

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: P401579

Luminaire Tested: **ENT-SA1D-830-U-SL4-HSS**

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401579  
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-830-U-SL4-HSS  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 3000K, 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: 3681 lumens  
Efficiency: N/A  
Efficacy: 85.4 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

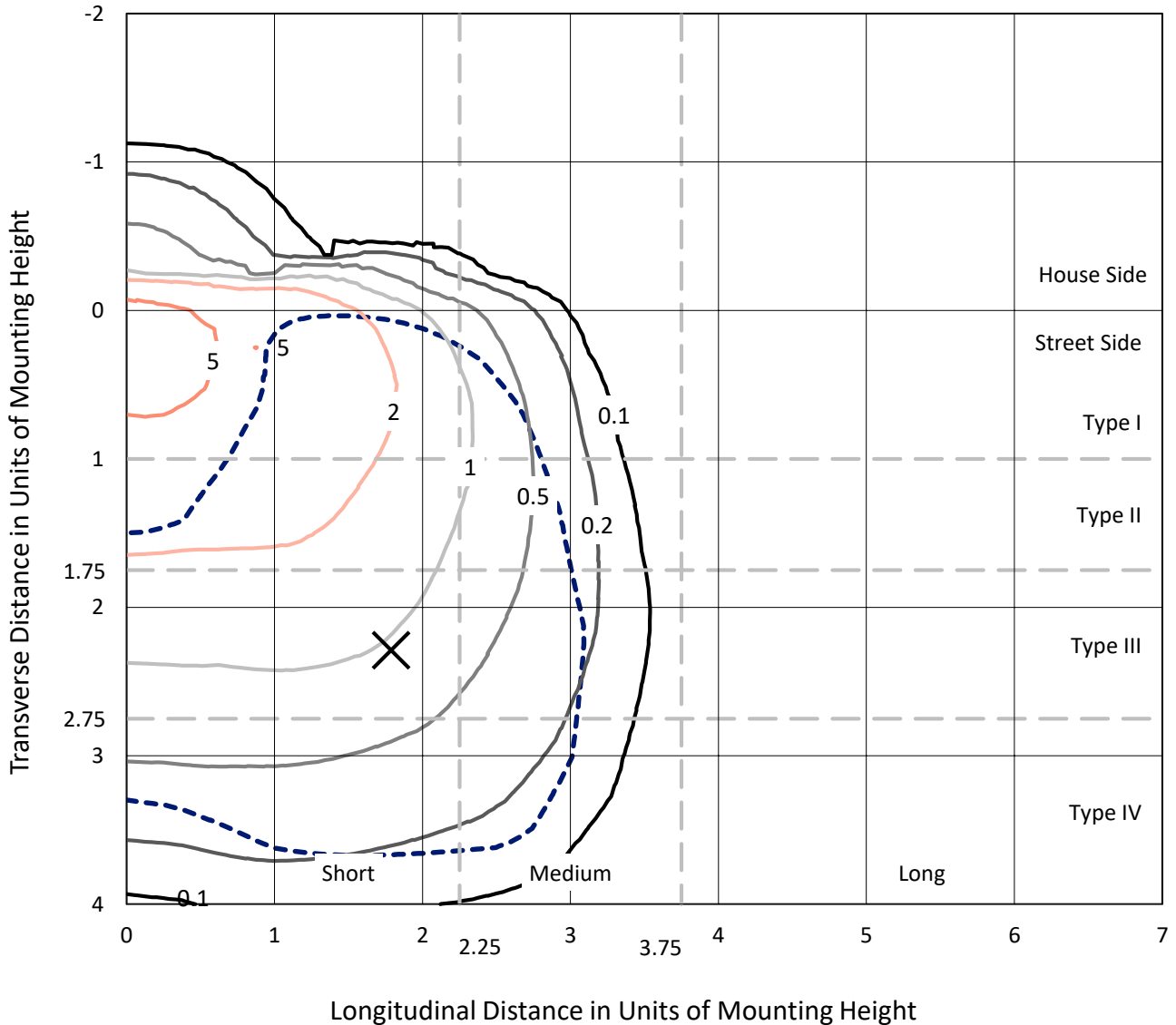
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

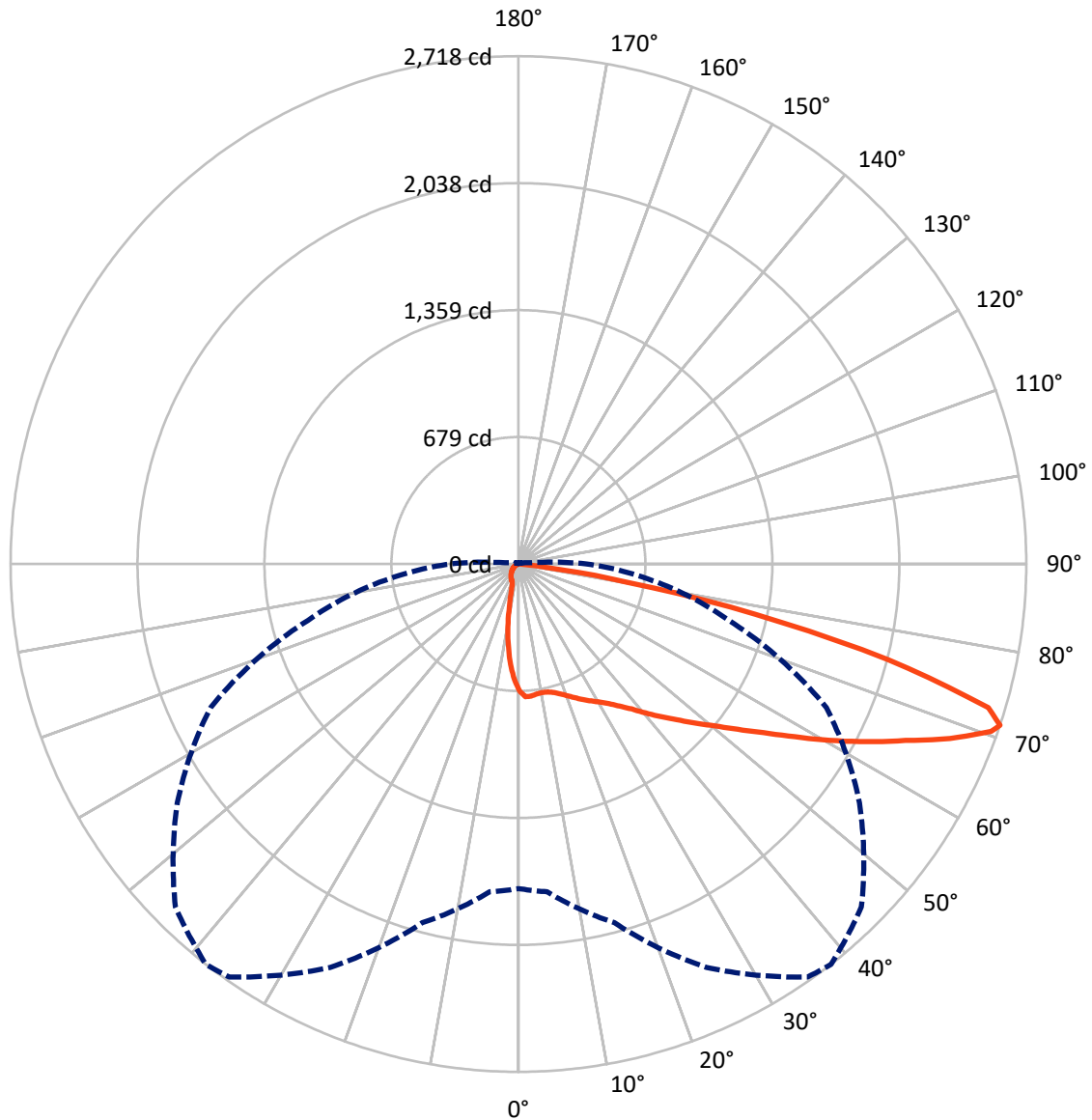


Based on 10 foot mounting height. Maximum calculated value = 7 fc  
 Type IV - Short - Semi-Cutoff

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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	314.4	0.0	314.4
	% Fixture	8.5	0.0	8.5
<b>Street Side</b>	Lumens	3366.6	0.0	3366.6
	% Fixture	91.5	0.0	91.5
<b>Total</b>	Lumens	3681.0	0.0	3681.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	57.3	1.6
10°-20°	138.8	3.8
20°-30°	222.5	6.0
30°-40°	338.5	9.2
40°-50°	527.6	14.3
50°-60°	771.5	21.0
60°-70°	989.6	26.9
70°-80°	604.8	16.4
80°-90°	30.4	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°	3681.0	100.0
0°-180°	3681.0	100.0



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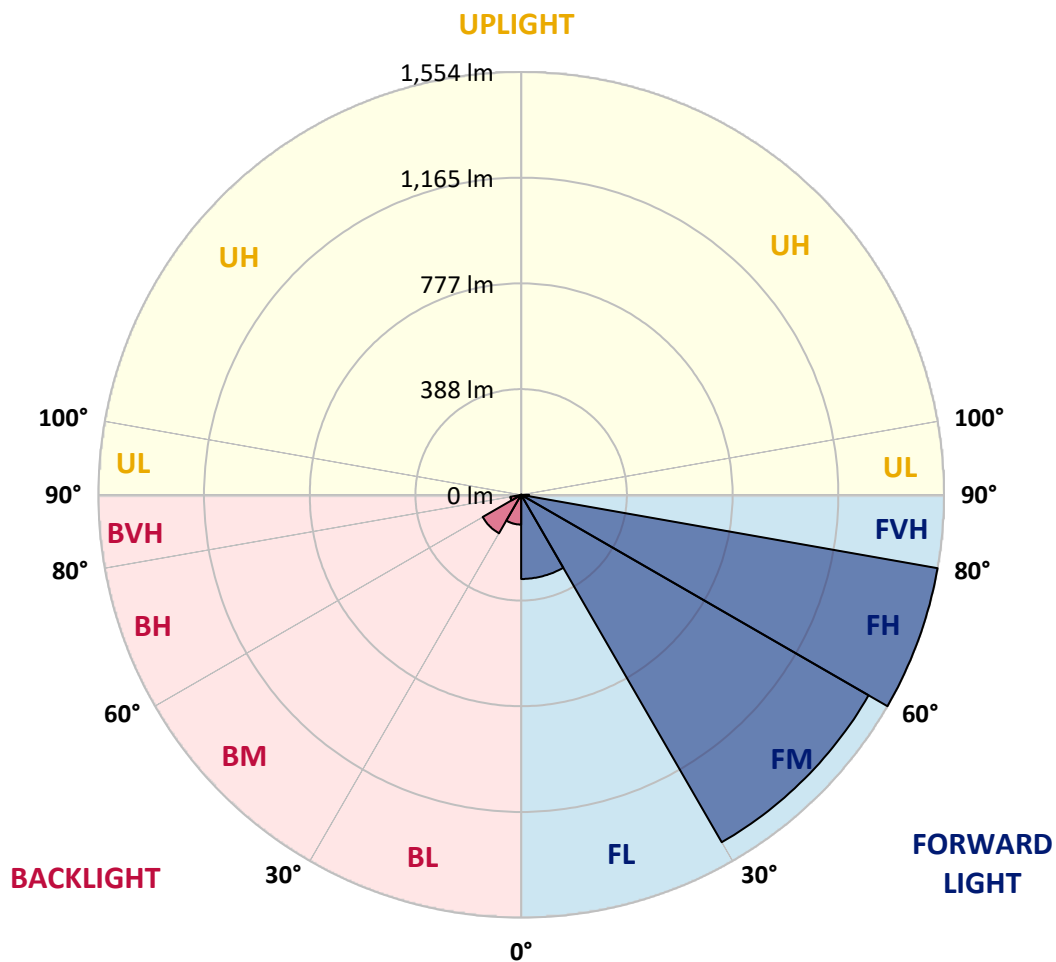
