

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: P400908

Luminaire Tested: **ENT-SA1A-727-U-T4W**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400908
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-17)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1A-727-U-T4W
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2700K, 350mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2286 lumens
Efficiency: N/A
Efficacy: 113.7 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 20.1
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: 25 FT

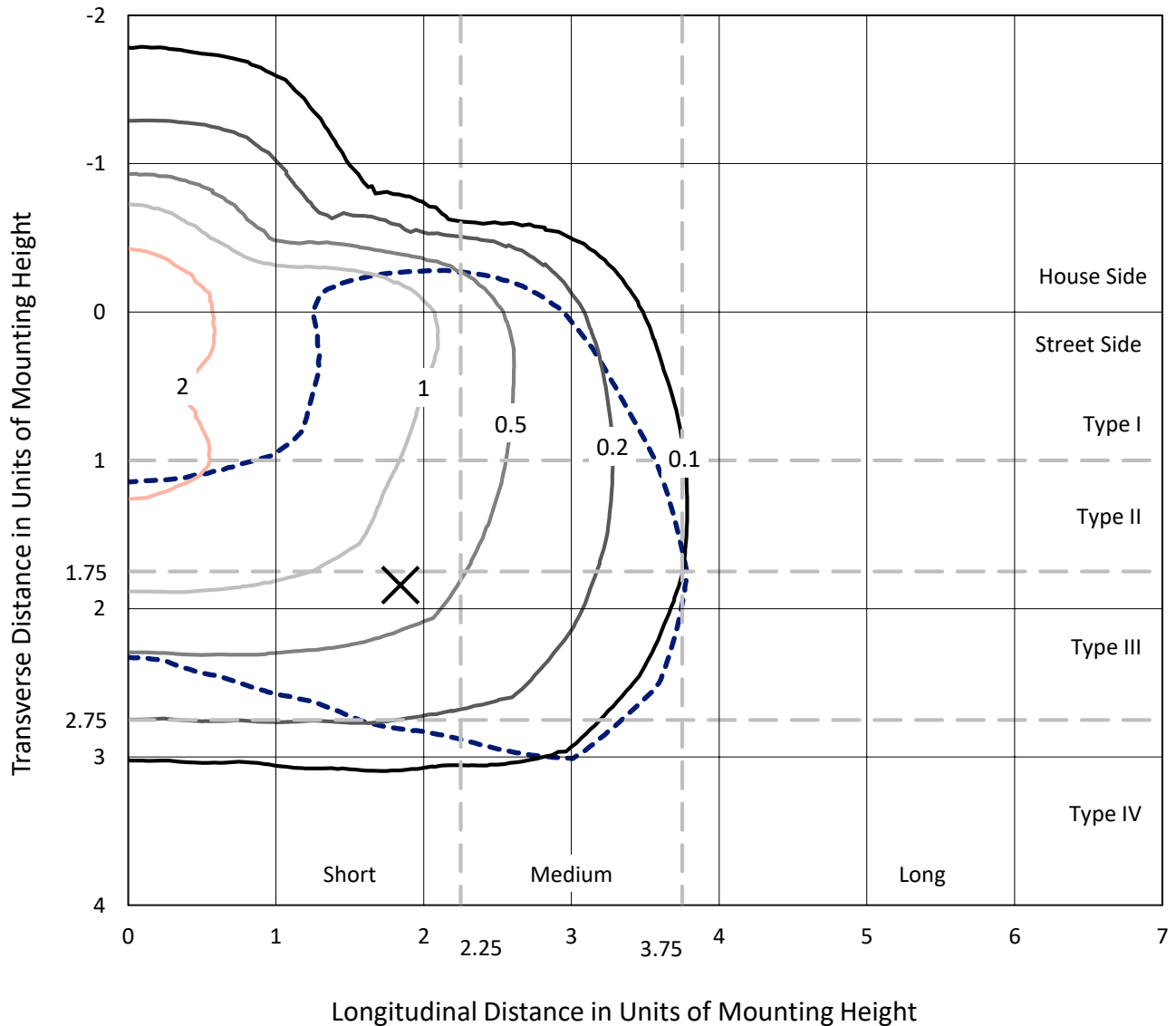


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Iso-Footcandle Lines of Horizontal Illumination

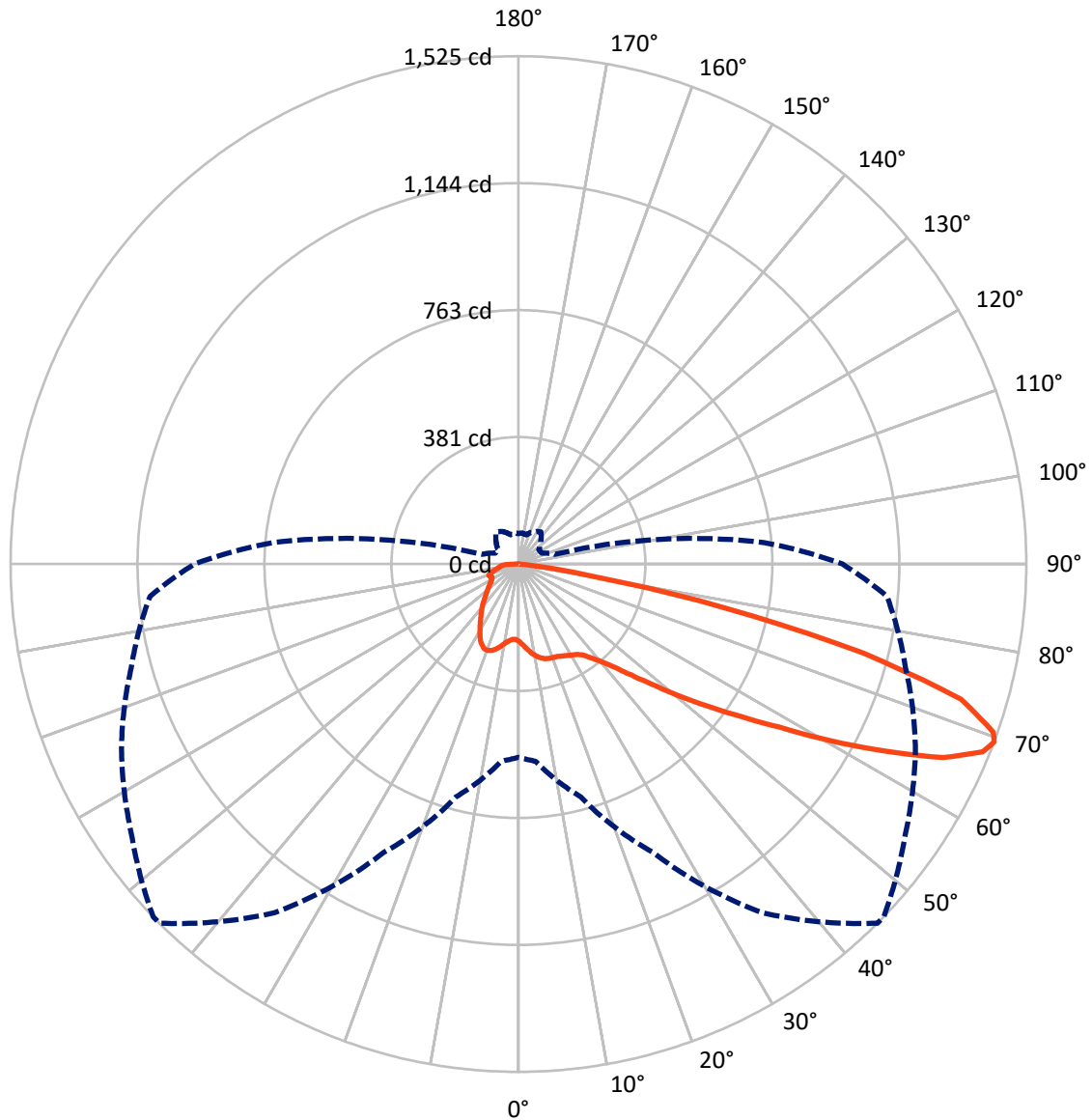
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 2.9 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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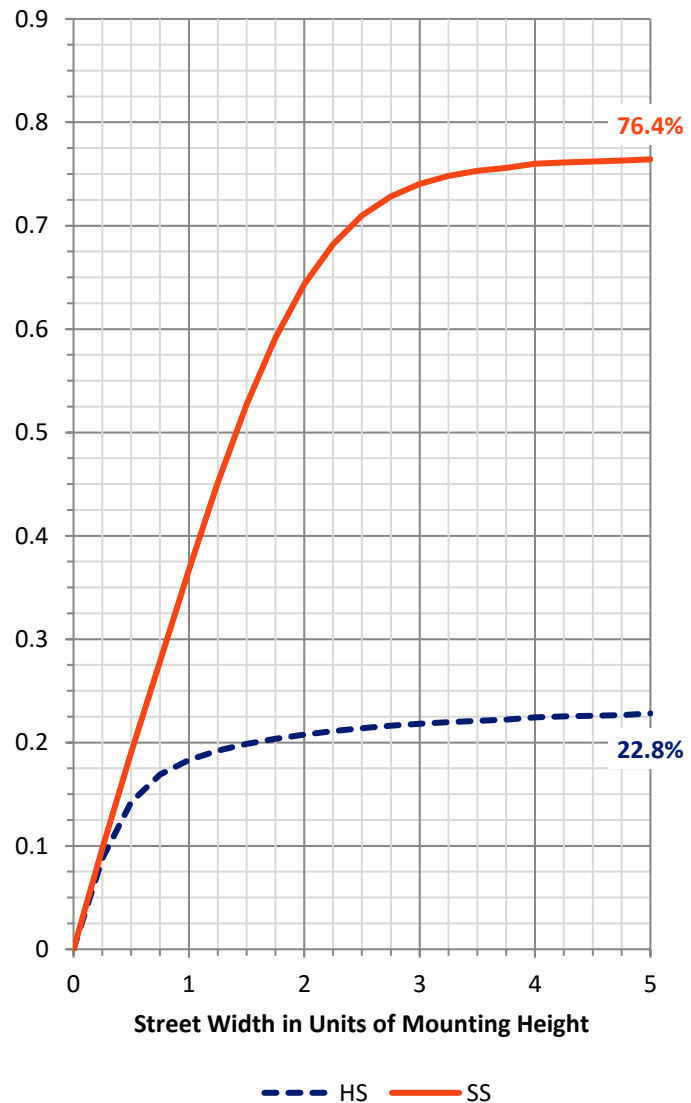
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	538.2	0.0	538.2
	% Fixture	23.5	0.0	23.5
Street Side	Lumens	1747.8	0.0	1747.8
	% Fixture	76.5	0.0	76.5
Total	Lumens	2286.0	0.0	2286.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.6	1.0
