

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: P401936

Luminaire Tested: **ENT-SA1F-830-U-SL2**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401936
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-SA1F-830-U-SL2
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 1200mA 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: 6111 lumens
Efficiency: N/A
Efficacy: 92.5 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

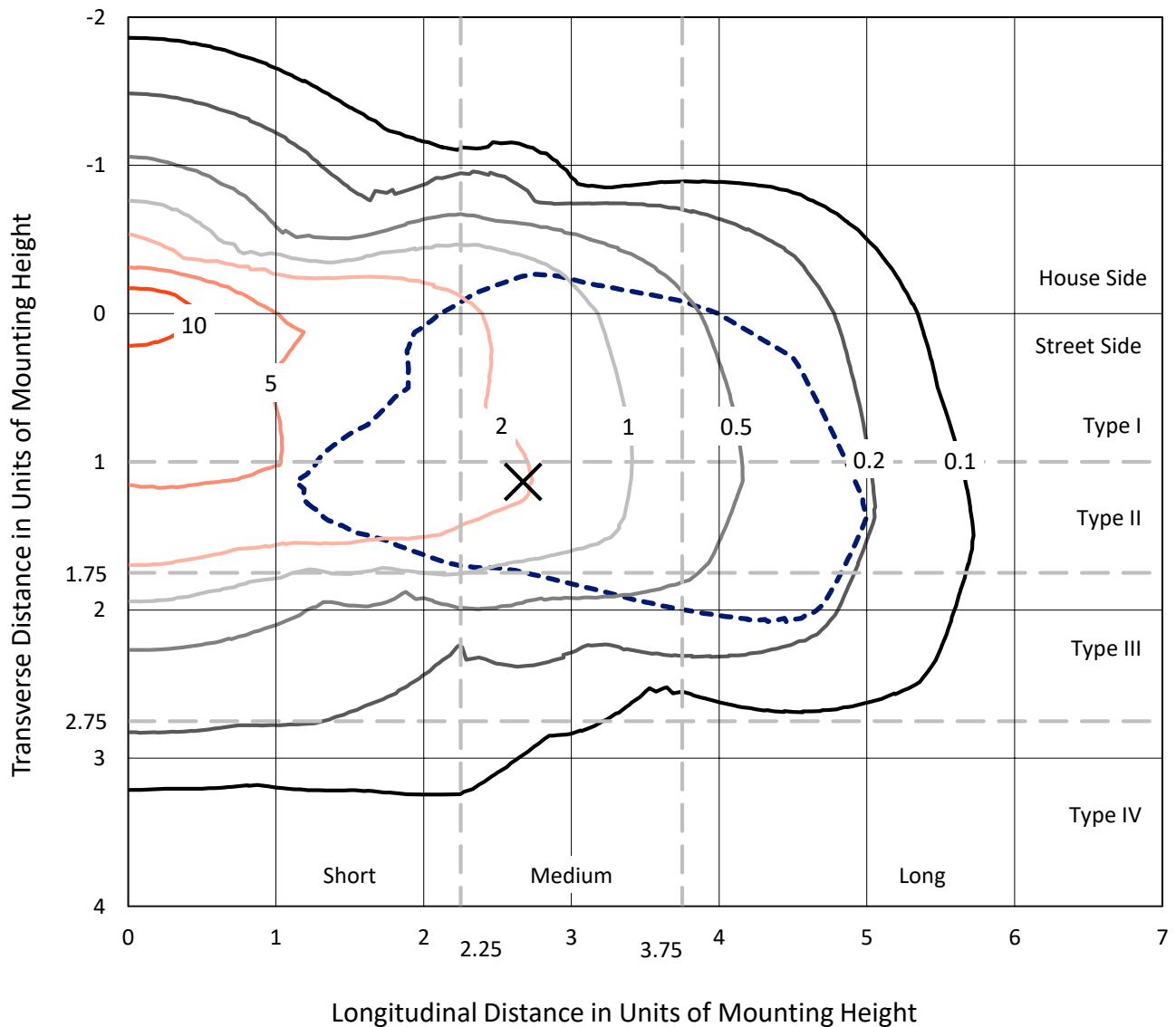
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

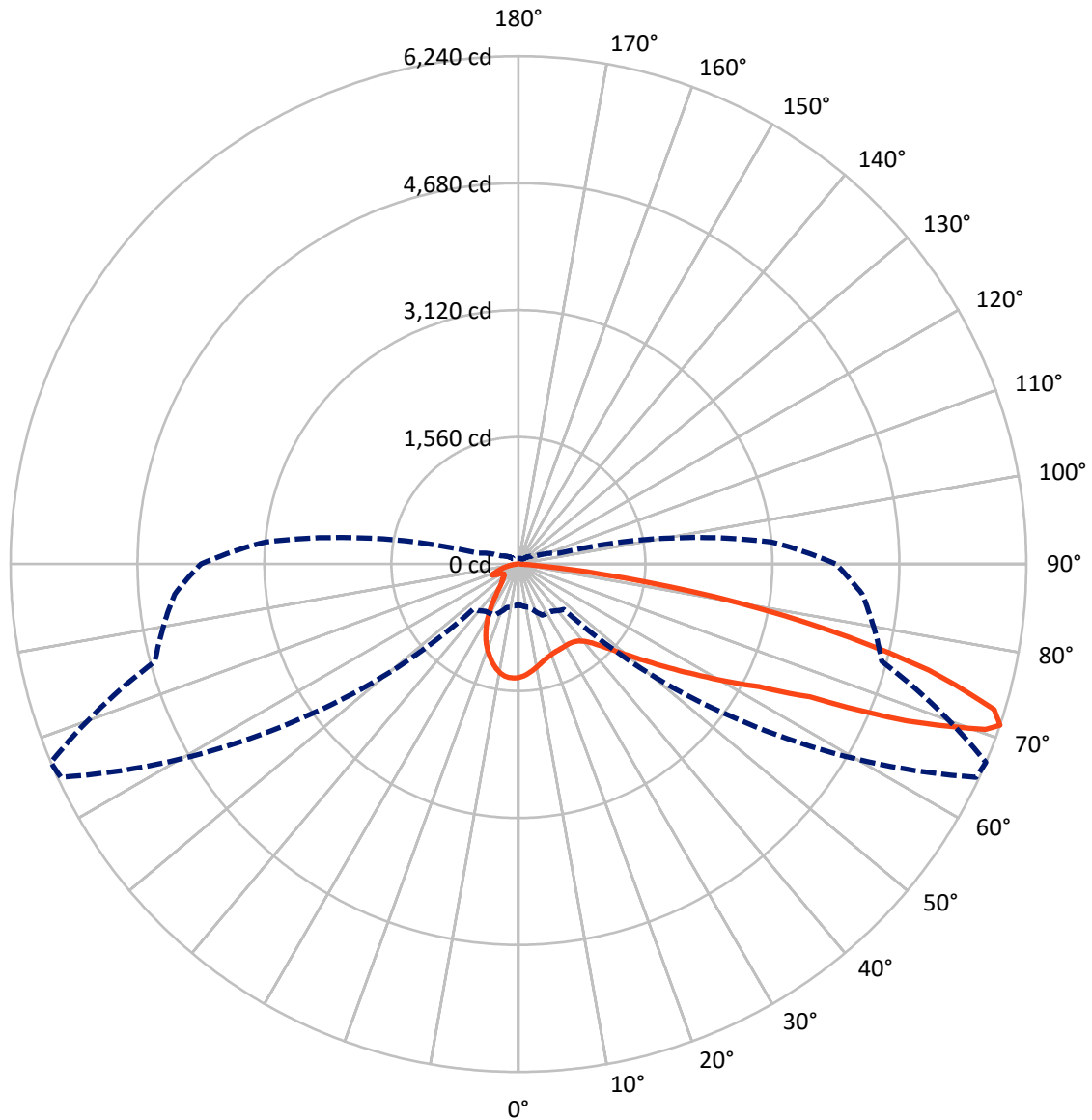
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.9 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	1252.0	0.0	1252.0
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	4859.0	0.0	4859.0
	% Fixture	79.5	0.0	79.5
Total	Lumens	6111.0	0.0	6111.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	123.5	2.0
10°-20°	303.5	5.0
20°-30°	409.7	6.7
30°-40°	539.6	8.8
40°-50°	768.6	12.6
50°-60°	1174.1	19.2
60°-70°	1466.1	24.0
70°-80°	1183.4	19.4
80°-90°	142.6	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°	6111.0	100.0
0°-180°	6111.0	100.0



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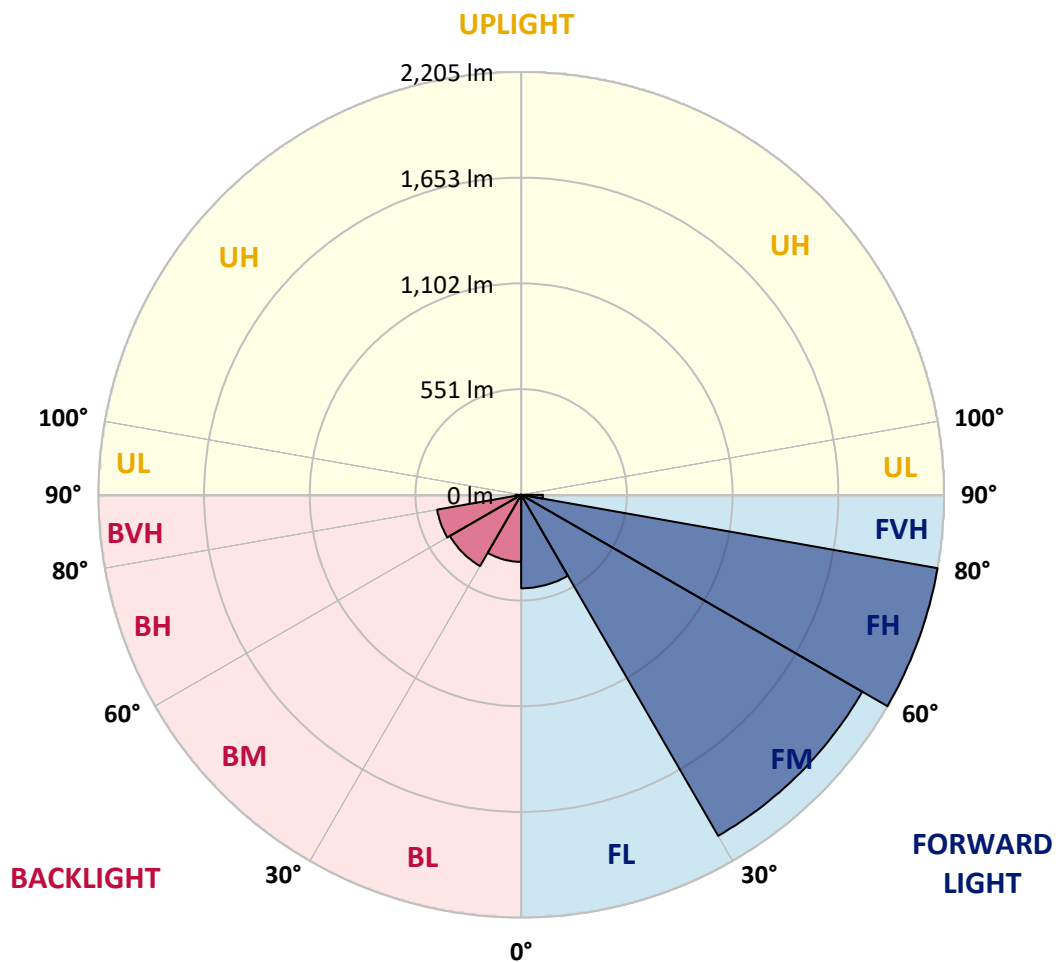
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	487.3	8.0			
FM	(30°-60°)	2053.4	33.6			
FH	(60°-80°)	2204.6	36.1			G2/5000
FVH	(80°-90°)	113.8	1.9			G2/225
BL	(0°-30°)	349.3	5.7	B1/500		
BM	(30°-60°)	428.9	7.0	B1/1000		