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	309.3	8.4			
FM (30°-60°)	1474.3	40.1			
FH (60°-80°)	1554.0	42.2			G1/1800
FVH (80°-90°)	29.0	0.8			G1/100
BL (0°-30°)	109.3	3.0	B0/110		
BM (30°-60°)	163.3	4.4	B0/220		
BH (60°-80°)	40.4	1.1	B0/110		G0/110
BVH (80°-90°)	1.3	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°	678.6	678.6	678.6	678.6	678.6	678.6	678.6	678.6	678.6	678.6	678.6
2.5°	718.8	716.9	718.8	716.9	713.0	711.1	708.6	701.6	695.2	687.5	676.0
5°	720.1	718.8	718.8	716.2	711.8	709.9	707.3	700.3	692.0	680.5	663.3
7.5°	713.0	712.4	711.1	708.6	703.5	702.2	700.3	692.0	683.7	671.6	650.5
10°	701.6	702.8	702.2	702.2	700.3	699.0	697.7	688.2	679.2	665.2	642.9
12.5°	690.7	692.0	695.2	700.3	702.2	702.8	702.8	693.3	682.4	667.1	644.2
15°	683.7	686.3	695.2	705.4	711.1	713.0	715.0	704.7	692.0	675.4	651.2
17.5°	681.8	685.6	702.8	718.8	729.6	730.9	730.9	718.1	704.7	685.6	659.5
20°	688.2	693.3	715.6	737.9	751.3	752.6	750.0	733.4	717.5	696.5	666.5
22.5°	707.3	711.8	737.3	763.4	776.2	777.5	771.7	748.8	731.5	714.3	676.0
25°	740.5	743.0	770.4	795.3	802.3	804.2	794.7	767.3	747.5	731.5	689.4
27.5°	784.5	785.7	810.6	829.1	830.4	829.8	819.5	790.8	771.1	757.7	709.9
30°	830.4	832.3	852.7	864.8	859.7	857.2	848.2	817.6	799.8	789.6	739.2
32.5°	873.1	875.0	897.4	903.7	892.3	890.3	884.0	851.4	836.1	841.2	781.3
35°	915.2	915.2	940.7	943.9	933.7	933.7	933.7	894.8	892.3	909.5	840.0
