

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: P401561

Luminaire Tested: **ENT-SA1D-827-U-SL4-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401561  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-6)  
Test Lab: INNOVATION CENTER  
Issue Date: 5/20/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: INVUE  
Catalog Number: ENT-SA1D-827-U-SL4-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS 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: 3406 lumens  
Efficiency: N/A  
Efficacy: 79.0 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 - G1

Input Watts (W): 43.1  
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

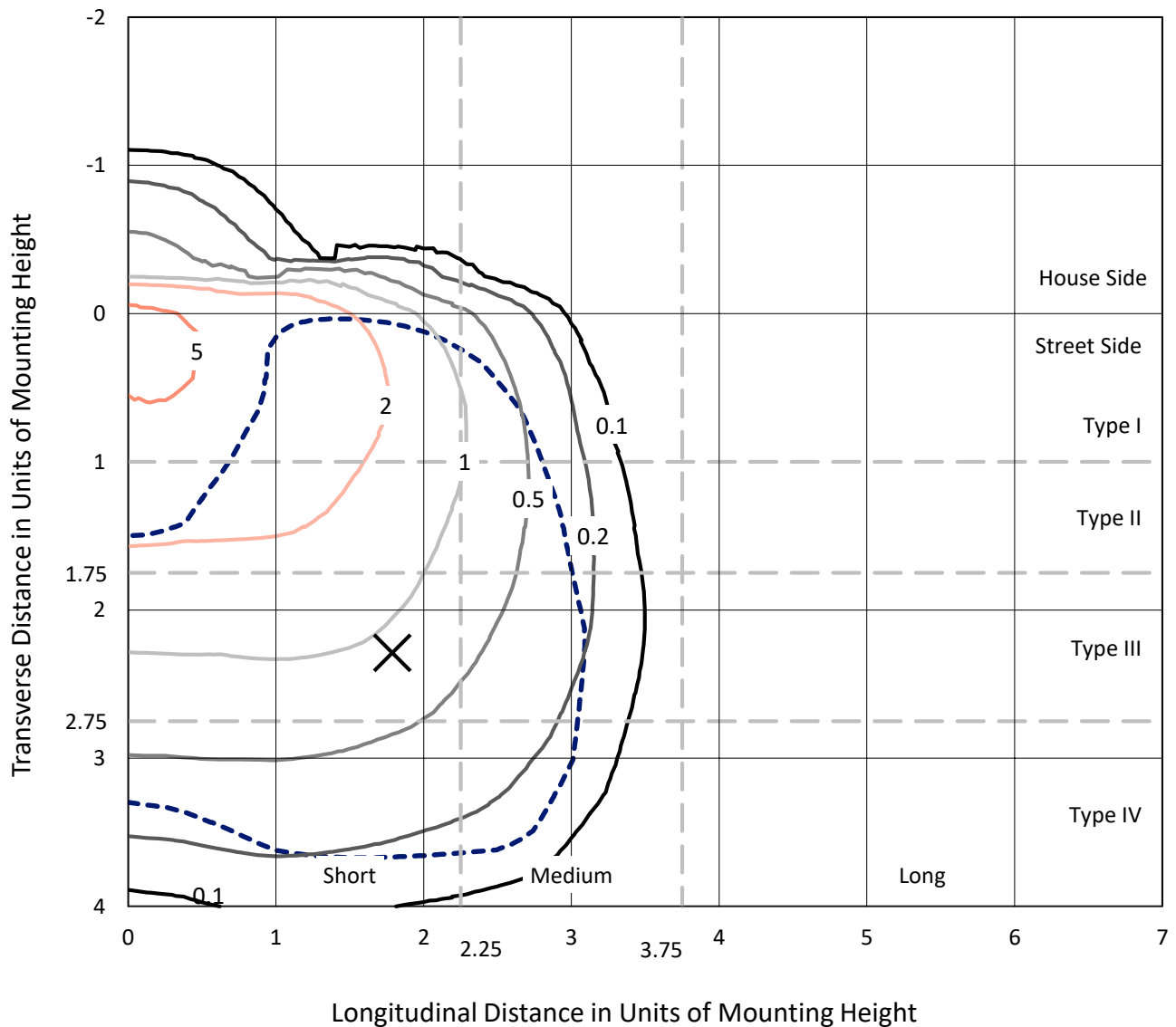


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### Iso-Footcandle Lines of Horizontal Illumination

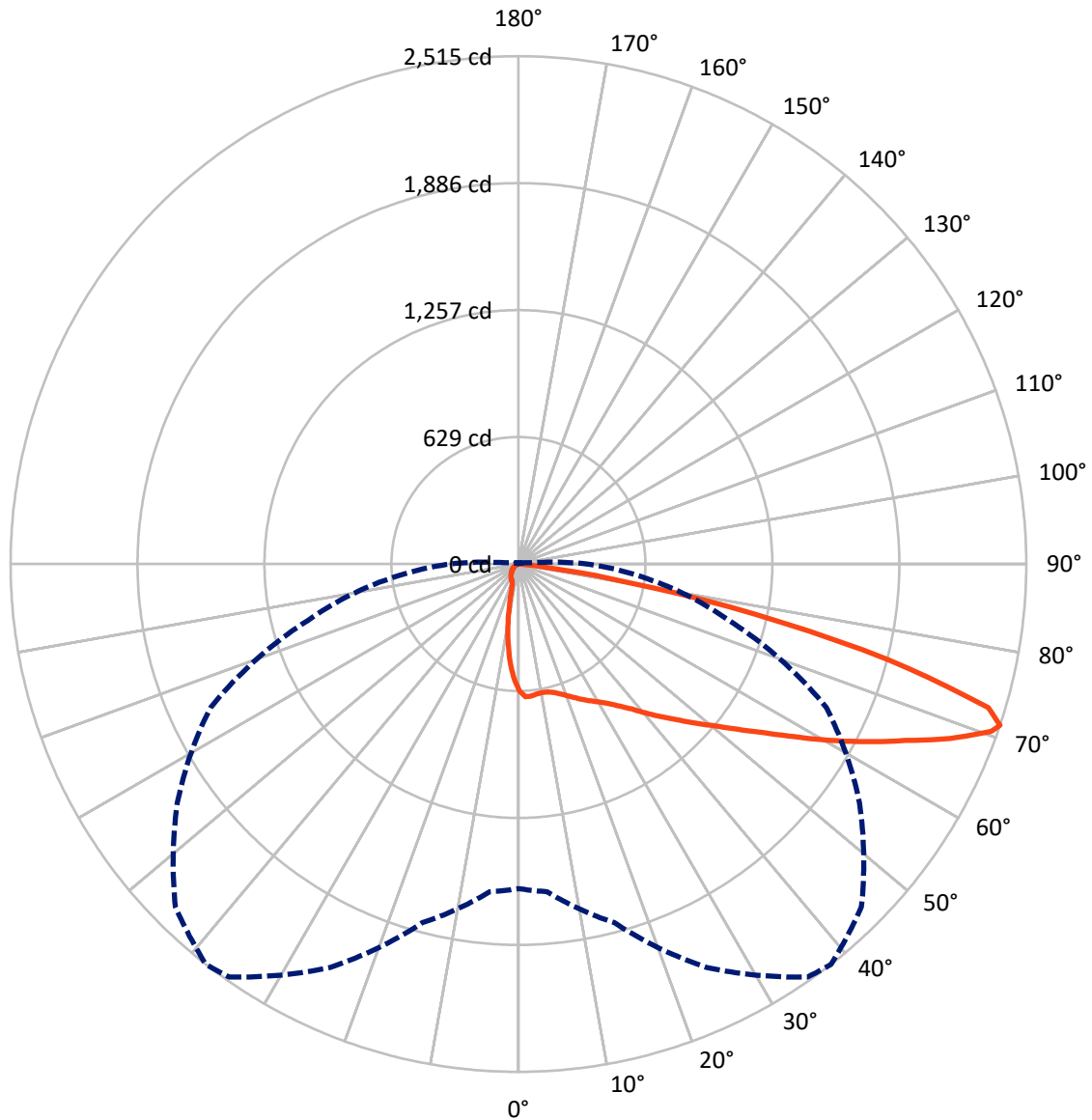
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.5 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 38-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	290.9	0.0	290.9
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	3115.1	0.0	3115.1
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	3406.0	0.0	3406.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	53.0	1.6
10°-20°	128.4	3.8
20°-30°	205.9	6.0
30°-40°	313.2	9.2
40°-50°	488.2	14.3
50°-60°	713.9	21.0
60°-70°	915.6	26.9
70°-80°	559.7	16.4
80°-90°	28.1	0.8
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°	3406.0	100.0
