

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: P401946

Luminaire Tested: **ENT-SA1F-830-U-T2**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401946
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-11)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1F-830-U-T2
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6158 lumens
Efficiency: N/A
Efficacy: 93.2 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 - G2

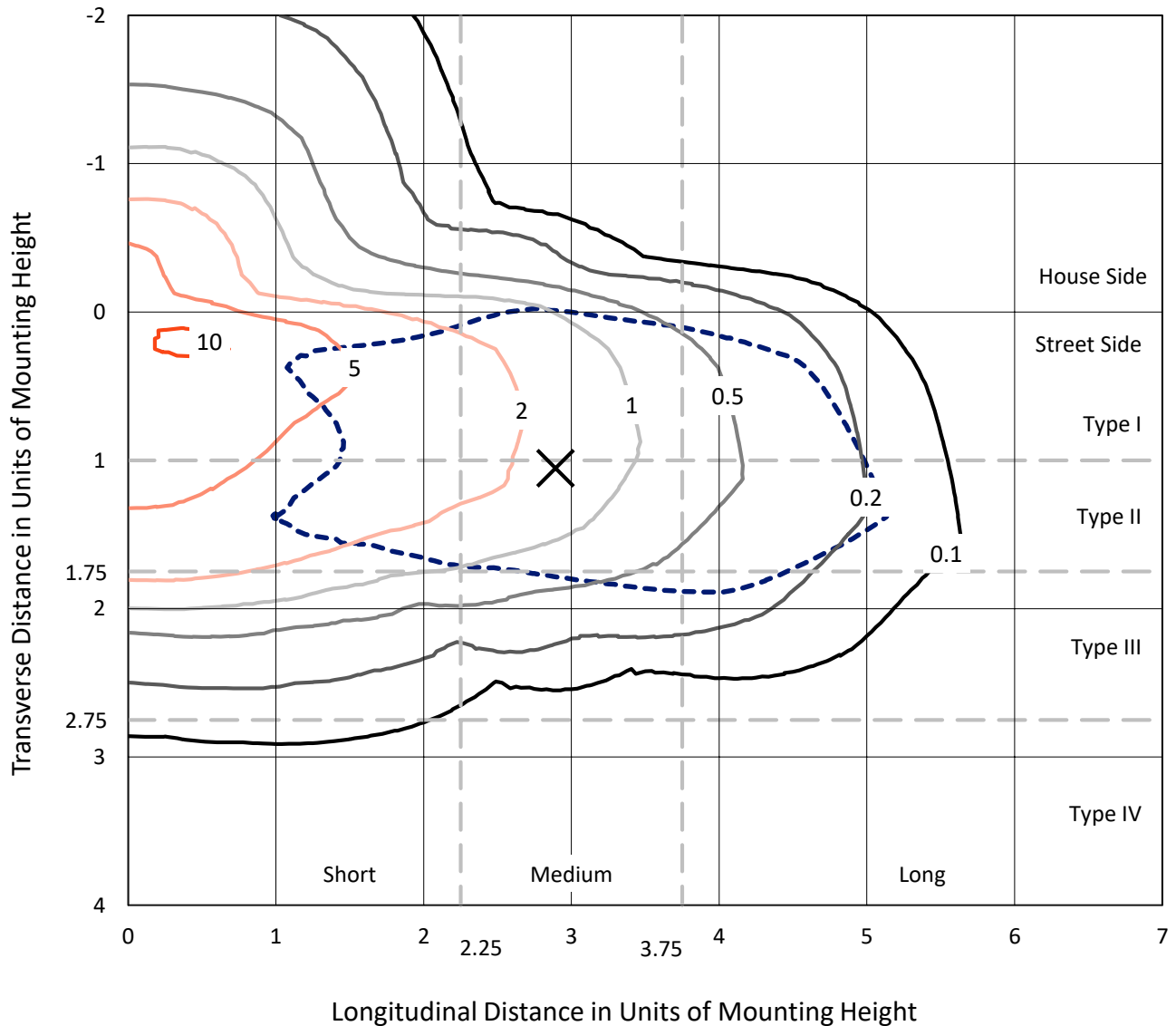
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

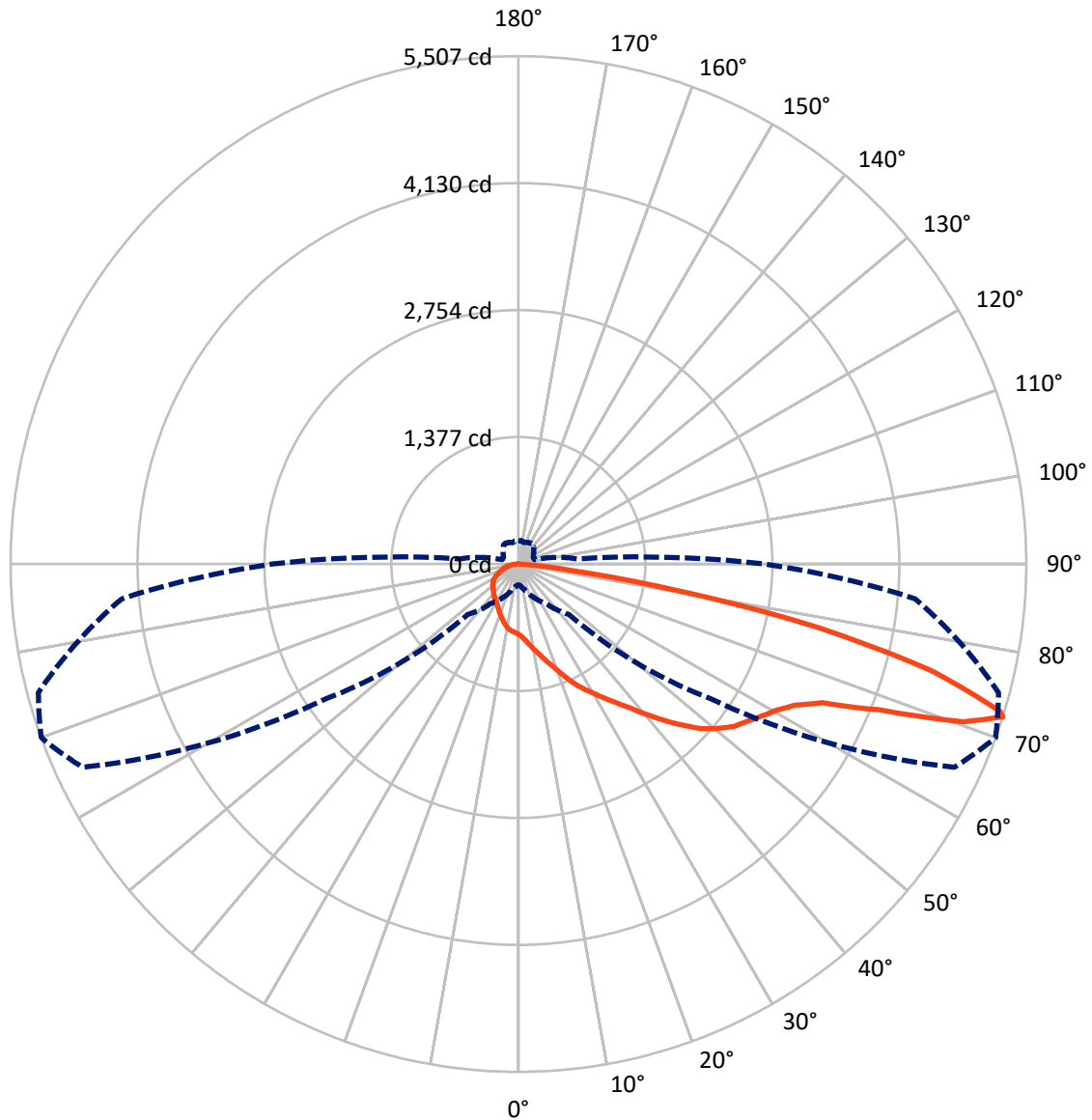
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.6 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1144.2	0.0	1144.2
	% Fixture	18.6	0.0	18.6
Street Side	Lumens	5013.8	0.0	5013.8
	% Fixture	81.4	0.0	81.4
Total	Lumens	6158.0	0.0	6158.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	1.2
10°-20°	245.9	4.0
20°-30°	435.5	7.1
30°-40°	647.5	10.5
40°-50°	939.3	15.3
50°-60°	1283.3	20.8
60°-70°	1405.0	22.8
70°-80°	999.4	16.2
80°-90°	125.5	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°	6158.0	100.0
0°-180°	6158.0	100.0



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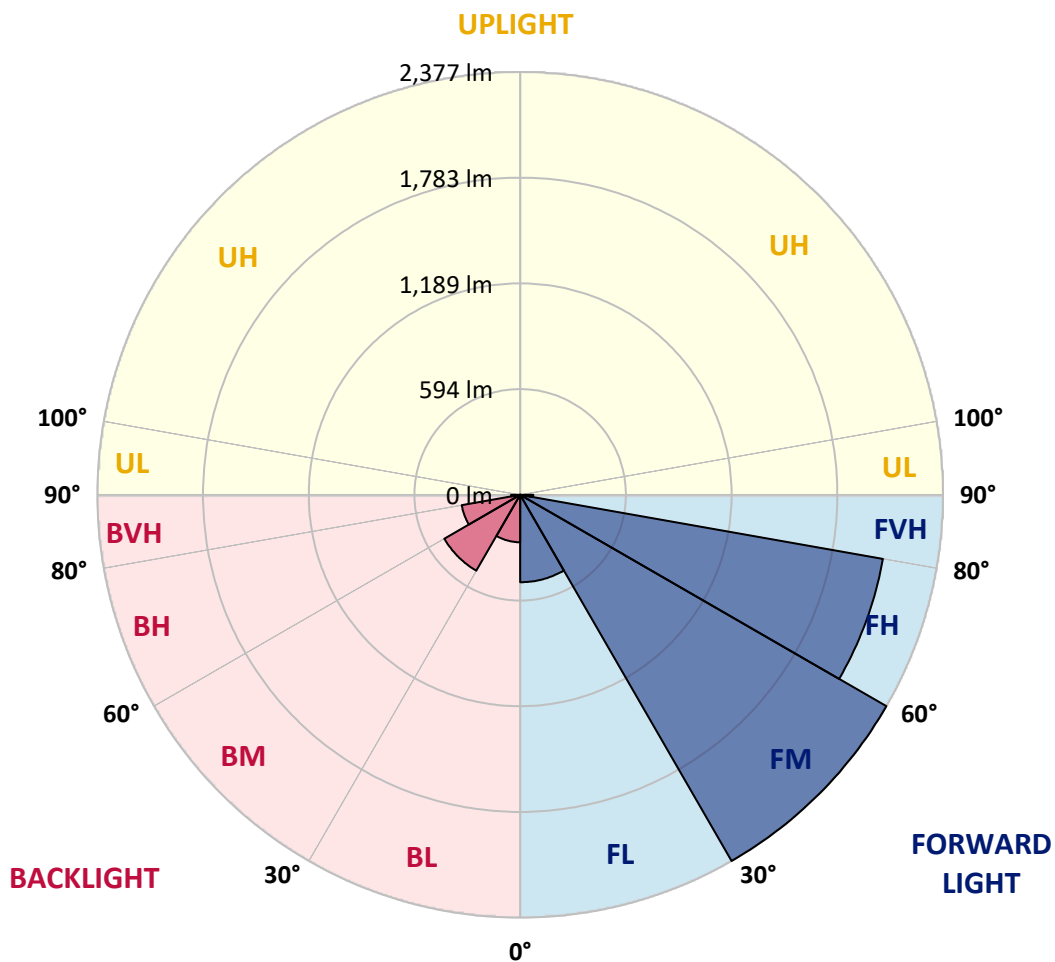
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	491.5	8.0			
FM	(30°-60°)	2377.4	38.6			
FH	(60°-80°)	2070.8	33.6			G2/5000
FVH	(80°-90°)	74.1	1.2			G1/100
BL	(0°-30°)	266.6	4.3	B1/500		
BM	(30°-60°)	492.7	8.0	B1/1000		
