

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: P401576

Luminaire Tested: **ENT-SA1D-830-U-SL2**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401576
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-1)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1D-830-U-SL2
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS AND TYPE II SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4431 lumens
Efficiency: N/A
Efficacy: 102.8 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - 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

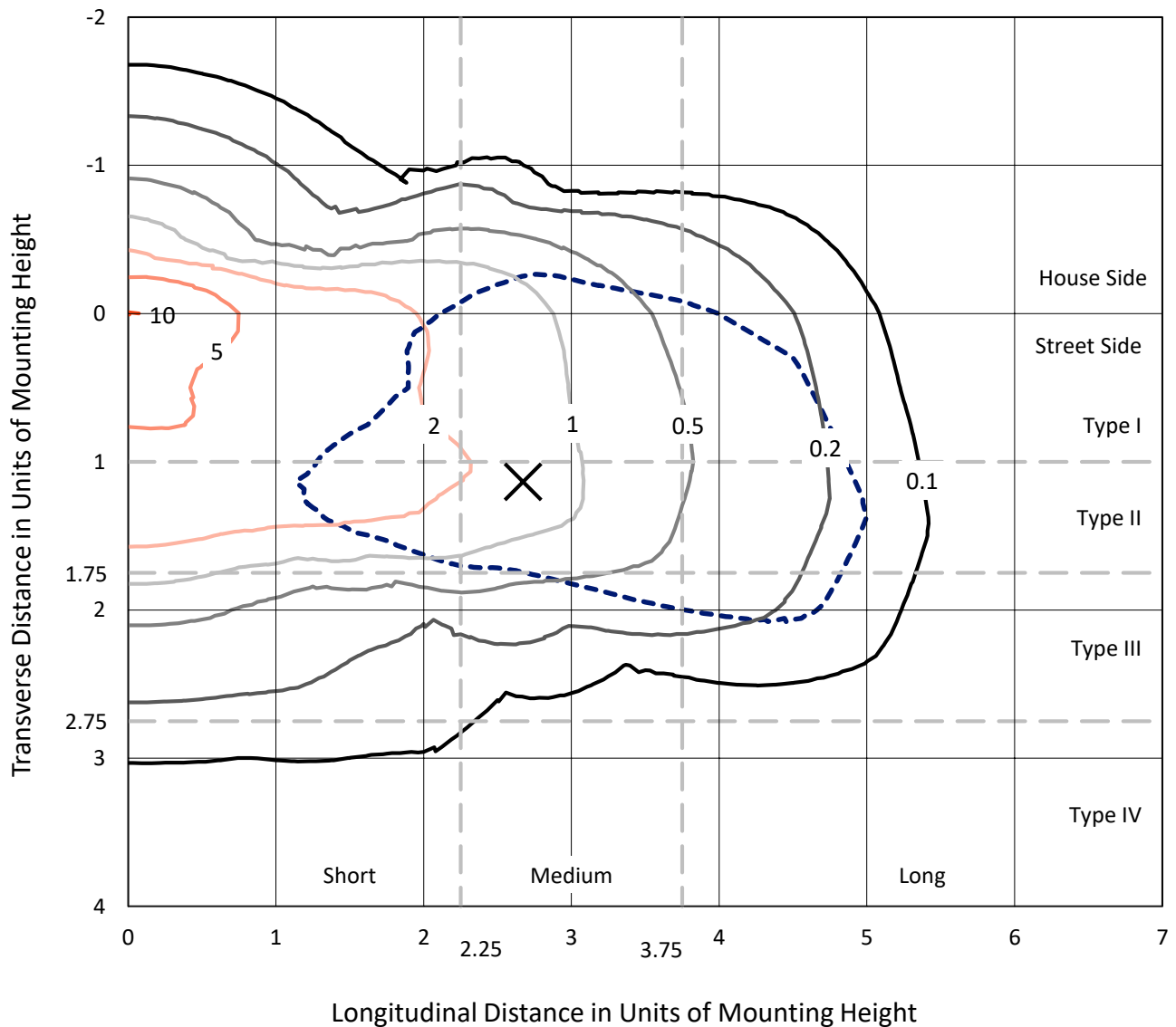


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

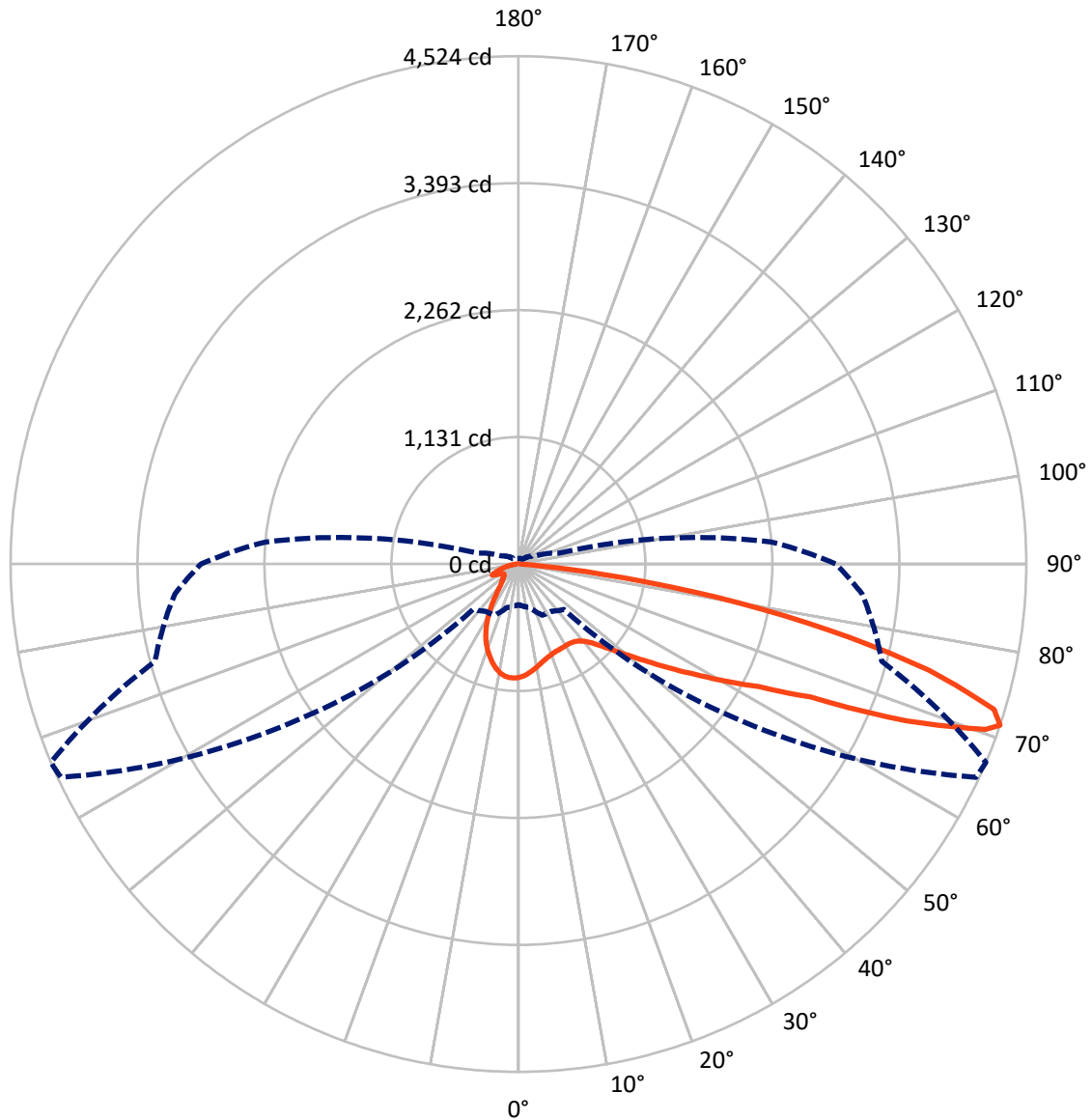


Based on 10 foot mounting height. Maximum calculated value = 10.1 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 67-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	907.8	0.0	907.8
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	3523.2	0.0	3523.2
	% Fixture	79.5	0.0	79.5
Total	Lumens	4431.0	0.0	4431.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	89.5	2.0
10°-20°	220.0	5.0
20°-30°	297.1	6.7
30°-40°	391.3	8.8
40°-50°	557.3	12.6
50°-60°	851.3	19.2
60°-70°	1063.0	24.0
70°-80°	858.1	19.4
80°-90°	103.4	2.3
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°	4431.0	100.0
0°-180°	4431.0	100.0



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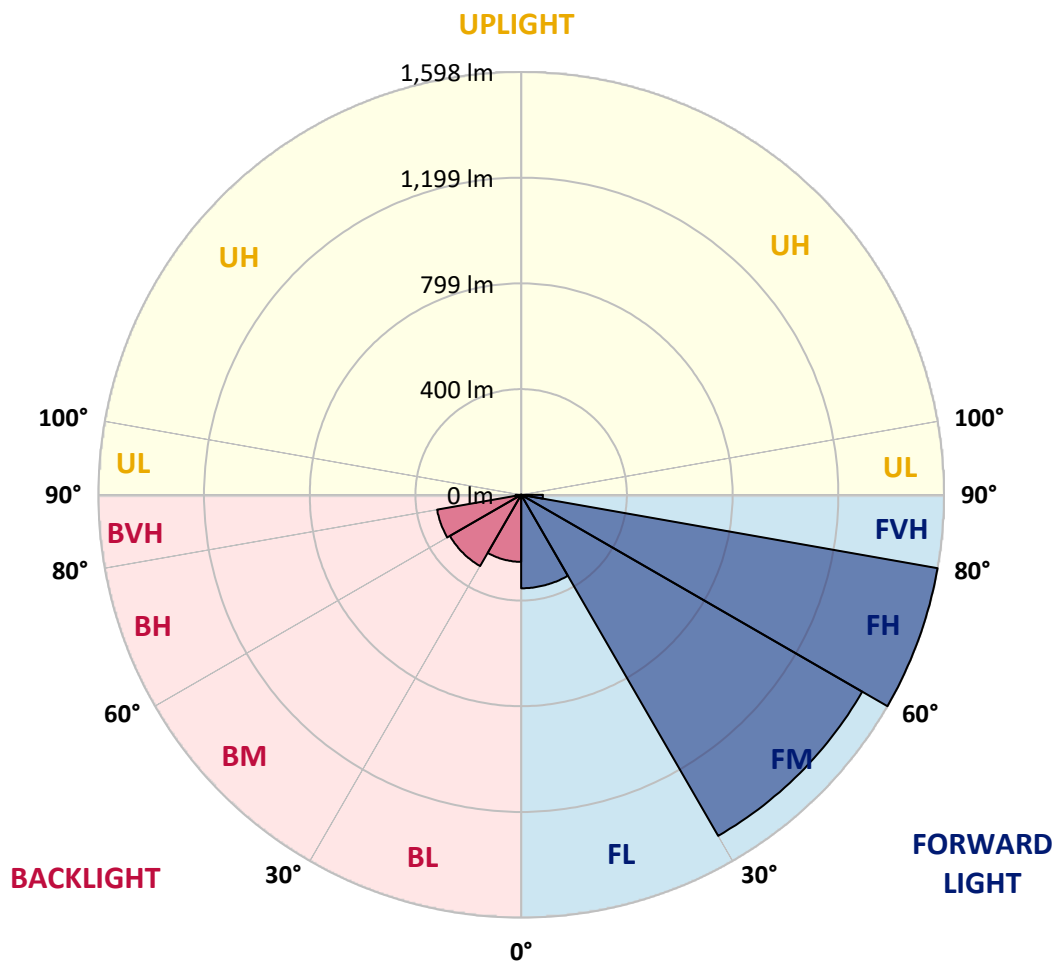
