

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: P400728

Luminaire Tested: **ENV-SA1-727-U-T4W-XXB**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P400728
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: ENV-SA1-727-U-T4W-XXB
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 2700K LIGHTSQUARE IN BATTERY OPERATION WITH 16 LEDS AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 645 lumens
Efficiency: N/A
Efficacy: 49.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B0 - U0 - G0

Input Watts (W): 13
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

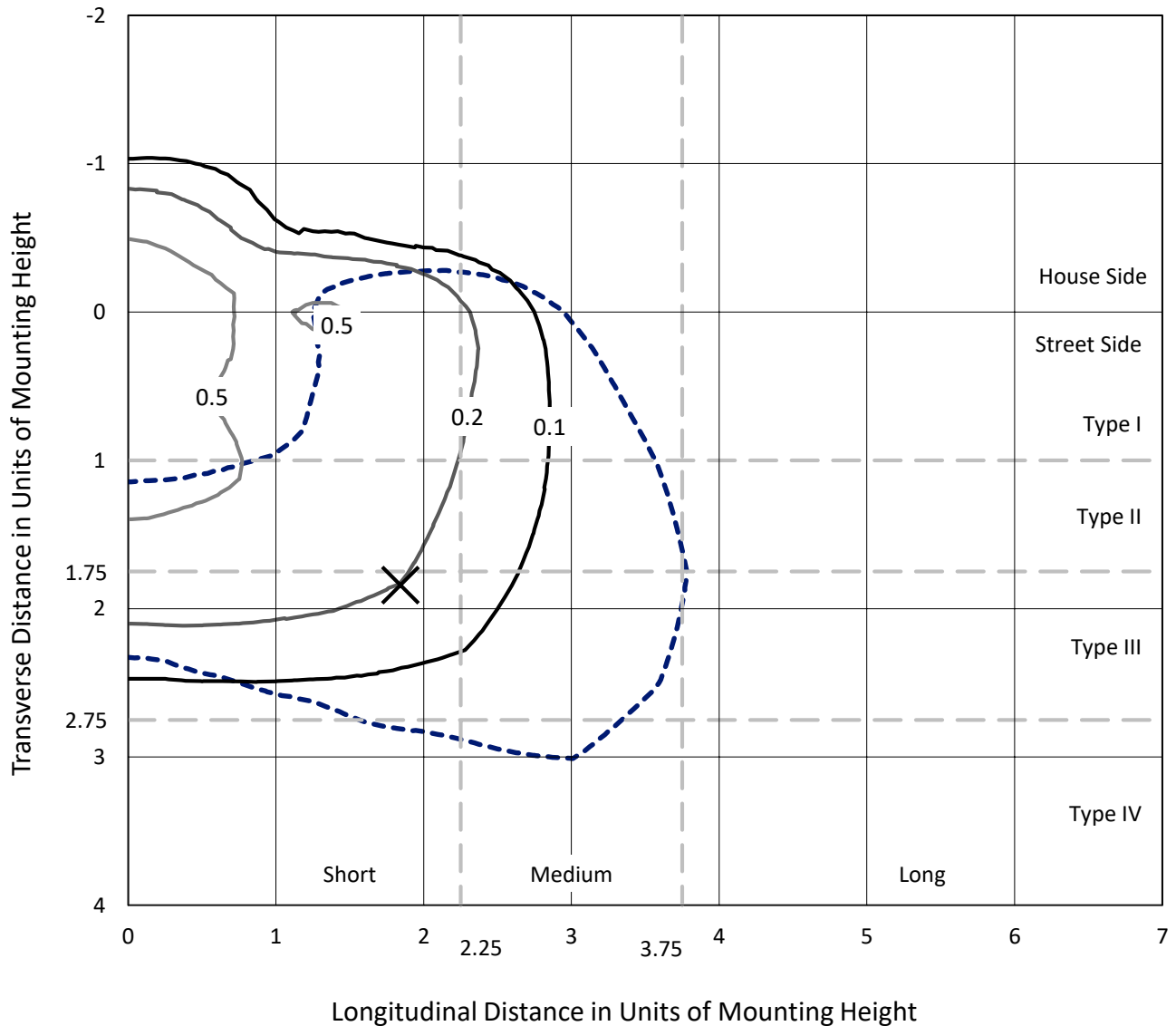


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Iso-Footcandle Lines of Horizontal Illumination

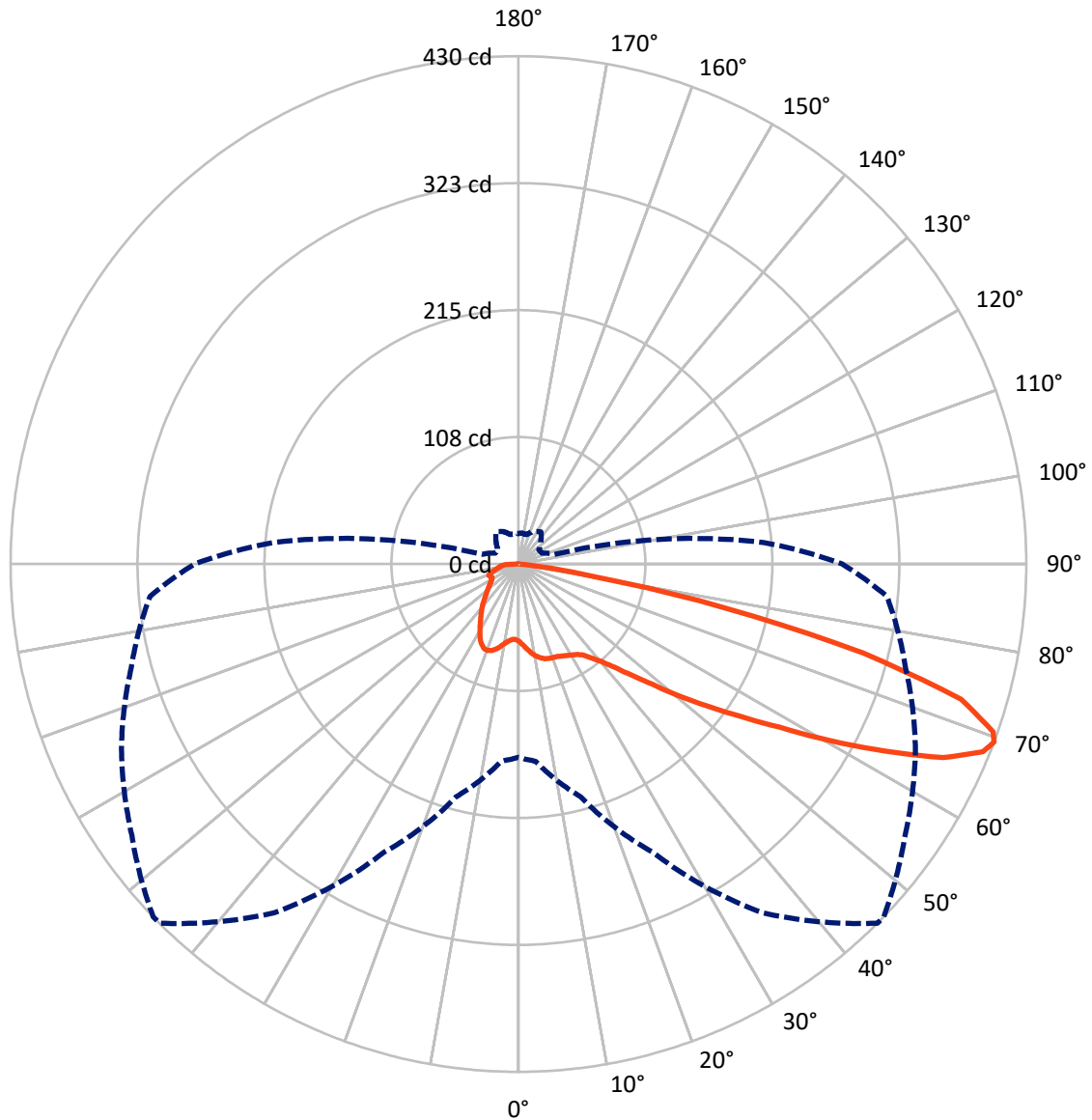
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 0.8 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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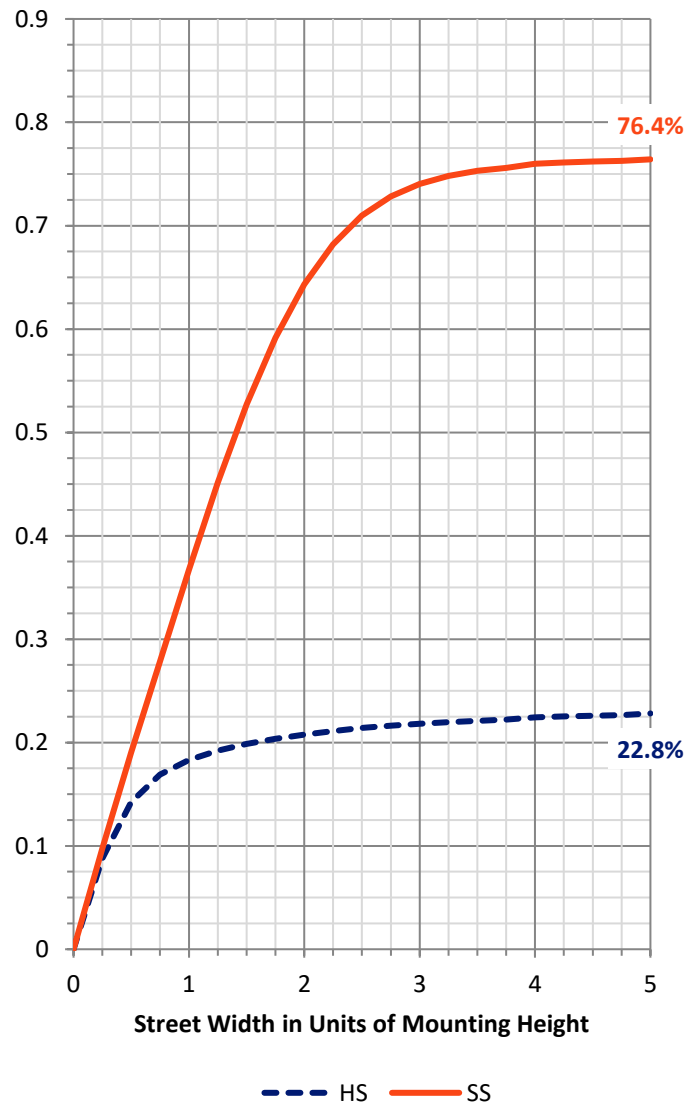
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	151.9	0.0	151.9
	% Fixture	23.5	0.0	23.5
Street Side	Lumens	493.1	0.0	493.1