10°-20°	78.3	3.4
20°-30°	132.4	5.8
30°-40°	191.6	8.4
40°-50°	289.2	12.7
50°-60°	487.7	21.3
60°-70°	670.9	29.3
70°-80°	371.8	16.3
80°-90°	40.5	1.8
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°	2286.0	100.0
0°-180°	2286.0	100.0



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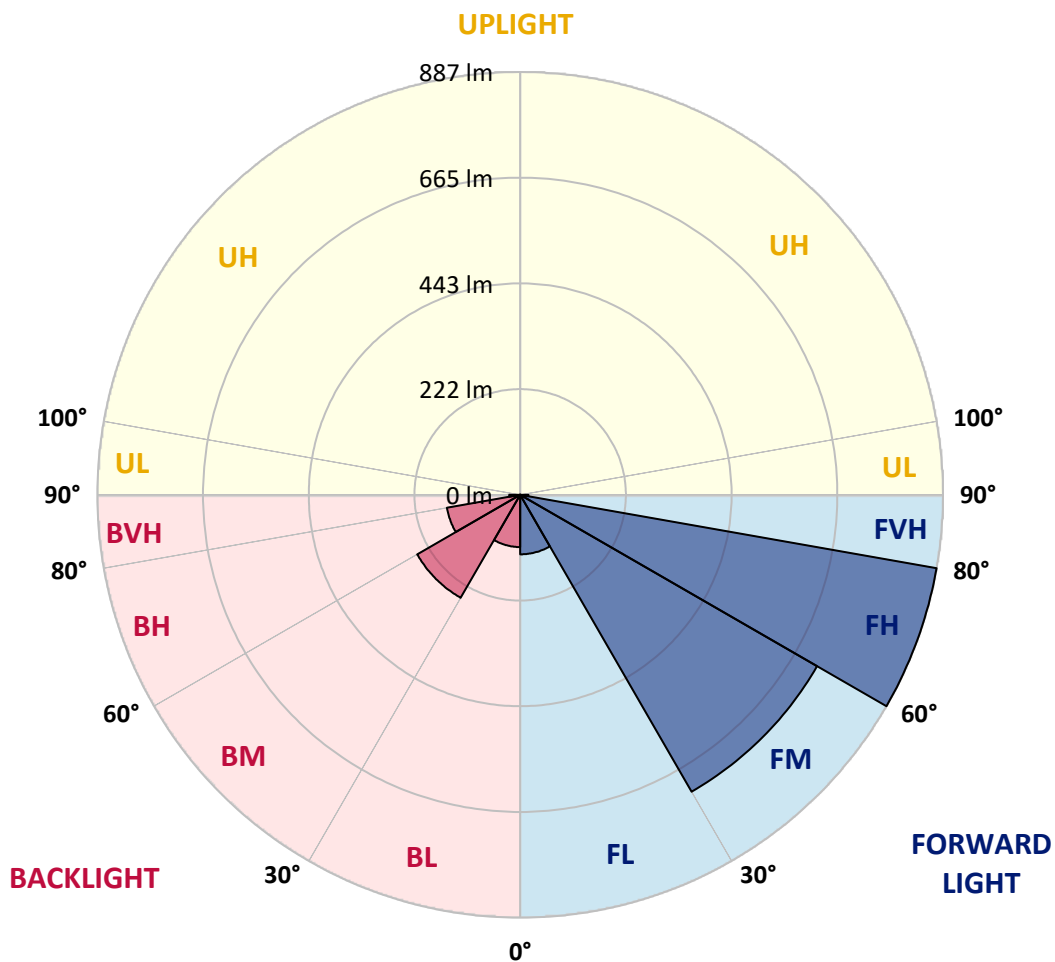
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	124.8	5.5			
FM	(30°-60°)	719.0	31.5			
FH	(60°-80°)	886.7	38.8			G1/1800
FVH	(80°-90°)	17.3	0.8			G1/100
BL	(0°-30°)	109.6	4.8	B0/110		
BM	(30°-60°)	249.5	10.9	B1/1000		
BH	(60°-80°)	156.0	6.8	B1/500		G1/500
BVH	(80°-90°)	23.1	1.0			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 IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	232.0	232.0	232.0	232.0	232.0	232.0	232.0	232.0	232.0	232.0	232.0
2.5°	246.7	246.3	246.7	245.4	244.1	242.1	241.5	239.2	237.6	235.3	233.3
5°	264.9	265.8	265.5	263.9	258.7	254.8	254.8	249.9	244.7	239.8	235.3
7.5°	284.7	284.7	282.7	279.5	274.3	268.4	267.8	261.3	253.8	247.0	239.8
10°	299.0	299.6	296.7	292.2	285.7	279.5	278.8	271.4	264.2	255.4	246.7
12.5°	309.1	309.1	306.5	302.2	294.4	288.6	287.9	281.1	273.6	264.5	254.5