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	353.4	8.0			
FM	(30°-60°)	1488.9	33.6			
FH	(60°-80°)	1598.5	36.1			G1/1800
FVH	(80°-90°)	82.5	1.9			G1/100
BL	(0°-30°)	253.3	5.7	B1/500		
BM	(30°-60°)	311.0	7.0	B1/1000		
BH	(60°-80°)	322.6	7.3	B1/500		G1/500
BVH	(80°-90°)	20.9	0.5			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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1010.4	1010.4	1010.4	1010.4	1010.4	1010.4	1010.4	1010.4	1010.4	1010.4	1010.4
2.5°	953.0	957.4	958.1	967.0	970.2	980.4	986.1	995.7	997.0	1002.7	1006.6
5°	891.1	891.7	895.6	903.2	915.3	933.8	947.9	971.5	975.9	992.5	1007.2
7.5°	835.6	838.8	845.2	856.7	870.7	892.4	914.1	946.6	953.0	979.8	1007.8
10°	798.0	801.2	806.3	819.0	833.1	857.3	883.4	921.1	928.1	965.1	1005.9
12.5°	768.0	771.2	775.0	789.0	804.4	828.6	855.4	897.5	904.5	947.2	1001.5
15°	748.2	748.9	754.0	765.4	782.7	806.3	833.1	876.4	884.7	933.2	1000.2
17.5°	736.1	737.4	741.8	750.8	766.1	789.0	815.2	859.2	868.8	921.7	1000.8
20°	736.7	738.0	740.6	743.8	754.6	774.4	801.8	846.5	856.0	914.7	1005.3
22.5°	750.1	750.8	751.4	746.9	750.8	764.8	791.6	837.5	847.7	911.5	1010.4
25°	775.6	775.6	774.4	764.2	755.9	761.6	785.9	834.3	844.5	909.0	1015.5
27.5°	810.7	813.3	806.9	794.8	775.6	766.1	784.6	831.8	842.0	909.0	1018.0
30°	858.6	859.8	857.3	841.4	810.1	783.9	788.4	829.9	840.1	907.7	1018.7
32.5°	907.1	910.9	914.1	900.0	862.4	815.8	803.7	832.4	841.4	907.1	1016.8
35°	956.2	958.7	974.0	971.5	930.7	863.7	828.6	842.6	850.3	910.2	1018.0
