

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: P401562

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

Issue Date: 5/20/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P401562  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-5)  
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  
Description: ENTRI LED LUMINAIRE  
(1) 80 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE IV SPILL LIGHT ELIMINATOR OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3935 lumens  
Efficiency: N/A  
Efficacy: 91.3 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G1

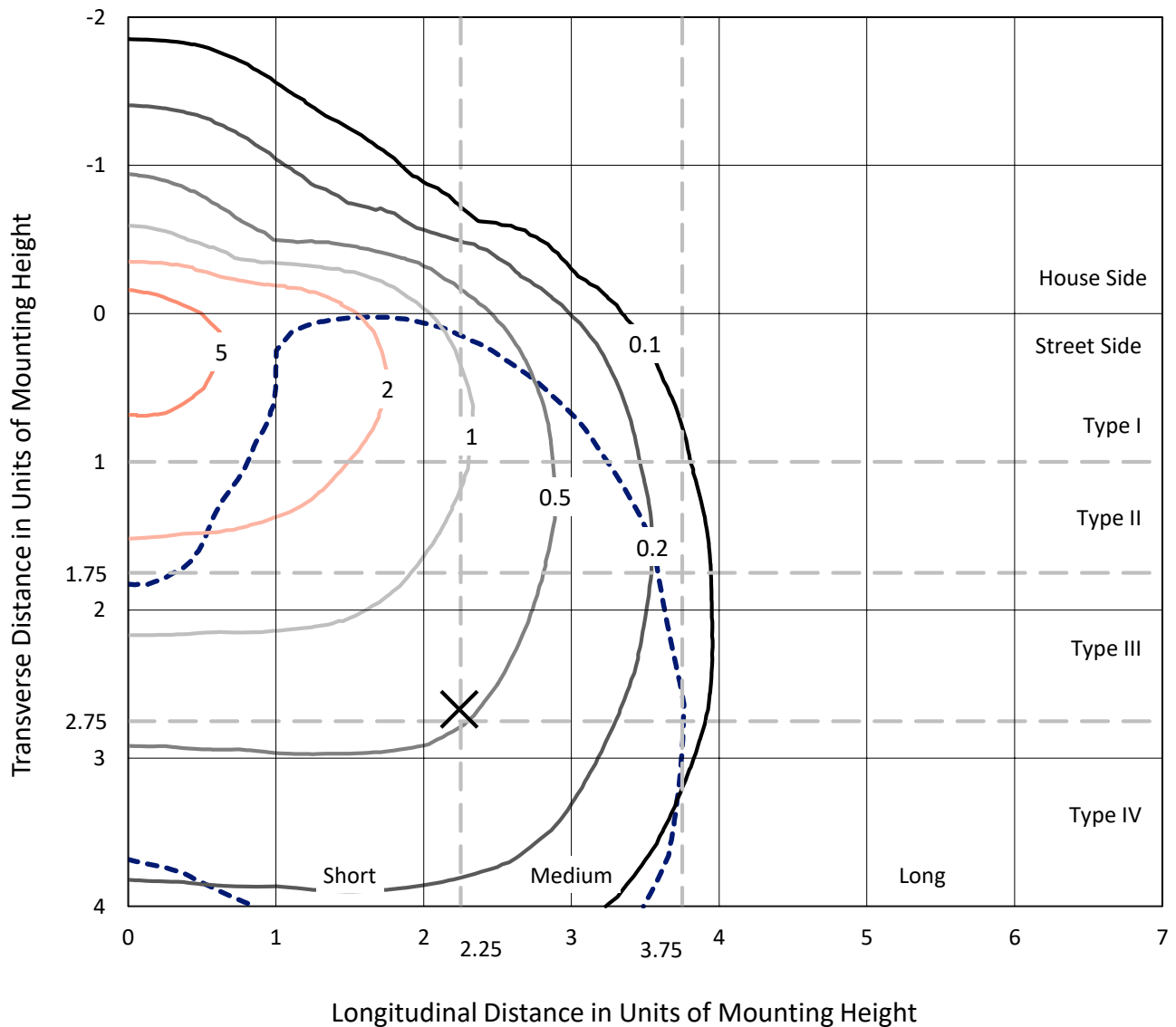
Input Watts (W): 43.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

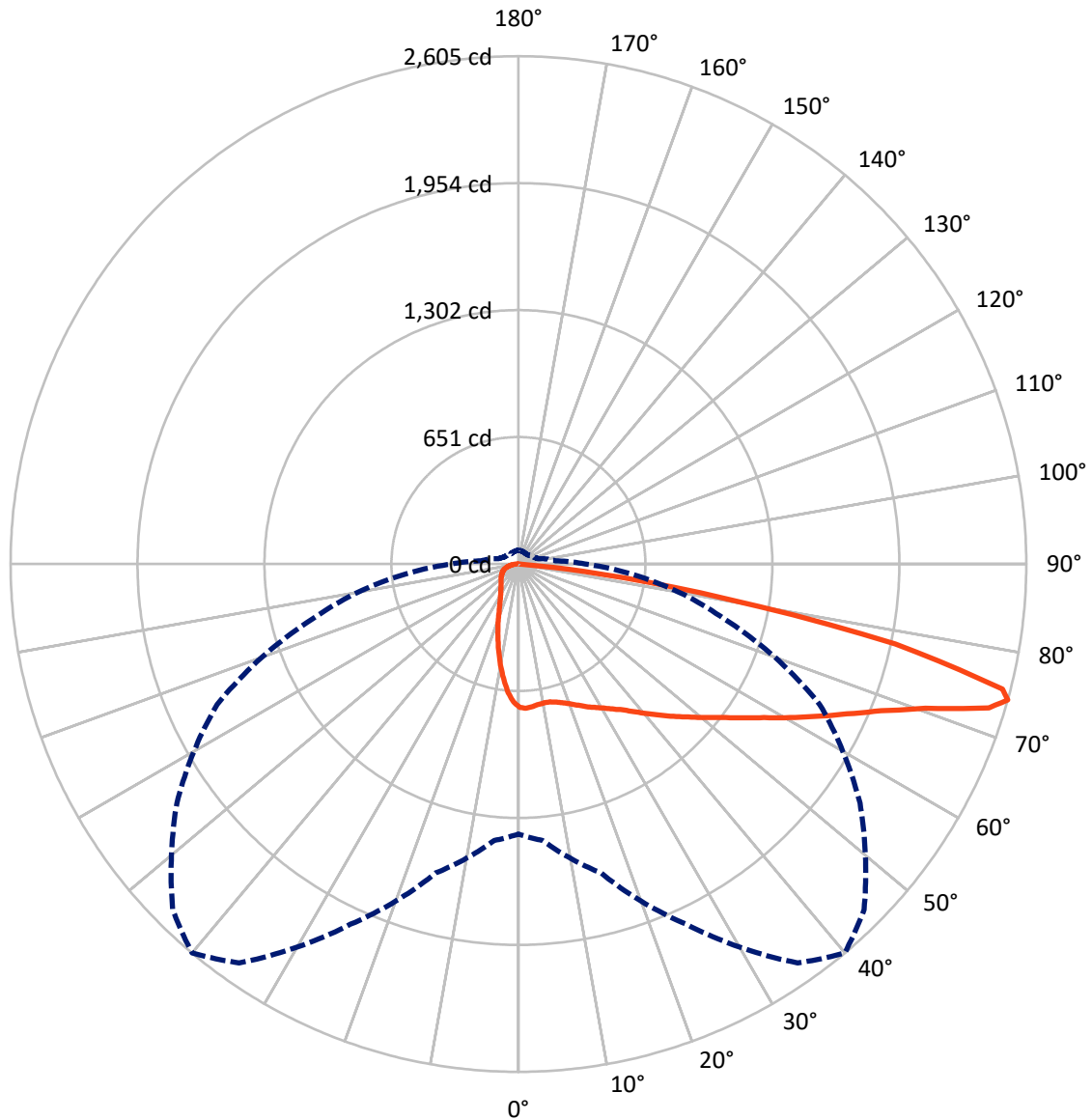


Based on 10 foot mounting height. Maximum calculated value = 7.3 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral    - - - Horizontal Cone Through 74-Deg Vertical

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	613.5	0.0	613.5
	% Fixture	15.6	0.0	15.6
<b>Street Side</b>	Lumens	3321.5	0.0	3321.5
	% Fixture	84.4	0.0	84.4
<b>Total</b>	Lumens	3935.0	0.0	3935.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	64.8	1.6
10°-20°	167.0	4.2
20°-30°	256.1	6.5
30°-40°	369.9	9.4
40°-50°	532.2	13.5
50°-60°	734.8	18.7
60°-70°	926.4	23.5
70°-80°	803.3	20.4
80°-90°	80.4	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°	3935.0	100.0
0°-180°	3935.0	100.0