15°	314.3	313.6	311.3	306.8	300.0	295.1	294.1	288.3	282.1	273.0	262.3
17.5°	313.3	313.3	311.3	306.8	301.9	298.0	297.4	293.1	288.6	279.8	269.1
20°	309.1	308.7	308.1	304.5	301.3	299.6	299.0	297.0	294.1	286.6	276.6
22.5°	305.2	304.8	303.9	301.6	300.3	301.3	301.3	300.9	300.6	294.8	285.0
25°	307.4	307.1	305.2	301.9	301.6	306.1	306.5	307.4	308.1	303.2	293.1
27.5°	323.4	322.4	316.9	308.4	305.5	311.3	312.0	314.9	314.3	309.1	300.3
30°	354.6	354.9	342.5	324.3	314.6	317.2	317.5	320.8	319.8	315.6	308.4
32.5°	401.7	401.7	381.5	353.9	329.2	324.0	323.0	326.0	329.9	324.3	317.2
35°	461.5	459.8	435.5	392.9	354.2	335.7	335.1	333.8	340.6	335.4	325.0
37.5°	521.6	515.7	492.0	445.2	389.3	358.5	355.9	352.0	355.9	344.8	335.7
40°	570.0	569.0	549.5	502.1	430.9	386.1	384.1	366.9	369.5	360.7	357.2
42.5°	623.3	624.0	611.0	563.2	480.6	423.4	418.2	391.6	399.1	395.8	394.2
45°	681.8	681.2	671.4	621.4	541.4	475.4	468.9	436.1	451.4	449.4	458.5
47.5°	726.7	730.2	724.7	689.3	613.6	538.5	533.6	493.6	516.7	532.3	549.5
50°	787.7	787.4	772.5	757.8	697.4	619.1	614.2	569.7	602.8	625.6	657.1
52.5°	863.5	860.9	830.0	824.8	799.4	707.2	702.9	656.5	703.9	723.7	787.7
55°	910.9	910.6	894.7	903.8	904.4	805.3	800.1	758.8	812.4	835.2	932.0