37.5°	998.3	1004.0	1026.3	1043.6	1011.7	928.7	871.3	865.0	869.4	926.2	1025.1
40°	1043.6	1051.8	1085.0	1117.5	1103.5	1010.4	931.9	905.1	903.9	955.5	1042.3
42.5°	1094.6	1104.2	1146.9	1194.1	1198.6	1114.4	1012.9	961.9	960.6	1005.9	1079.9
45°	1154.5	1163.5	1221.5	1277.7	1305.1	1230.5	1112.4	1042.3	1042.9	1076.1	1139.9
47.5°	1228.5	1242.6	1298.7	1370.1	1419.3	1361.2	1233.0	1154.5	1149.4	1182.0	1238.1
50°	1332.5	1344.0	1390.6	1460.1	1546.2	1519.4	1384.8	1289.8	1285.9	1301.3	1369.5
52.5°	1441.6	1445.4	1467.7	1539.8	1684.6	1711.4	1571.7	1457.5	1442.9	1451.2	1532.8
55°	1448.0	1456.3	1470.9	1562.1	1809.0	1941.7	1777.7	1655.3	1636.1	1630.4	1718.4
57.5°	1315.3	1328.7	1347.8	1465.8	1814.1	2207.7	2070.5	1886.2	1851.7	1823.0	1916.8
60°	1034.0	1051.2	1086.3	1231.1	1684.6	2359.5	2559.1	2145.2	2114.5	2016.9	2110.7
62.5°	747.6	754.6	788.4	853.5	1337.0	2368.4	3068.2	2483.2	2407.3	2205.8	2277.8
65°	602.1	613.6	623.8	623.2	791.6	2100.5	3406.2	3084.7	2855.7	2416.9	2461.5
67.5°	496.3	500.1	525.0	568.3	538.4	1297.4	3440.0	3963.7	3731.5	2701.4	2679.7
70°	414.6	415.9	440.8	518.6	515.4	669.8	2884.4	4469.6	4413.4	3168.3	3021.0
71°	362.9	373.8	401.2	502.0	512.8	572.2	2450.7	4496.3	4524.4	3351.4	3073.9
72.5°	285.8	285.8	324.7	460.5	517.3	528.2	1805.8	4350.3	4431.3	3559.3	2982.0
75°	167.8	166.5	187.5	320.8	528.8	526.2	986.1	3615.4	3779.4	3596.9	2760.1
77.5°	94.4	96.3	107.8	178.6	419.7	505.2	566.4	2632.5	2825.8	3008.8	2334.0