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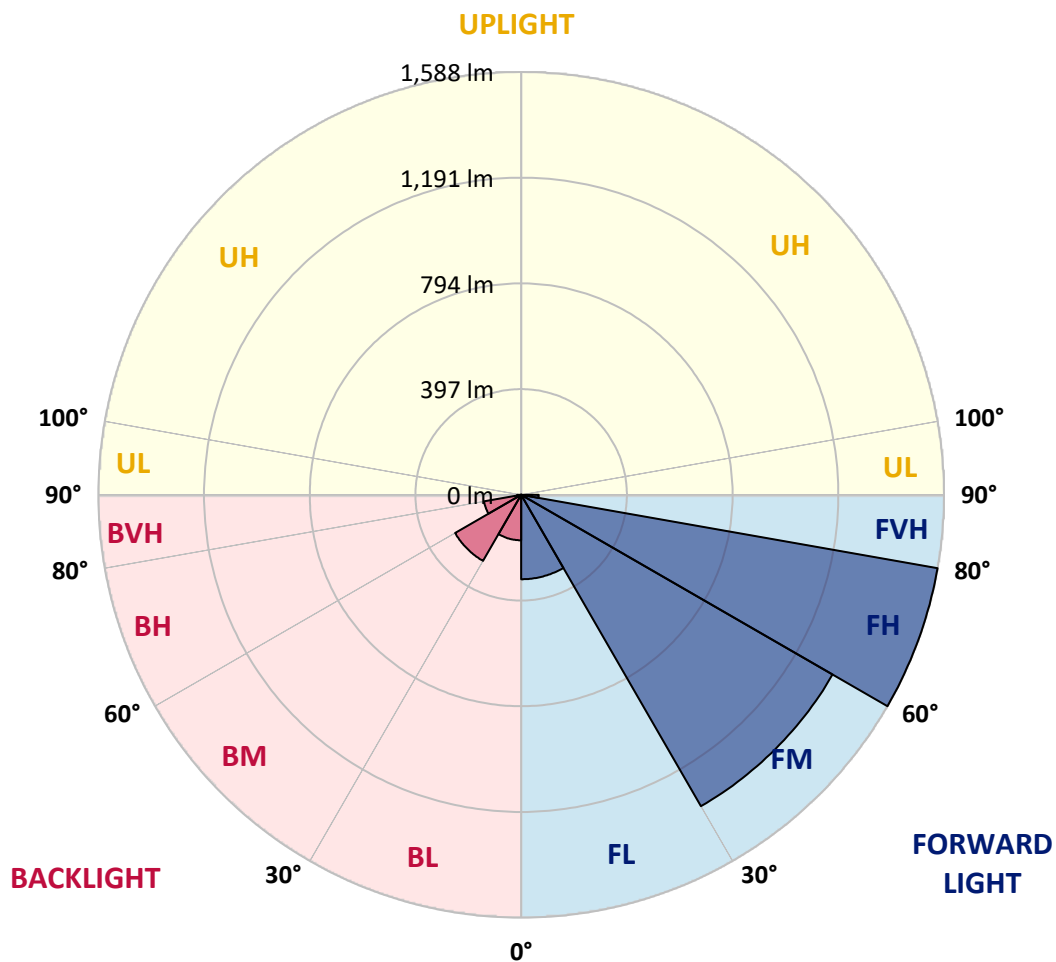
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	317.2	8.1			
FM (30°-60°)	1350.3	34.3			
FH (60°-80°)	1588.1	40.4			G1/1800
FVH (80°-90°)	65.8	1.7			G1/100
BL (0°-30°)	170.7	4.3	B1/500		
BM (30°-60°)	286.5	7.3	B1/1000		
BH (60°-80°)	141.6	3.6	B1/500		G1/500
BVH (80°-90°)	14.7	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 IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	734.5	734.5	734.5	734.5	734.5	734.5	734.5	734.5	734.5	734.5	734.5
2.5°	744.0	743.4	745.1	744.0	742.2	741.0	740.4	736.9	735.7	732.2	727.4
5°	741.0	741.0	741.0	739.8	736.3	735.1	733.9	728.6	725.1	719.2	710.3
7.5°	731.0	732.7	732.2	731.6	728.6	727.4	725.7	719.2	714.5	705.6	694.4
10°	721.5	721.5	722.1	724.5	723.3	723.9	723.3	716.2	709.7	698.5	684.4
12.5°	708.0	710.3	713.9	720.4	723.3	725.7	725.7	720.4	713.3	699.7	683.2
15°	699.7	702.7	711.5	723.3	730.4	734.5	735.7	729.2	720.4	706.8	688.5
17.5°	696.2	699.7	716.2	732.7	745.1	748.7	749.3	742.2	732.7	716.2	695.0
20°	699.7	703.8	725.7	748.1	762.8	765.8	767.0	756.9	745.1	729.2	701.5
22.5°	713.3	719.2	743.4	767.6	782.9	787.0	785.8	771.7	759.9	742.8	709.7
25°	742.8	746.3	768.1	794.1	805.9	810.6	807.7	791.7	776.4	759.3	721.5
27.5°	777.0	781.7	804.7	824.2	831.9	833.0	830.1	813.6	796.5	782.3	739.8
30°	818.3	822.4	841.3	856.1	856.6	857.2	855.5	836.6	822.4	811.2	766.4
32.5°	862.0	862.5	882.0	889.1	884.4	886.1	884.4	863.7	853.7	850.2	801.2