57.5°	950.6	950.9	964.2	996.1	1017.5	924.6	922.6	872.2	926.5	958.4	1072.8
60°	981.1	987.6	1025.0	1097.8	1133.5	1076.7	1068.2	1014.9	1051.3	1064.0	1180.3
62.5°	968.8	977.2	1050.7	1157.9	1249.9	1237.8	1234.9	1157.9	1157.6	1151.1	1260.6
65°	871.3	889.5	1005.2	1155.6	1326.6	1401.6	1397.4	1292.8	1256.4	1223.9	1284.6
67.5°	713.0	716.9	856.3	1067.2	1325.9	1504.6	1500.1	1390.9	1317.8	1238.2	1214.1
69°	580.4	594.7	723.7	955.4	1279.1	1525.4	1525.4	1418.2	1315.5	1204.0	1110.8
70°	502.1	502.7	627.2	866.4	1215.4	1513.1	1516.0	1418.2	1297.0	1159.5	1019.1
72.5°	235.3	249.9	328.6	565.5	981.8	1390.9	1398.1	1324.6	1189.4	999.0	764.7
75°	70.5	73.1	109.5	268.1	562.5	1071.5	1087.4	1102.0	968.8	735.4	470.9
77.5°	41.9	41.6	53.0	91.0	260.3	635.3	642.5	704.9	628.5	408.8	213.8
80°	20.5	21.1	28.3	44.2	97.5	230.7	253.8	329.5	278.5	159.9	78.3
82.5°	6.8	7.5	11.7	17.9	41.3	74.4	82.2	103.3	89.0	58.2	33.5
85°	0.0	0.0	0.3	0.6	2.3	5.5	5.5	12.3	18.5	20.5	11.0
87.5°	0.0	0.0	0.3	0.3	0.6	0.6	0.6	0.6	0.6	0.6	1.0
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°	232.0	232.0	232.0	232.0	232.0	232.0	232.0	232.0	232.0	232.0	232.0
2.5°	232.4	231.7	230.4	229.1	228.5	226.8	227.2	226.5	226.2	226.2	226.5