BH	(60°-80°)	333.6	5.4	B1/500		G1/500
BVH	(80°-90°)	51.4	0.8			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	762.6	762.6	762.6	762.6	762.6	762.6	762.6	762.6	762.6	762.6	762.6
2.5°	847.9	843.5	844.4	836.5	832.1	821.6	810.1	797.8	791.7	787.3	772.3
5°	930.6	930.6	934.1	928.0	911.3	893.7	873.5	846.2	834.8	818.9	789.0
7.5°	999.2	1001.0	1001.0	999.2	984.3	964.9	938.5	905.1	886.6	863.8	817.2
10°	1034.4	1038.8	1042.3	1045.0	1043.2	1031.8	1001.9	967.6	942.1	912.2	849.7
12.5°	1052.0	1053.8	1059.9	1073.1	1083.7	1092.5	1070.5	1030.0	1004.5	968.5	884.9
15°	1071.4	1071.4	1077.5	1094.2	1114.5	1138.2	1135.6	1103.9	1076.6	1031.8	929.8
17.5°	1083.7	1087.2	1098.6	1116.2	1144.4	1184.0	1204.2	1186.6	1151.4	1103.9	978.1
20°	1076.6	1079.3	1102.2	1136.5	1172.5	1223.5	1274.6	1274.6	1241.1	1186.6	1031.8
22.5°	1089.8	1094.2	1110.1	1142.6	1191.9	1257.8	1341.4	1370.4	1341.4	1281.6	1094.2
25°	1140.9	1139.1	1152.3	1165.5	1207.7	1289.5	1398.6	1473.4	1447.0	1381.0	1154.9
27.5°	1214.7	1214.7	1221.8	1220.9	1235.9	1315.9	1448.7	1564.0	1542.0	1462.8	1205.1
30°	1300.1	1301.8	1300.1	1299.2	1296.5	1352.0	1493.6	1644.9	1633.4	1555.2	1250.8
32.5°	1403.9	1408.3	1401.2	1383.6	1373.1	1403.9	1531.4	1735.5	1739.0	1646.6	1295.7
35°	1534.0	1541.1	1514.7	1489.2	1462.8	1476.9	1575.4	1820.8	1856.0	1750.4	1350.2
37.5°	1664.2	1675.7	1671.3	1602.7	1565.7	1564.8	1640.5	1927.2	1986.2	1885.9	1427.6
40°	1774.2	1783.9	1789.1	1726.7	1675.7	1673.9	1736.4	2038.1	2146.3	2041.6	1519.1