35°	902.1	902.7	922.7	925.1	917.4	918.0	921.5	897.4	897.4	905.6	853.1
37.5°	940.4	942.2	959.9	957.5	954.6	959.9	964.6	944.0	955.8	979.4	916.2
40°	969.3	973.5	997.1	995.9	1002.4	1007.7	1011.8	1001.2	1020.1	1066.1	994.1
42.5°	988.2	996.5	1030.1	1038.4	1049.6	1059.0	1066.1	1065.5	1098.5	1162.3	1076.7
45°	1007.7	1015.9	1060.8	1080.8	1099.7	1114.5	1128.0	1135.1	1187.6	1263.7	1172.9
47.5°	1031.3	1038.4	1088.5	1128.0	1152.2	1172.3	1196.5	1211.8	1278.5	1367.0	1262.0
50°	1067.3	1072.0	1116.8	1178.2	1208.9	1236.6	1266.7	1297.9	1376.4	1472.6	1339.8
52.5°	1113.9	1116.8	1149.9	1228.9	1277.9	1307.4	1352.2	1393.5	1476.1	1568.2	1403.6
55°	1167.0	1164.6	1190.0	1289.7	1346.9	1391.2	1446.6	1488.5	1581.1	1651.3	1454.3
57.5°	1220.1	1218.3	1238.4	1348.1	1434.2	1486.1	1543.4	1587.6	1677.3	1729.2	1490.9
60°	1270.8	1264.3	1292.6	1416.5	1539.8	1599.4	1650.7	1691.5	1768.2	1785.3	1510.3
62.5°	1315.6	1315.6	1356.9	1500.9	1666.1	1719.8	1760.5	1787.6	1854.9	1826.6	1502.7
65°	1356.9	1362.3	1421.2	1595.3	1797.1	1851.9	1887.3	1897.9	1941.0	1828.3	1437.8
67.5°	1403.6	1411.8	1495.0	1705.6	1948.1	2006.5	2037.2	2033.6	2002.4	1801.2	1298.5
70°	1449.0	1462.5	1586.4	1847.8	2134.5	2213.6	2247.2	2177.6	2034.2	1650.7	1078.5
72.5°	1482.0	1505.0	1661.4	1990.0	2401.8	2523.3	2509.8	2217.1	1885.0	1360.5	815.9
74°	1385.3	1423.6	1640.7	2039.0	2498.0	2604.7	2507.4	2138.7	1705.0	1095.6	578.2
75°	1272.6	1309.7	1536.3	2019.5	2516.2	2564.0	2385.9	2000.6	1529.2	849.0	377.6
77.5°	942.2	971.1	1179.9	1592.3	1990.0	1975.8	1776.4	1355.8	753.4	256.0	159.3