5°	233.0	232.0	230.1	228.8	227.5	226.8	228.5	229.1	229.8	229.8	230.1
7.5°	236.9	235.0	232.7	231.1	231.4	232.4	235.0	236.9	237.9	238.5	239.2
10°	243.4	241.1	237.9	237.6	238.2	240.8	244.4	247.3	249.9	251.5	251.5
12.5°	250.2	247.3	244.7	245.4	248.3	252.2	255.8	259.0	261.3	262.9	263.2
15°	257.7	254.8	252.2	253.8	258.7	263.2	266.5	267.8	268.8	270.4	270.7
17.5°	264.5	261.9	259.7	263.9	268.1	271.7	272.7	272.0	270.7	271.7	272.3
20°	271.7	269.4	268.1	272.7	275.6	275.9	273.3	270.4	267.1	267.1	267.5
22.5°	280.5	277.5	276.9	279.2	278.2	274.3	267.8	263.2	258.7	258.0	259.0
25°	288.9	286.0	285.7	284.0	275.6	265.5	256.7	251.5	248.0	248.3	250.2
27.5°	297.4	295.4	295.7	287.0	268.1	252.8	241.1	236.9	237.9	238.5	240.5
30°	305.8	305.8	307.1	287.0	257.7	235.0	223.9	223.6	226.2	228.1	230.4
32.5°	315.6	318.5	316.2	283.4	243.7	216.8	208.0	208.6	211.6	214.8	216.8
35°	325.0	331.8	325.3	275.3	224.6	200.2	193.0	192.1	194.3	197.3	198.2
37.5°	339.9	351.0	333.1	262.6	204.7	185.6	178.4	175.8	173.5	175.8	175.5
40°	365.9	379.2	339.0	241.5	185.6	171.9	164.4	159.6	154.0	149.2	149.2
42.5°	407.5	416.3	342.2	215.8	166.4	158.3	150.8	143.6	135.2	126.4	126.4
45°	475.4	477.4	343.5	188.5	148.8	144.6	136.8	130.0	118.9	110.2	108.2