	% Fixture	76.5	0.0	76.5
Total	Lumens	645.0	0.0	645.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	6.7	1.0
10°-20°	22.1	3.4
20°-30°	37.4	5.8
30°-40°	54.0	8.4
40°-50°	81.6	12.7
50°-60°	137.6	21.3
60°-70°	189.3	29.3
70°-80°	104.9	16.3
80°-90°	11.4	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°	645.0	100.0
0°-180°	645.0	100.0

Coefficient of Utilization



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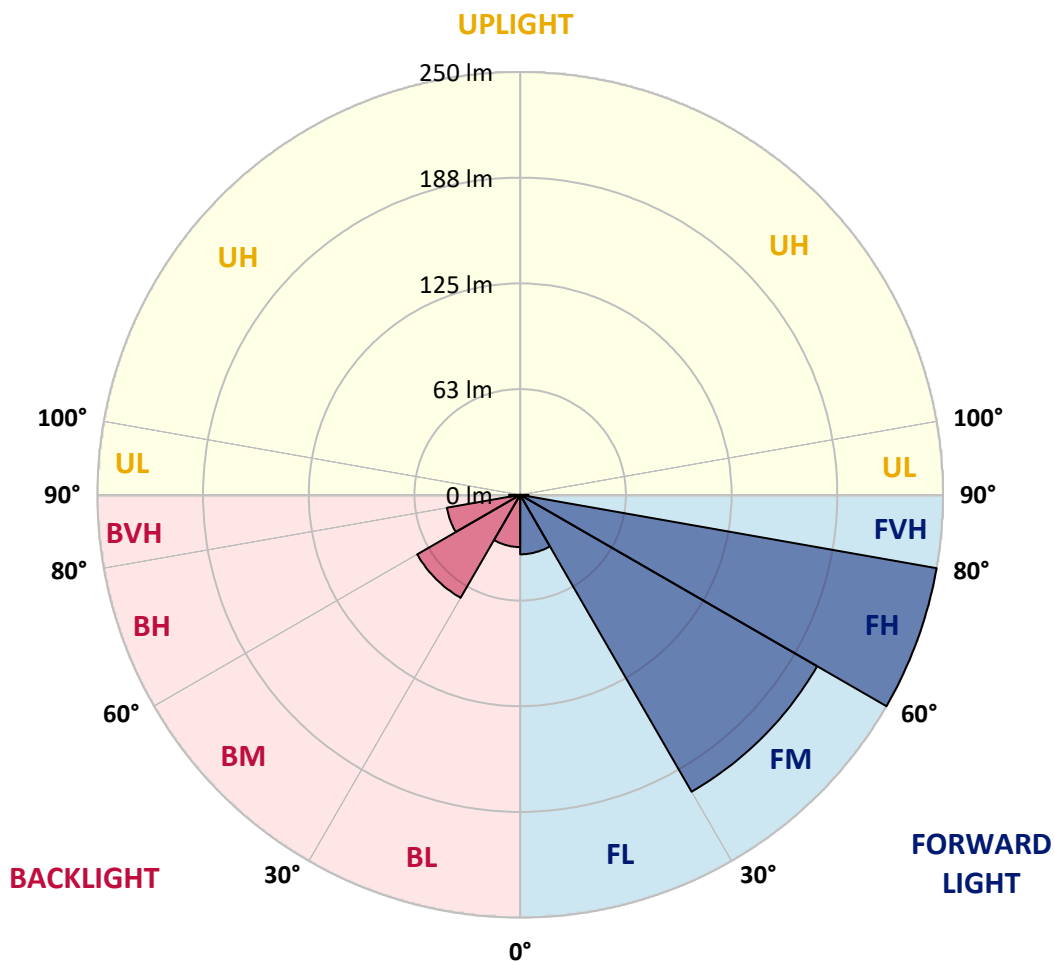
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	35.2	5.5			
FM	(30°-60°)	202.9	31.5			
FH	(60°-80°)	250.2	38.8			G0/660
FVH	(80°-90°)	4.9	0.8			G0/10
BL	(0°-30°)	30.9	4.8	B0/110		
BM	(30°-60°)	70.4	10.9	B0/220		
BH	(60°-80°)	44.0	6.8	B0/110		G0/110
BVH	(80°-90°)	6.5	1.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B0-U0-G0

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	46°	55°	65°	75°	85°
0°	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5
2.5°	69.6	69.5	69.6	69.2	68.9	68.3	68.1	67.5	67.0	66.4	65.8
5°	74.7	75.0	74.9	74.5	73.0	71.9	71.9	70.5	69.0	67.7	66.4
7.5°	80.3	80.3	79.8	78.9	77.4	75.7	75.6	73.7	71.6	69.7	67.7
