1	323.1	246.0	179.0	141.0	115.0	104.0	102.0	101.0	98.0
20°	450.1	405.1	293.0	198.0	146.0	113.0	101.0	95.0	96.0	100.0	99.0
22.5°	461.1	400.1	257.0	159.0	113.0	97.0	91.0	89.0	93.0	100.0	101.0
25°	461.1	391.1	220.0	132.0	97.0	86.0	85.0	87.0	92.0	99.0	99.0
27.5°	464.1	371.1	182.0	109.0	86.0	79.0	81.0	85.0	87.0	97.0	98.0
30°	455.1	368.1	155.0	96.0	80.0	75.0	78.0	81.0	85.0	94.0	95.0
32.5°	481.1	336.1	136.0	88.0	77.0	74.0	76.0	79.0	84.0	92.0	94.0
35°	495.1	331.1	123.0	84.0	76.0	73.0	75.0	78.0	84.0	92.0	93.0
37.5°	564.1	325.1	114.0	84.0	77.0	74.0	75.0	78.0	85.0	92.0	95.0
40°	640.1	331.1	110.0	85.0	77.0	76.0	76.0	79.0	85.0	93.0	96.0
42.5°	724.1	343.1	110.0	86.0	79.0	76.0	76.0	80.0	86.0	94.0	97.0
45°	820.1	359.1	109.0	88.0	80.0	79.0	77.0	81.0	86.0	94.0	98.0
47.5°	934.1	388.1	112.0	88.0	82.0	81.0	80.0	81.0	86.0	94.0	99.0
50°	1067.2	445.1	114.0	90.0	87.0	84.0	81.0	82.0	86.0	94.0	98.0
52.5°	1275.2	556.1	118.0	93.0	90.0	86.0	83.0	82.0	85.0	91.0	95.0
55°	1541.2	734.1	125.0	97.0	93.0	89.0	85.0	81.0	83.0	87.0	92.0
57.5°	1947.3	984.2	134.0	100.0	94.0	90.0	84.0	79.0	79.0	83.0	86.0
60°	2273.4	1168.2	139.0	103.0	98.0	89.0	82.0	76.0	75.0	77.0	80.0
62.5°	2331.4	1137.2	142.0	109.0	104.0	89.0	79.0	72.0	70.0	72.0	74.0
65°	2181.3	999.2	138.0	114.0	112.0	88.0	77.0	69.0	66.0	67.0	68.0
67.5°	1814.3	781.1	125.0	116.0	114.0	85.0	75.0	66.0	62.0	62.0	63.0
70°	1218.2	547.1	112.0	111.0	104.0	78.0	70.0	62.0	58.0	58.0	58.0
72.5°	706.1	324.1	99.0	99.0	87.0	69.0	64.0	58.0	54.0	53.0	54.0
75°	312.0	146.0	83.0	82.0	68.0	57.0	57.0	54.0	50.0	48.0	48.0
77.5°	120.0	84.0	62.0	63.0	55.0	49.0	49.0	47.0	44.0	42.0	42.0
80°	80.0	60.0	48.0	47.0	41.0	37.0	40.0	39.0	36.0	34.0	33.0
82.5°	48.0	41.0	36.0	32.0	30.0	25.0	29.0	27.0	26.0	23.0	22.0
85°	26.0	24.0	22.0	20.0	18.0	12.0	16.0	16.0	16.0	15.0	13.0
87.5°	6.0	9.0	9.0	9.0	7.0	4.0	7.0	8.0	8.0	8.0	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)