80°	415.9	437.8	582.3	801.2	1077.9	1073.8	1000.0	623.0	243.1	133.9	97.3
82.5°	125.7	125.1	167.6	233.6	409.4	417.1	354.6	214.8	116.2	55.5	47.2
85°	0.6	0.6	0.6	0.6	1.8	15.3	13.0	41.3	21.2	10.0	17.1
87.5°	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	0.6	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°	734.5	734.5	734.5	734.5	734.5	734.5	734.5	734.5	734.5	734.5	734.5
2.5°	724.5	723.9	722.1	718.0	715.0	706.2	709.1	703.2	702.7	701.5	700.9
5°	706.2	703.8	696.8	688.5	679.1	664.3	659.6	650.7	645.4	643.7	644.8
7.5°	687.3	682.0	668.4	650.7	631.9	610.0	594.1	581.7	572.9	569.9	565.8
10°	675.5	666.7	643.7	614.2	583.5	552.8	526.3	508.0	494.4	483.8	483.8
12.5°	671.4	659.6	626.0	582.9	538.6	495.0	456.6	432.5	409.4	398.2	396.5
15°	673.8	657.2	611.2	554.6	495.6	438.9	391.7	356.9	335.1	321.5	326.3
17.5°	676.1	655.5	595.9	524.5	453.7	388.2	333.3	293.8	267.3	260.2	257.2
20°	679.1	651.9	576.4	492.0	410.6	339.2	281.4	241.3	221.2	212.4	212.4
22.5°	683.2	647.2	556.3	456.1	366.4	291.4	237.8	207.7	191.7	186.4	186.4
25°	689.1	644.3	535.7	420.1	324.5	253.7	208.9	185.3	177.0	173.5	172.9
27.5°	700.3	644.8	515.6	383.5	283.2	221.8	188.2	172.9	166.4	164.6	164.0
30°	717.4	650.7	494.4	344.5	246.6	197.6	174.0	163.4	159.3	158.1	158.1
32.5°	741.0	661.4	476.7	309.7	219.5	178.2	162.2	155.2	152.8	151.6	152.2
35°	777.6	679.7	455.5	277.9	194.1	164.6	152.8	147.5	145.7	145.7	146.3
37.5°	825.4	708.0	434.8	248.4	177.0	152.8	144.0	141.0	139.2	140.4	141.0