10°	84.4	84.5	83.7	82.4	80.6	78.9	78.7	76.6	74.5	72.1	69.6
12.5°	87.2	87.2	86.5	85.3	83.1	81.4	81.2	79.3	77.2	74.6	71.8
15°	88.7	88.5	87.8	86.6	84.6	83.3	83.0	81.3	79.6	77.0	74.0
17.5°	88.4	88.4	87.8	86.6	85.2	84.1	83.9	82.7	81.4	78.9	75.9
20°	87.2	87.1	86.9	85.9	85.0	84.5	84.4	83.8	83.0	80.9	78.0
22.5°	86.1	86.0	85.7	85.1	84.7	85.0	85.0	84.9	84.8	83.2	80.4
25°	86.7	86.7	86.1	85.2	85.1	86.4	86.5	86.7	86.9	85.5	82.7
27.5°	91.2	91.0	89.4	87.0	86.2	87.8	88.0	88.9	88.7	87.2	84.7
30°	100.0	100.1	96.6	91.5	88.8	89.5	89.6	90.5	90.2	89.0	87.0
32.5°	113.3	113.3	107.6	99.9	92.9	91.4	91.1	92.0	93.1	91.5	89.5
35°	130.2	129.7	122.9	110.9	99.9	94.7	94.5	94.2	96.1	94.6	91.7
37.5°	147.2	145.5	138.8	125.6	109.8	101.1	100.4	99.3	100.4	97.3	94.7
40°	160.8	160.6	155.1	141.7	121.6	108.9	108.4	103.5	104.3	101.8	100.8
42.5°	175.9	176.1	172.4	158.9	135.6	119.5	118.0	110.5	112.6	111.7	111.2
45°	192.4	192.2	189.4	175.3	152.8	134.1	132.3	123.1	127.4	126.8	129.4
47.5°	205.0	206.0	204.5	194.5	173.1	151.9	150.6	139.3	145.8	150.2	155.1
50°	222.3	222.2	218.0	213.8	196.8	174.7	173.3	160.7	170.1	176.5	185.4
52.5°	243.6	242.9	234.2	232.7	225.6	199.5	198.3	185.2	198.6	204.2	222.3