BH	(60°-80°)	444.9	7.3	B1/500		G1/500
BVH	(80°-90°)	28.9	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-G2

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	67°	75°	85°
0°	1393.5	1393.5	1393.5	1393.5	1393.5	1393.5	1393.5	1393.5	1393.5	1393.5	1393.5
2.5°	1314.3	1320.5	1321.3	1333.6	1338.0	1352.1	1360.0	1373.2	1375.0	1382.9	1388.2
5°	1229.0	1229.8	1235.1	1245.7	1262.4	1287.9	1307.3	1339.8	1346.0	1368.8	1389.1
7.5°	1152.4	1156.8	1165.6	1181.5	1200.8	1230.7	1260.6	1305.5	1314.3	1351.2	1390.0
10°	1100.5	1104.9	1112.0	1129.6	1148.9	1182.3	1218.4	1270.3	1280.0	1331.0	1387.3
12.5°	1059.2	1063.6	1068.9	1088.2	1109.3	1142.8	1179.7	1237.8	1247.4	1306.4	1381.2
15°	1031.9	1032.8	1039.8	1055.7	1079.4	1112.0	1148.9	1208.7	1220.2	1287.0	1379.4
17.5°	1015.2	1017.0	1023.1	1035.4	1056.5	1088.2	1124.3	1185.0	1198.2	1271.2	1380.3
20°	1016.1	1017.8	1021.4	1025.7	1040.7	1068.0	1105.8	1167.4	1180.6	1261.5	1386.4
22.5°	1034.5	1035.4	1036.3	1030.1	1035.4	1054.8	1091.7	1155.1	1169.1	1257.1	1393.5
25°	1069.7	1069.7	1068.0	1053.9	1042.5	1050.4	1083.8	1150.7	1164.7	1253.6	1400.5
27.5°	1118.1	1121.6	1112.8	1096.1	1069.7	1056.5	1082.1	1147.1	1161.2	1253.6	1404.0
30°	1184.1	1185.9	1182.3	1160.3	1117.2	1081.2	1087.3	1144.5	1158.6	1251.8	1404.9
32.5°	1251.0	1256.2	1260.6	1241.3	1189.4	1125.2	1108.4	1148.0	1160.3	1251.0	1402.3
35°	1318.7	1322.2	1343.3	1339.8	1283.5	1191.1	1142.8	1162.1	1172.7	1255.4	1404.0
37.5°	1376.8	1384.7	1415.5	1439.2	1395.2	1280.9	1201.7	1192.9	1199.1	1277.3	1413.7