40°	885.6	741.6	415.3	221.8	162.8	143.4	136.3	133.9	133.3	134.5	135.7
42.5°	950.4	782.3	397.6	200.0	151.6	135.7	129.8	128.6	128.0	128.6	130.4
45°	1026.0	828.9	382.9	183.5	143.4	129.2	123.9	122.7	122.1	123.3	124.5
47.5°	1095.6	870.8	371.1	172.3	136.3	124.5	119.2	117.4	117.4	117.4	118.6
50°	1152.2	903.8	364.0	164.6	130.4	119.2	114.5	112.7	112.1	111.5	112.1
52.5°	1201.2	928.6	361.7	159.9	125.7	114.5	109.7	108.6	107.4	106.2	106.8
55°	1233.6	941.0	356.9	155.8	121.5	109.1	105.0	103.8	102.7	100.9	100.9
57.5°	1252.5	939.8	346.3	153.4	119.2	104.4	100.3	100.3	99.1	96.2	96.8
60°	1254.3	919.2	320.4	150.4	117.4	99.7	95.0	96.2	96.2	93.8	93.8
62.5°	1224.2	864.9	270.2	142.8	115.0	96.2	90.9	93.8	95.0	92.6	92.6
65°	1131.6	736.9	217.1	131.6	109.1	92.0	86.1	92.0	95.6	93.8	93.2
67.5°	954.0	583.5	179.4	119.2	102.7	86.7	81.4	89.1	93.8	93.8	93.2
70°	765.8	443.1	147.5	105.6	92.6	80.2	76.1	82.6	86.7	87.9	87.9
72.5°	527.4	270.8	119.8	90.9	81.4	72.6	69.0	73.2	75.5	77.9	77.3
74°	340.4	190.0	105.0	82.6	74.3	66.7	64.9	66.7	67.8	70.2	70.8
75°	227.7	155.2	97.9	76.7	70.2	62.5	61.4	63.1	64.3	66.1	66.1
77.5°	131.0	110.9	79.1	63.7	58.4	53.7	53.1	53.7	55.5	57.2	56.6
80°	90.9	84.4	62.5	49.6	46.0	43.7	44.2	44.8	47.8	48.4	47.8
82.5°	54.9	60.8	44.2	37.2	34.8	34.2	36.0	37.2	39.5	40.1	39.5
85°	21.8	28.9	21.8	20.6	23.0	25.4	28.3	30.1	31.3	31.3	31.3
87.5°	0.0	4.1	5.3	8.3	13.0	15.3	20.1	21.8	23.0	22.4	21.8
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)