55°	257.0	256.9	252.4	255.0	255.2	227.2	225.7	214.1	229.2	235.7	263.0
57.5°	268.2	268.3	272.1	281.0	287.1	260.9	260.3	246.1	261.4	270.4	302.7
60°	276.8	278.7	289.2	309.7	319.8	303.8	301.4	286.4	296.6	300.2	333.0
62.5°	273.3	275.7	296.4	326.7	352.7	349.3	348.4	326.7	326.6	324.8	355.7
65°	245.8	251.0	283.6	326.1	374.3	395.5	394.3	364.8	354.5	345.3	362.5
67.5°	201.2	202.3	241.6	301.1	374.1	424.5	423.3	392.4	371.8	349.4	342.6
69°	163.8	167.8	204.2	269.6	360.9	430.4	430.4	400.1	371.2	339.7	313.4
70°	141.7	141.8	177.0	244.5	342.9	426.9	427.7	400.1	365.9	327.2	287.6
72.5°	66.4	70.5	92.7	159.5	277.0	392.4	394.5	373.7	335.6	281.9	215.8
75°	19.9	20.6	30.9	75.6	158.7	302.3	306.8	310.9	273.3	207.5	132.9
77.5°	11.8	11.7	14.9	25.7	73.4	179.3	181.3	198.9	177.3	115.4	60.3
80°	5.8	6.0	8.0	12.5	27.5	65.1	71.6	93.0	78.6	45.1	22.1
82.5°	1.9	2.1	3.3	5.0	11.6	21.0	23.2	29.2	25.1	16.4	9.4
85°	0.0	0.0	0.1	0.2	0.6	1.6	1.6	3.5	5.2	5.8	3.1
87.5°	0.0	0.0	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.3
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°	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5	65.5