80°	43.4	45.9	54.2	86.8	247.5	436.3	404.4	1709.5	1782.8	1808.4	1102.9
82.5°	11.5	12.8	16.6	33.2	95.7	297.2	299.2	715.7	739.3	427.4	236.6
85°	0.0	0.0	0.0	0.0	1.3	36.4	84.8	128.8	107.2	56.8	48.5
87.5°	0.0	0.0	0.0	0.0	0.0	1.3	1.9	2.6	2.6	2.6	3.2
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°	1010.4	1010.4	1010.4	1010.4	1010.4	1010.4	1010.4	1010.4	1010.4	1010.4	1010.4
2.5°	1009.7	1012.3	1016.8	1016.1	1014.9	1007.2	1011.7	1007.2	1006.6	1004.6	1005.3
5°	1012.3	1016.1	1018.7	1012.9	1003.4	986.8	981.0	966.4	956.8	951.7	949.2
7.5°	1016.1	1018.7	1017.4	1001.5	976.6	945.3	918.5	897.5	875.2	871.3	870.1
10°	1016.1	1018.7	1008.5	977.9	935.1	886.0	845.2	810.7	776.3	763.5	765.4
12.5°	1013.6	1014.9	991.2	942.1	880.3	813.3	755.9	699.1	655.1	628.3	623.2
15°	1011.7	1009.7	968.3	897.5	815.2	732.3	645.5	569.0	516.7	481.6	477.1
17.5°	1011.7	1004.6	940.9	846.5	744.4	630.2	515.4	432.5	374.4	354.0	353.4
20°	1012.9	997.6	911.5	793.5	656.4	509.0	384.6	313.8	292.1	289.0	289.6
22.5°	1014.2	988.1	879.6	733.6	558.1	379.5	274.9	249.4	251.3	259.0	258.3
25°	1012.9	975.3	842.0	666.6	451.0	273.6	222.0	215.6	227.1	236.0	238.6
27.5°	1009.7	958.7	801.8	586.8	343.8	215.6	193.9	193.3	204.8	213.0	212.4
30°	1000.2	938.9	755.2	502.6	248.1	183.7	174.8	176.7	184.3	192.0	192.0
32.5°	990.0	916.6	706.1	410.8	190.7	166.5	163.3	163.9	169.0	174.8	174.1
35°	979.1	894.9	655.7	315.1	167.1	156.3	155.0	154.4	156.3	157.6	157.6
37.5°	972.8	875.8	600.2	237.3	154.4	149.9	147.3	144.8	144.2	142.9	141.6