40°	1439.2	1450.7	1496.4	1541.3	1521.9	1393.5	1285.3	1248.3	1246.6	1317.8	1437.5
42.5°	1509.6	1522.8	1581.7	1646.8	1653.0	1536.9	1397.0	1326.6	1324.9	1387.3	1489.4
45°	1592.3	1604.6	1684.7	1762.1	1799.9	1697.0	1534.2	1437.5	1438.3	1484.1	1572.1
47.5°	1694.3	1713.7	1791.1	1889.6	1957.4	1877.3	1700.5	1592.3	1585.2	1630.1	1707.5
50°	1837.7	1853.6	1917.8	2013.7	2132.4	2095.5	1909.9	1778.8	1773.5	1794.6	1888.8
52.5°	1988.2	1993.4	2024.2	2123.6	2323.3	2360.3	2167.6	2010.2	1989.9	2001.4	2114.0
55°	1997.0	2008.4	2028.6	2154.4	2494.9	2677.9	2451.8	2282.9	2256.5	2248.6	2370.0
57.5°	1814.0	1832.4	1858.8	2021.6	2501.9	3044.7	2855.6	2601.3	2553.8	2514.2	2643.5
60°	1426.0	1449.8	1498.2	1697.9	2323.3	3254.1	3529.4	2958.5	2916.3	2781.7	2911.0
62.5°	1031.0	1040.7	1087.3	1177.1	1843.9	3266.4	4231.4	3424.7	3320.0	3042.1	3141.5
65°	830.5	846.3	860.4	859.5	1091.7	2896.9	4697.7	4254.3	3938.5	3333.2	3394.8
67.5°	684.4	689.7	724.0	783.8	742.5	1789.3	4744.3	5466.6	5146.3	3725.6	3695.7
70°	571.8	573.6	607.9	715.2	710.8	923.7	3978.1	6164.2	6086.8	4369.5	4166.3
71°	500.6	515.5	553.3	692.3	707.3	789.1	3379.9	6201.1	6239.8	4622.0	4239.4
72.5°	394.1	394.1	447.8	635.2	713.4	728.4	2490.5	5999.7	6111.4	4908.8	4112.7
75°	231.4	229.6	258.6	442.5	729.3	725.8	1360.0	4986.2	5212.3	4960.7	3806.5
77.5°	130.2	132.8	148.7	246.3	578.9	696.7	781.2	3630.6	3897.1	4149.6	3218.9
80°	59.8	63.3	74.8	119.6	341.3	601.7	557.7	2357.6	2458.8	2494.0	1521.0