42.5°	1847.2	1856.0	1871.8	1834.9	1787.4	1809.4	1841.9	2148.0	2318.7	2231.6	1631.7
45°	1926.4	1933.4	1943.1	1922.0	1897.3	1960.7	1975.6	2270.3	2491.1	2435.6	1763.6
47.5°	2010.8	2017.8	2023.1	2007.3	1998.5	2087.3	2106.7	2395.2	2665.2	2646.8	1892.0
50°	2104.0	2106.7	2112.0	2104.0	2106.7	2202.6	2214.9	2505.1	2803.3	2866.7	2025.7
52.5°	2264.1	2267.6	2269.4	2231.6	2218.4	2275.6	2301.9	2622.1	2924.7	3049.6	2143.6
55°	2390.8	2403.1	2458.5	2433.9	2402.2	2327.5	2374.1	2716.2	3010.9	3220.3	2266.8
57.5°	2287.0	2315.1	2453.2	2569.3	2658.2	2479.6	2459.4	2813.0	3110.3	3367.2	2410.1
60°	1985.3	2026.6	2227.2	2469.1	2756.7	2828.8	2634.4	2933.5	3218.5	3520.2	2564.1
62.5°	1376.6	1418.8	1695.9	2082.0	2590.5	3028.5	3113.8	3147.3	3368.9	3676.8	2764.6
65°	659.7	702.8	931.5	1338.8	2046.0	2900.1	3672.4	3590.6	3622.2	3875.6	3060.2
67.5°	419.6	442.4	532.2	729.2	1190.1	2258.8	3872.9	4473.7	4222.1	4333.9	3648.6
70°	307.0	312.3	389.7	504.9	706.3	1319.4	3419.9	5319.0	5122.0	5109.7	4358.5
72°	226.9	235.7	295.5	402.9	522.5	771.4	2544.7	5216.1	5507.3	5390.3	4316.3
72.5°	213.7	220.8	272.7	380.9	493.5	677.3	2280.0	5096.5	5459.8	5398.2	4235.3
75°	155.7	161.0	186.5	270.9	381.8	392.3	1217.4	3911.6	4636.4	5153.7	3839.5
77.5°	107.3	110.8	124.0	166.2	261.2	265.6	516.3	2670.5	3346.0	4121.0	2952.9
80°	65.1	66.9	74.8	90.6	166.2	157.5	212.9	1395.9	1746.0	2240.4	1369.6
82.5°	27.3	28.1	32.5	36.1	70.4	74.8	86.2	455.6	577.9	700.2	394.9