37.5°	952.8	959.2	986.0	984.7	982.8	984.1	987.9	958.6	967.5	996.9	917.1
40°	984.7	993.0	1028.7	1031.9	1040.2	1047.2	1053.0	1037.7	1058.7	1106.6	1016.0
42.5°	1013.4	1023.0	1068.9	1083.6	1106.6	1116.1	1127.0	1123.1	1169.7	1257.1	1142.3
45°	1050.4	1060.6	1107.8	1142.9	1174.8	1187.5	1211.8	1228.4	1305.5	1405.0	1278.8
47.5°	1099.5	1106.6	1149.9	1205.4	1248.8	1271.7	1309.4	1352.1	1445.9	1561.9	1400.6
50°	1166.5	1167.1	1199.7	1271.7	1336.2	1361.0	1426.1	1481.6	1598.9	1700.3	1488.6
52.5°	1240.5	1236.7	1262.2	1353.4	1435.0	1468.8	1545.3	1622.5	1740.5	1800.5	1528.1
55°	1310.6	1312.6	1328.5	1440.1	1559.4	1591.9	1688.8	1767.3	1870.0	1861.7	1549.8
57.5°	1391.6	1391.0	1411.4	1535.1	1704.8	1742.4	1843.8	1908.2	1948.4	1905.7	1553.6
60°	1468.2	1466.3	1497.5	1648.7	1859.8	1915.3	2006.5	2003.9	2026.9	1933.8	1550.4
62.5°	1536.4	1540.9	1595.7	1780.7	2033.2	2093.2	2139.1	2107.2	2113.6	1966.3	1510.9
65°	1619.3	1627.6	1716.3	1940.8	2247.5	2276.2	2294.1	2242.4	2178.7	1940.1	1391.0
67.5°	1723.9	1748.8	1873.8	2176.7	2470.8	2490.5	2491.2	2324.1	2176.1	1808.1	1169.7
70°	1765.4	1791.5	1990.5	2363.6	2658.9	2683.8	2606.0	2311.3	2004.5	1415.9	789.6
71°	1736.7	1760.3	1987.3	2381.5	2697.8	2717.6	2595.8	2227.8	1817.7	1166.5	611.6
72.5°	1529.4	1590.6	1864.9	2269.2	2628.3	2628.9	2430.6	2030.7	1445.9	728.3	307.4