0°-180°	3406.0	100.0



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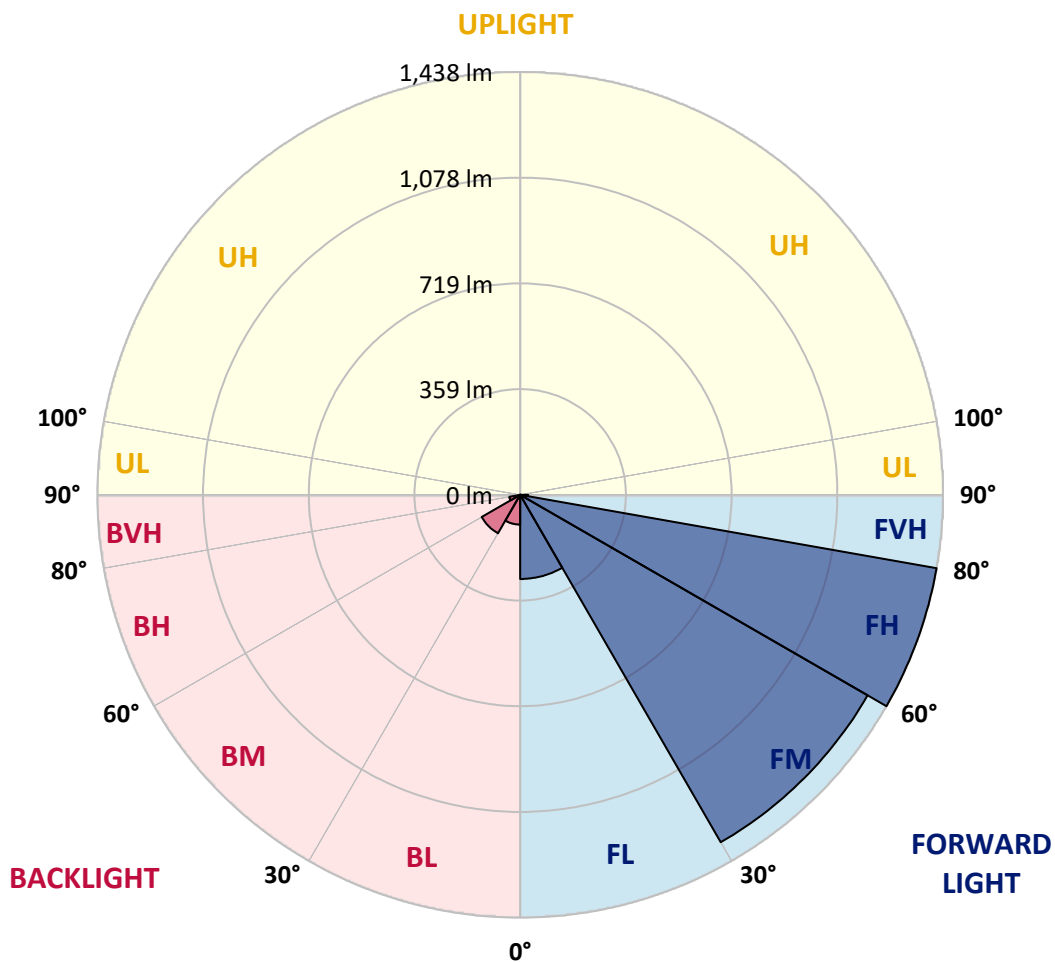
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	286.2	8.4			
FM	(30°-60°)	1364.1	40.1			
FH	(60°-80°)	1437.9	42.2			G1/1800
FVH	(80°-90°)	26.9	0.8			G1/100
BL	(0°-30°)	101.2	3.0	B0/110		
BM	(30°-60°)	151.1	4.4	B0/220		
BH	(60°-80°)	37.4	1.1	B0/110		G0/110
BVH	(80°-90°)	1.2	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B0-U0-G1**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	38°	45°	55°	65°	75°	85°
0°	627.9	627.9	627.9	627.9	627.9	627.9	627.9	627.9	627.9	627.9	627.9
2.5°	665.1	663.3	665.1	663.3	659.8	658.0	655.6	649.1	643.2	636.2	625.5
5°	666.3	665.1	665.1	662.7	658.6	656.8	654.5	648.0	640.3	629.7	613.7
7.5°	659.8	659.2	658.0	655.6	650.9	649.7	648.0	640.3	632.6	621.4	601.9
10°	649.1	650.3	649.7	649.7	648.0	646.8	645.6	636.8	628.5	615.5	594.9
12.5°	639.1	640.3	643.2	648.0	649.7	650.3	650.3	641.5	631.4	617.3	596.0
15°	632.6	635.0	643.2	652.7	658.0	659.8	661.5	652.1	640.3	625.0	602.5
17.5°	630.9	634.4	650.3	665.1	675.1	676.3	676.3	664.5	652.1	634.4	610.2
20°	636.8	641.5	662.1	682.8	695.2	696.4	694.0	678.7	663.9	644.4	616.7
22.5°	654.5	658.6	682.2	706.4	718.2	719.4	714.1	692.8	676.9	661.0	625.5
25°	685.1	687.5	712.9	735.9	742.4	744.2	735.3	709.9	691.6	676.9	637.9
27.5°	725.9	727.0	750.1	767.2	768.4	767.8	758.3	731.8	713.5	701.1	656.8