85°	0.0	0.0	0.9	0.9	1.8	7.9	12.3	56.3	85.3	102.0	71.2
87.5°	0.0	0.0	0.9	0.9	0.9	1.8	1.8	2.6	3.5	3.5	5.3
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°	762.6	762.6	762.6	762.6	762.6	762.6	762.6	762.6	762.6	762.6	762.6
2.5°	765.3	761.7	751.2	742.4	735.4	723.9	723.0	714.2	714.2	711.6	709.8
5°	777.6	766.1	745.0	725.7	711.6	694.9	687.0	677.3	671.1	667.6	668.5
7.5°	793.4	774.1	738.0	705.4	679.1	658.0	645.6	637.7	633.3	631.6	631.6
10°	815.4	785.5	726.6	677.3	643.9	628.0	621.9	621.0	621.9	622.8	623.6
12.5°	840.0	793.4	705.4	643.9	617.5	611.3	614.8	622.8	629.8	632.4	632.4
15°	865.5	798.7	676.4	613.1	597.3	603.4	615.7	630.7	642.1	649.2	650.9
17.5°	891.9	799.6	645.6	584.9	579.7	595.5	617.5	641.2	659.7	671.1	672.9
20°	920.1	797.8	609.6	559.4	562.1	588.5	619.2	651.8	676.4	691.4	693.1
22.5°	950.9	790.8	574.4	534.8	547.1	581.4	617.5	655.3	681.7	699.3	702.8
25°	980.8	776.7	539.2	512.8	536.6	574.4	608.7	641.2	666.7	683.5	687.9
27.5°	996.6	746.8	505.8	496.1	528.6	563.8	588.5	610.5	624.5	635.1	639.5
30°	999.2	704.6	478.5	484.7	519.9	548.9	563.0	566.5	563.8	567.4	563.0
32.5°	994.0	658.8	456.5	475.9	505.8	527.8	531.3	520.7	504.9	482.9	483.8
35°	990.4	608.7	438.9	463.6	487.3	501.4	495.2	478.5	448.6	422.2	420.5
37.5°	996.6	563.0	424.0	447.7	463.6	469.7	460.9	438.9	412.5	389.7	387.0
40°	1014.2	529.5	409.9	430.1	438.0	442.4	431.9	412.5	402.0	385.3	382.6
42.5°	1048.5	506.7	396.7	410.8	414.3	418.7	408.1	394.9	404.6	401.1	401.1