75°	825.9	899.9	1366.8	1727.1	2027.5	2043.5	1870.0	1410.1	699.6	188.8	74.6
77.5°	272.3	306.8	612.9	896.7	1271.7	1296.6	1143.5	626.3	220.7	63.8	38.9
80°	170.9	174.8	207.3	376.9	565.7	586.8	470.7	253.8	99.5	35.1	26.8
82.5°	28.7	34.4	97.6	111.0	199.6	158.2	107.1	129.5	46.6	15.9	23.0
85°	0.0	0.0	0.6	0.6	3.2	0.6	0.6	26.1	2.6	2.6	12.1
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°	678.6	678.6	678.6	678.6	678.6	678.6	678.6	678.6	678.6	678.6	678.6
2.5°	670.9	665.8	655.6	644.8	631.4	619.9	616.1	607.8	604.0	600.8	600.8
5°	652.5	643.5	621.8	599.5	577.8	554.9	533.8	514.1	504.5	491.1	497.5
7.5°	637.1	621.8	591.2	556.1	511.5	466.2	431.1	400.5	375.0	366.7	361.0
10°	626.3	607.2	562.5	508.9	443.9	379.5	325.3	274.9	245.5	227.7	227.7
12.5°	625.0	600.8	542.8	460.5	366.7	279.3	212.4	164.5	140.9	130.1	129.5
15°	629.5	600.2	524.9	416.5	295.9	193.9	132.7	111.6	105.9	104.6	104.6
17.5°	633.3	599.5	503.8	366.7	218.1	127.6	105.2	101.4	100.1	99.5	99.5
20°	637.1	596.3	479.6	310.6	154.3	104.0	98.2	96.3	95.7	95.0	95.0
22.5°	642.2	593.1	454.7	246.8	114.2	96.9	93.8	91.8	91.2	91.2	91.2
25°	649.3	591.2	424.1	186.9	98.2	91.8	88.7	87.4	87.4	86.7	86.7
27.5°	662.7	593.1	391.0	133.9	91.8	86.7	84.8	83.5	83.5	82.9	82.9
30°	681.2	598.9	349.5	104.6	86.7	81.6	79.7	79.1	78.4	78.4	78.4
32.5°	707.3	607.8	304.2	89.3	80.4	76.5	74.6	74.0	74.0	74.0	73.3
35°	747.5	626.3	248.7	81.6	74.6	70.8	68.9	68.9	68.9	68.2	68.9