30°	768.4	770.1	789.0	800.2	795.5	793.1	784.9	756.6	740.0	730.6	684.0
32.5°	807.9	809.7	830.3	836.2	825.6	823.8	817.9	787.8	773.7	778.4	722.9
35°	846.8	846.8	870.4	873.4	864.0	864.0	864.0	828.0	825.6	841.5	777.2
37.5°	881.7	887.6	912.3	911.2	909.4	910.6	914.1	887.0	895.2	922.4	848.6
40°	911.2	918.8	951.9	954.8	962.5	969.0	974.3	960.1	979.6	1023.9	940.1
42.5°	937.7	946.6	989.1	1002.6	1023.9	1032.7	1042.8	1039.2	1082.3	1163.2	1056.9
45°	972.0	981.4	1025.1	1057.5	1087.0	1098.8	1121.3	1136.6	1208.0	1300.1	1183.2
47.5°	1017.4	1023.9	1064.0	1115.4	1155.5	1176.7	1211.5	1251.1	1337.8	1445.2	1295.9
50°	1079.4	1079.9	1110.0	1176.7	1236.3	1259.3	1319.5	1370.9	1479.5	1573.3	1377.4
52.5°	1147.8	1144.3	1167.9	1252.3	1327.8	1359.1	1429.9	1501.3	1610.5	1665.9	1414.0
55°	1212.7	1214.5	1229.2	1332.5	1442.9	1473.0	1562.7	1635.3	1730.3	1722.6	1434.0
57.5°	1287.7	1287.1	1306.0	1420.5	1577.4	1612.2	1706.1	1765.7	1802.9	1763.3	1437.6
60°	1358.5	1356.7	1385.6	1525.5	1720.8	1772.2	1856.6	1854.2	1875.4	1789.3	1434.6
62.5°	1421.6	1425.8	1476.5	1647.7	1881.3	1936.8	1979.3	1949.8	1955.7	1819.4	1398.0
65°	1498.4	1506.0	1588.1	1795.8	2079.6	2106.2	2122.7	2074.9	2015.9	1795.2	1287.1
67.5°	1595.1	1618.1	1733.8	2014.1	2286.2	2304.5	2305.1	2150.4	2013.5	1673.0	1082.3
70°	1633.5	1657.7	1841.8	2187.0	2460.3	2483.3	2411.3	2138.6	1854.8	1310.1	730.6
71°	1606.9	1628.8	1838.9	2203.6	2496.3	2514.6	2401.8	2061.3	1681.9	1079.4	565.9
72.5°	1415.1	1471.8	1725.6	2099.7	2431.9	2432.5	2249.0	1879.0	1337.8	673.9	284.4