82.5°	15.8	17.6	22.9	45.7	132.0	409.9	412.6	987.0	1019.6	589.4	326.4
85°	0.0	0.0	0.0	0.0	1.8	50.1	117.0	177.7	147.8	78.3	66.9
87.5°	0.0	0.0	0.0	0.0	0.0	1.8	2.6	3.5	3.5	3.5	4.4
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°	1393.5	1393.5	1393.5	1393.5	1393.5	1393.5	1393.5	1393.5	1393.5	1393.5	1393.5
2.5°	1392.6	1396.1	1402.3	1401.4	1399.6	1389.1	1395.2	1389.1	1388.2	1385.6	1386.4
5°	1396.1	1401.4	1404.9	1397.0	1383.8	1360.9	1353.0	1332.8	1319.6	1312.5	1309.0
7.5°	1401.4	1404.9	1403.1	1381.2	1346.8	1303.7	1266.8	1237.8	1207.0	1201.7	1199.9
10°	1401.4	1404.9	1390.8	1348.6	1289.7	1221.9	1165.6	1118.1	1070.6	1053.0	1055.7
12.5°	1397.9	1399.6	1367.1	1299.3	1214.0	1121.6	1042.5	964.2	903.5	866.5	859.5
15°	1395.2	1392.6	1335.4	1237.8	1124.3	1009.9	890.3	784.7	712.6	664.2	658.0
17.5°	1395.2	1385.6	1297.6	1167.4	1026.6	869.2	710.8	596.4	516.4	488.2	487.4
20°	1397.0	1375.9	1257.1	1094.4	905.2	702.0	530.5	432.8	402.9	398.5	399.4
22.5°	1398.7	1362.7	1213.1	1011.7	769.8	523.4	379.2	344.0	346.6	357.2	356.3
25°	1397.0	1345.1	1161.2	919.3	622.0	377.4	306.1	297.3	313.2	325.5	329.0
27.5°	1392.6	1322.2	1105.8	809.3	474.2	297.3	267.4	266.6	282.4	293.8	292.9
30°	1379.4	1294.9	1041.6	693.2	342.2	253.4	241.0	243.7	254.2	264.8	264.8
32.5°	1365.3	1264.2	973.8	566.5	263.0	229.6	225.2	226.1	233.1	241.0	240.2
35°	1350.4	1234.2	904.3	434.6	230.5	215.5	213.8	212.9	215.5	217.3	217.3
37.5°	1341.6	1207.9	827.8	327.3	212.9	206.7	203.2	199.7	198.8	197.1	195.3