37.5°	808.7	656.3	192.6	75.3	68.2	65.1	63.8	63.1	63.1	63.1	63.1
40°	885.9	704.7	140.3	69.5	62.5	59.3	58.0	57.4	56.8	56.8	56.8
42.5°	985.4	758.3	102.0	63.1	57.4	54.2	52.9	51.7	50.4	49.7	49.7
45°	1088.7	822.1	79.7	58.0	52.3	49.7	48.5	46.6	44.6	42.7	42.7
47.5°	1188.8	871.2	68.2	52.3	47.8	45.3	44.0	41.5	38.3	36.4	36.4
50°	1252.0	886.5	61.2	47.2	43.4	41.5	39.5	36.4	31.9	30.0	30.0
52.5°	1271.7	858.5	54.8	42.7	39.5	37.6	35.1	30.6	26.1	23.6	23.6
55°	1279.4	804.2	48.5	39.5	35.7	33.2	30.0	25.5	21.0	18.5	18.5
57.5°	1269.8	727.7	43.4	35.7	31.9	29.3	25.5	20.4	15.9	14.0	14.0
60°	1237.3	616.7	38.9	31.9	28.1	24.9	21.0	15.9	12.1	9.6	10.2
62.5°	1149.3	477.1	33.8	26.8	24.2	21.0	16.6	12.1	7.7	6.4	6.4
65°	1009.0	330.4	28.7	22.3	20.4	17.2	12.8	8.3	4.5	3.8	3.8
67.5°	819.5	213.7	22.3	18.5	17.2	14.0	9.6	5.1	2.6	2.6	1.9
70°	514.7	105.9	17.9	14.0	14.0	10.8	7.0	3.2	1.9	1.9	1.9
71°	364.2	72.1	15.9	12.8	12.8	10.2	6.4	2.6	1.9	1.9	1.9
72.5°	164.5	45.3	13.4	11.5	10.8	8.3	5.7	2.6	2.6	2.6	2.6
75°	51.7	24.9	9.6	8.9	8.9	7.0	5.1	3.2	3.2	3.2	3.2
77.5°	34.4	19.1	6.4	5.7	7.0	7.0	5.1	3.8	3.8	3.8	3.8
80°	28.1	10.2	3.8	3.8	5.1	6.4	5.1	3.8	4.5	3.8	3.8
82.5°	27.4	5.1	1.3	1.9	3.2	3.8	3.8	3.2	3.8	3.8	3.8
85°	11.5	1.3	0.6	1.3	1.3	1.9	1.9	2.6	3.2	3.2	3.2
87.5°	0.0	0.0	0.0	0.0	0.6	0.6	1.3	1.3	1.9	2.6	2.6
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)