75°	764.2	832.7	1264.7	1598.1	1876.0	1890.8	1730.3	1304.8	647.4	174.7	69.0
77.5°	252.0	283.9	567.1	829.7	1176.7	1199.7	1058.1	579.5	204.2	59.0	36.0
80°	158.2	161.7	191.8	348.8	523.4	542.9	435.5	234.9	92.1	32.5	24.8
82.5°	26.6	31.9	90.3	102.7	184.7	146.4	99.1	119.8	43.1	14.8	21.2
85°	0.0	0.0	0.6	0.6	3.0	0.6	0.6	24.2	2.4	2.4	11.2
87.5°	0.0	0.0	0.6	0.6	0.6	0.6	0.6	0.6	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



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**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	627.9	627.9	627.9	627.9	627.9	627.9	627.9	627.9	627.9	627.9	627.9
2.5°	620.8	616.1	606.7	596.6	584.2	573.6	570.1	562.4	558.9	555.9	555.9
5°	603.7	595.4	575.4	554.7	534.7	513.4	493.9	475.6	466.8	454.4	460.3
7.5°	589.5	575.4	547.1	514.6	473.3	431.4	398.9	370.6	347.0	339.3	334.0
10°	579.5	561.8	520.5	470.9	410.7	351.1	301.0	254.3	227.2	210.7	210.7
12.5°	578.3	555.9	502.2	426.1	339.3	258.5	196.5	152.3	130.4	120.4	119.8
15°	582.5	555.3	485.7	385.4	273.8	179.4	122.7	103.3	98.0	96.8	96.8
17.5°	586.0	554.7	466.2	339.3	201.8	118.0	97.4	93.8	92.7	92.1	92.1
20°	589.5	551.8	443.8	287.4	142.8	96.2	90.9	89.1	88.5	87.9	87.9
22.5°	594.3	548.8	420.8	228.4	105.6	89.7	86.7	85.0	84.4	84.4	84.4
25°	600.8	547.1	392.4	172.9	90.9	85.0	82.0	80.8	80.8	80.3	80.3
27.5°	613.1	548.8	361.8	123.9	85.0	80.3	78.5	77.3	77.3	76.7	76.7
30°	630.3	554.1	323.4	96.8	80.3	75.5	73.8	73.2	72.6	72.6	72.6