40°	1345.1	1190.3	753.9	253.4	202.3	197.1	191.8	186.5	183.0	181.2	180.3
42.5°	1369.7	1185.0	672.1	218.2	192.7	188.3	181.2	172.4	168.9	168.9	168.0
45°	1426.9	1200.8	595.6	200.6	183.9	178.6	167.1	161.0	158.3	159.2	159.2
47.5°	1516.6	1245.7	526.9	191.8	177.7	169.8	156.6	150.4	148.7	149.6	149.6
50°	1651.2	1330.1	456.6	183.9	170.7	160.1	148.7	141.6	139.0	139.0	139.0
52.5°	1848.3	1469.1	405.5	178.6	164.5	152.2	140.8	132.8	129.3	129.3	128.4
55°	2088.4	1650.3	386.2	175.1	156.6	145.2	132.8	124.9	119.6	117.9	118.8
57.5°	2351.5	1885.2	414.3	174.2	147.8	137.2	124.9	115.2	110.0	109.1	108.2
60°	2622.4	2118.4	495.3	169.8	140.8	127.6	116.1	107.3	102.0	100.3	99.4
62.5°	2856.4	2350.6	629.0	166.3	135.5	118.8	106.4	98.5	94.1	91.5	91.5
65°	3138.8	2617.2	833.1	170.7	132.8	110.0	97.6	90.6	87.1	84.5	84.5
67.5°	3524.1	3012.1	987.9	191.8	139.0	102.9	88.0	82.7	80.1	78.3	78.3
70°	3903.3	3233.8	687.1	225.2	154.8	96.8	79.2	75.7	73.9	72.1	72.1
71°	3898.0	3115.1	516.4	233.1	160.1	95.0	75.7	73.0	71.3	70.4	69.5
72.5°	3702.7	2831.8	370.4	226.1	157.5	89.7	71.3	68.6	66.9	66.9	66.0
75°	3320.9	2495.8	289.4	189.1	132.0	80.1	63.3	61.6	59.8	58.9	59.8
77.5°	2721.0	1997.0	227.8	149.6	100.3	66.0	56.3	53.7	52.8	51.9	52.8
80°	1250.1	870.0	166.3	116.1	74.8	52.8	47.5	46.6	45.7	44.9	44.9
82.5°	300.9	243.7	88.9	77.4	51.0	40.5	37.8	37.8	37.8	36.9	36.9
85°	66.0	66.0	36.1	36.1	30.8	28.2	29.9	29.9	29.9	28.2	28.2
87.5°	3.5	10.6	11.4	16.7	17.6	16.7	20.2	21.1	20.2	19.4	18.5
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)