45°	1096.0	496.1	385.3	392.3	395.8	402.9	396.7	385.3	395.8	375.6	372.1
47.5°	1157.6	499.6	377.4	373.8	384.4	396.7	389.7	375.6	372.1	336.0	329.9
50°	1222.7	518.1	369.4	358.9	372.1	388.8	380.0	358.0	336.9	318.4	314.9
52.5°	1299.2	548.9	362.4	342.2	358.0	380.0	373.8	350.1	328.1	314.9	312.3
55°	1383.6	578.8	353.6	322.8	339.5	377.4	375.6	344.8	315.8	309.6	307.9
57.5°	1478.6	603.4	343.0	300.8	321.1	369.4	367.7	332.5	312.3	307.0	306.1
60°	1597.4	632.4	324.6	275.3	302.6	354.5	352.7	326.3	304.3	299.9	298.2
62.5°	1759.2	686.1	292.9	251.6	283.2	328.1	338.7	314.0	292.9	292.0	292.0
65°	2025.7	789.9	260.4	231.3	261.2	302.6	320.2	299.9	282.4	286.8	286.8
67.5°	2529.8	929.8	226.9	212.0	240.1	278.0	304.3	285.9	270.9	279.7	279.7
70°	2918.6	877.9	200.6	193.5	219.0	256.0	284.1	270.9	256.8	271.8	270.0
72°	2662.6	643.0	183.0	178.6	201.4	237.5	266.5	256.8	241.9	254.2	250.7
72.5°	2556.2	584.1	177.7	174.2	196.2	234.0	263.0	253.3	237.5	249.8	244.5
75°	2229.8	492.6	154.8	153.1	174.2	210.2	240.1	234.9	219.0	226.1	220.8
77.5°	1845.4	415.2	130.2	133.7	148.7	187.4	216.4	211.1	196.2	195.3	194.4
80°	865.5	231.3	107.3	110.0	124.9	160.1	186.5	183.0	168.9	167.1	164.5
82.5°	250.7	110.8	82.7	84.4	100.3	131.1	160.1	158.3	147.8	145.1	139.0
85°	46.6	36.1	44.9	52.8	73.0	109.1	146.0	142.5	126.7	115.2	106.4
87.5°	2.6	7.0	15.0	25.5	46.6	81.8	117.9	115.2	101.2	87.1	88.0
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)