32.5°	654.5	562.4	281.5	82.6	74.4	70.8	69.0	68.5	68.5	68.5	67.9
35°	691.6	579.5	230.2	75.5	69.0	65.5	63.7	63.7	63.7	63.1	63.7
37.5°	748.3	607.2	178.2	69.6	63.1	60.2	59.0	58.4	58.4	58.4	58.4
40°	819.7	652.1	129.8	64.3	57.8	54.9	53.7	53.1	52.5	52.5	52.5
42.5°	911.8	701.7	94.4	58.4	53.1	50.2	49.0	47.8	46.6	46.0	46.0
45°	1007.4	760.7	73.8	53.7	48.4	46.0	44.9	43.1	41.3	39.5	39.5
47.5°	1100.0	806.1	63.1	48.4	44.3	41.9	40.7	38.4	35.4	33.6	33.6
50°	1158.4	820.3	56.7	43.7	40.1	38.4	36.6	33.6	29.5	27.7	27.7
52.5°	1176.7	794.3	50.8	39.5	36.6	34.8	32.5	28.3	24.2	21.8	21.8
55°	1183.8	744.2	44.9	36.6	33.0	30.7	27.7	23.6	19.5	17.1	17.1
57.5°	1175.0	673.3	40.1	33.0	29.5	27.1	23.6	18.9	14.8	13.0	13.0
60°	1144.9	570.7	36.0	29.5	26.0	23.0	19.5	14.8	11.2	8.9	9.4
62.5°	1063.4	441.4	31.3	24.8	22.4	19.5	15.3	11.2	7.1	5.9	5.9
65°	933.6	305.7	26.6	20.7	18.9	15.9	11.8	7.7	4.1	3.5	3.5
67.5°	758.3	197.7	20.7	17.1	15.9	13.0	8.9	4.7	2.4	2.4	1.8
70°	476.2	98.0	16.5	13.0	13.0	10.0	6.5	3.0	1.8	1.8	1.8
71°	337.0	66.7	14.8	11.8	11.8	9.4	5.9	2.4	1.8	1.8	1.8
72.5°	152.3	41.9	12.4	10.6	10.0	7.7	5.3	2.4	2.4	2.4	2.4
75°	47.8	23.0	8.9	8.3	8.3	6.5	4.7	3.0	3.0	3.0	3.0
77.5°	31.9	17.7	5.9	5.3	6.5	6.5	4.7	3.5	3.5	3.5	3.5
80°	26.0	9.4	3.5	3.5	4.7	5.9	4.7	3.5	4.1	3.5	3.5
82.5°	25.4	4.7	1.2	1.8	3.0	3.5	3.5	3.0	3.5	3.5	3.5
85°	10.6	1.2	0.6	1.2	1.2	1.8	1.8	2.4	3.0	3.0	3.0
87.5°	0.0	0.0	0.0	0.0	0.6	0.6	1.2	1.2	1.8	2.4	2.4
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)