2.5°	65.6	65.4	65.0	64.6	64.5	64.0	64.1	63.9	63.8	63.8	63.9
5°	65.7	65.5	64.9	64.6	64.2	64.0	64.5	64.6	64.8	64.8	64.9
7.5°	66.8	66.3	65.7	65.2	65.3	65.6	66.3	66.8	67.1	67.3	67.5
10°	68.7	68.0	67.1	67.0	67.2	67.9	69.0	69.8	70.5	71.0	71.0
12.5°	70.6	69.8	69.0	69.2	70.1	71.2	72.2	73.1	73.7	74.2	74.3
15°	72.7	71.9	71.2	71.6	73.0	74.3	75.2	75.6	75.8	76.3	76.4
17.5°	74.6	73.9	73.3	74.5	75.6	76.7	76.9	76.7	76.4	76.7	76.8
20°	76.7	76.0	75.6	76.9	77.8	77.8	77.1	76.3	75.4	75.4	75.5
22.5°	79.1	78.3	78.1	78.8	78.5	77.4	75.6	74.3	73.0	72.8	73.1
25°	81.5	80.7	80.6	80.1	77.8	74.9	72.4	71.0	70.0	70.1	70.6
27.5°	83.9	83.3	83.4	81.0	75.6	71.3	68.0	66.8	67.1	67.3	67.9
30°	86.3	86.3	86.7	81.0	72.7	66.3	63.2	63.1	63.8	64.4	65.0
32.5°	89.0	89.9	89.2	80.0	68.8	61.2	58.7	58.9	59.7	60.6	61.2
35°	91.7	93.6	91.8	77.7	63.4	56.5	54.5	54.2	54.8	55.7	55.9
37.5°	95.9	99.0	94.0	74.1	57.8	52.4	50.3	49.6	49.0	49.6	49.5
40°	103.2	107.0	95.6	68.1	52.4	48.5	46.4	45.0	43.5	42.1	42.1
42.5°	115.0	117.5	96.6	60.9	46.9	44.7	42.5	40.5	38.1	35.7	35.7
45°	134.1	134.7	96.9	53.2	42.0	40.8	38.6	36.7	33.6	31.1	30.5