47.5°	566.1	557.7	346.8	162.2	133.6	132.6	126.1	118.3	106.3	98.1	97.2
50°	688.0	651.6	361.1	141.0	121.2	122.2	117.3	108.2	96.8	91.0	89.7
52.5°	825.1	770.2	372.1	124.1	110.5	113.4	109.8	101.1	91.3	86.4	85.5
55°	974.9	884.3	369.5	112.8	102.4	105.6	104.3	96.8	88.1	83.8	82.9
57.5°	1097.1	964.5	346.8	102.7	94.2	98.8	100.1	94.2	86.1	82.2	81.2
60°	1188.8	1008.4	300.0	94.2	87.7	93.3	96.8	92.6	85.8	83.5	82.5
62.5°	1230.4	1004.5	239.2	87.7	82.9	89.4	97.2	95.2	90.7	92.3	92.6
65°	1207.0	955.4	179.4	82.9	79.9	90.0	102.7	102.7	95.9	98.8	99.1
67.5°	1087.1	827.1	130.6	79.3	77.0	93.3	113.1	106.6	93.6	95.9	94.9
69°	973.0	740.0	112.1	77.3	74.7	94.9	117.6	107.2	91.0	93.6	91.0
70°	889.1	661.3	100.7	75.7	73.8	94.9	118.9	106.6	89.7	91.6	88.7
72.5°	632.7	459.2	82.9	72.5	70.2	87.7	116.7	103.0	86.1	83.8	78.3
75°	367.9	253.8	70.5	68.9	62.1	77.0	110.8	99.1	82.5	78.3	74.4
77.5°	154.4	113.4	60.1	62.7	54.9	68.6	103.7	95.2	78.3	72.5	70.5
80°	62.7	56.5	50.0	54.3	47.8	60.4	95.5	88.7	72.1	66.3	63.4
82.5°	32.8	31.2	38.3	43.9	39.6	55.6	90.0	84.2	66.9	61.1	57.5
85°	9.7	13.0	21.8	29.9	30.2	50.0	87.4	78.0	58.2	50.4	49.7
87.5°	0.6	2.6	7.5	15.6	19.8	38.3	70.8	64.0	47.1	39.6	40.0
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)