40°	975.3	863.0	546.7	183.7	146.7	142.9	139.1	135.2	132.7	131.4	130.8
42.5°	993.2	859.2	487.3	158.2	139.7	136.5	131.4	125.0	122.5	122.5	121.8
45°	1034.6	870.7	431.8	145.4	133.3	129.5	121.2	116.7	114.8	115.5	115.5
47.5°	1099.7	903.2	382.1	139.1	128.8	123.1	113.5	109.1	107.8	108.4	108.4
50°	1197.3	964.5	331.1	133.3	123.7	116.1	107.8	102.7	100.8	100.8	100.8
52.5°	1340.2	1065.2	294.1	129.5	119.3	110.4	102.1	96.3	93.8	93.8	93.1
55°	1514.3	1196.6	280.0	126.9	113.5	105.2	96.3	90.6	86.8	85.5	86.1
57.5°	1705.0	1367.0	300.4	126.3	107.2	99.5	90.6	83.6	79.7	79.1	78.5
60°	1901.5	1536.0	359.1	123.1	102.1	92.5	84.2	77.8	74.0	72.7	72.1
62.5°	2071.2	1704.4	456.1	120.6	98.2	86.1	77.2	71.4	68.3	66.3	66.3
65°	2275.9	1897.7	604.1	123.7	96.3	79.7	70.8	65.7	63.1	61.2	61.2
67.5°	2555.3	2184.1	716.3	139.1	100.8	74.6	63.8	60.0	58.0	56.8	56.8
70°	2830.2	2344.8	498.2	163.3	112.3	70.2	57.4	54.9	53.6	52.3	52.3
71°	2826.4	2258.7	374.4	169.0	116.1	68.9	54.9	52.9	51.7	51.0	50.4
72.5°	2684.8	2053.3	268.5	163.9	114.2	65.1	51.7	49.8	48.5	48.5	47.8
75°	2408.0	1809.6	209.9	137.1	95.7	58.0	45.9	44.7	43.4	42.7	43.4
77.5°	1972.9	1448.0	165.2	108.4	72.7	47.8	40.8	38.9	38.3	37.6	38.3
80°	906.4	630.9	120.6	84.2	54.2	38.3	34.4	33.8	33.2	32.5	32.5
82.5°	218.2	176.7	64.4	56.1	37.0	29.3	27.4	27.4	27.4	26.8	26.8
85°	47.8	47.8	26.2	26.2	22.3	20.4	21.7	21.7	21.7	20.4	20.4
87.5°	2.6	7.7	8.3	12.1	12.8	12.1	14.7	15.3	14.7	14.0	13.4
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)