47.5°	159.7	157.3	97.8	45.8	37.7	37.4	35.6	33.4	30.0	27.7	27.4
50°	194.1	183.8	101.9	39.8	34.2	34.5	33.1	30.5	27.3	25.7	25.3
52.5°	232.8	217.3	105.0	35.0	31.2	32.0	31.0	28.5	25.8	24.4	24.1
55°	275.1	249.5	104.3	31.8	28.9	29.8	29.4	27.3	24.8	23.7	23.4
57.5°	309.6	272.1	97.8	29.0	26.6	27.9	28.2	26.6	24.3	23.2	22.9
60°	335.4	284.5	84.6	26.6	24.8	26.3	27.3	26.1	24.2	23.6	23.3
62.5°	347.2	283.4	67.5	24.8	23.4	25.2	27.4	26.9	25.6	26.0	26.1
65°	340.5	269.6	50.6	23.4	22.6	25.4	29.0	29.0	27.0	27.9	28.0
67.5°	306.7	233.4	36.9	22.4	21.7	26.3	31.9	30.1	26.4	27.0	26.8
69°	274.5	208.8	31.6	21.8	21.1	26.8	33.2	30.3	25.7	26.4	25.7
70°	250.9	186.6	28.4	21.4	20.8	26.8	33.6	30.1	25.3	25.9	25.0
72.5°	178.5	129.6	23.4	20.4	19.8	24.8	32.9	29.1	24.3	23.7	22.1
75°	103.8	71.6	19.9	19.4	17.5	21.7	31.3	28.0	23.3	22.1	21.0
77.5°	43.6	32.0	17.0	17.7	15.5	19.3	29.3	26.9	22.1	20.4	19.9
80°	17.7	16.0	14.1	15.3	13.5	17.1	27.0	25.0	20.4	18.7	17.9
82.5°	9.3	8.8	10.8	12.4	11.2	15.7	25.4	23.7	18.9	17.2	16.2
85°	2.8	3.7	6.1	8.4	8.5	14.1	24.7	22.0	16.4	14.2	14.0
87.5°	0.2	0.7	2.1	4.4	5.6	10.8	20.0	18.1	13.3	11.2	11.3
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)