

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: P401938

Luminaire Tested: **ENT-SA1F-830-U-SL3**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401938
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G1-2004-754-3)
Test Lab: INNOVATION CENTER
Issue Date: 5/20/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: INVUE
Catalog Number: ENT-SA1F-830-U-SL3
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS AND TYPE III SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6070 lumens
Efficiency: N/A
Efficacy: 91.8 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 - G2

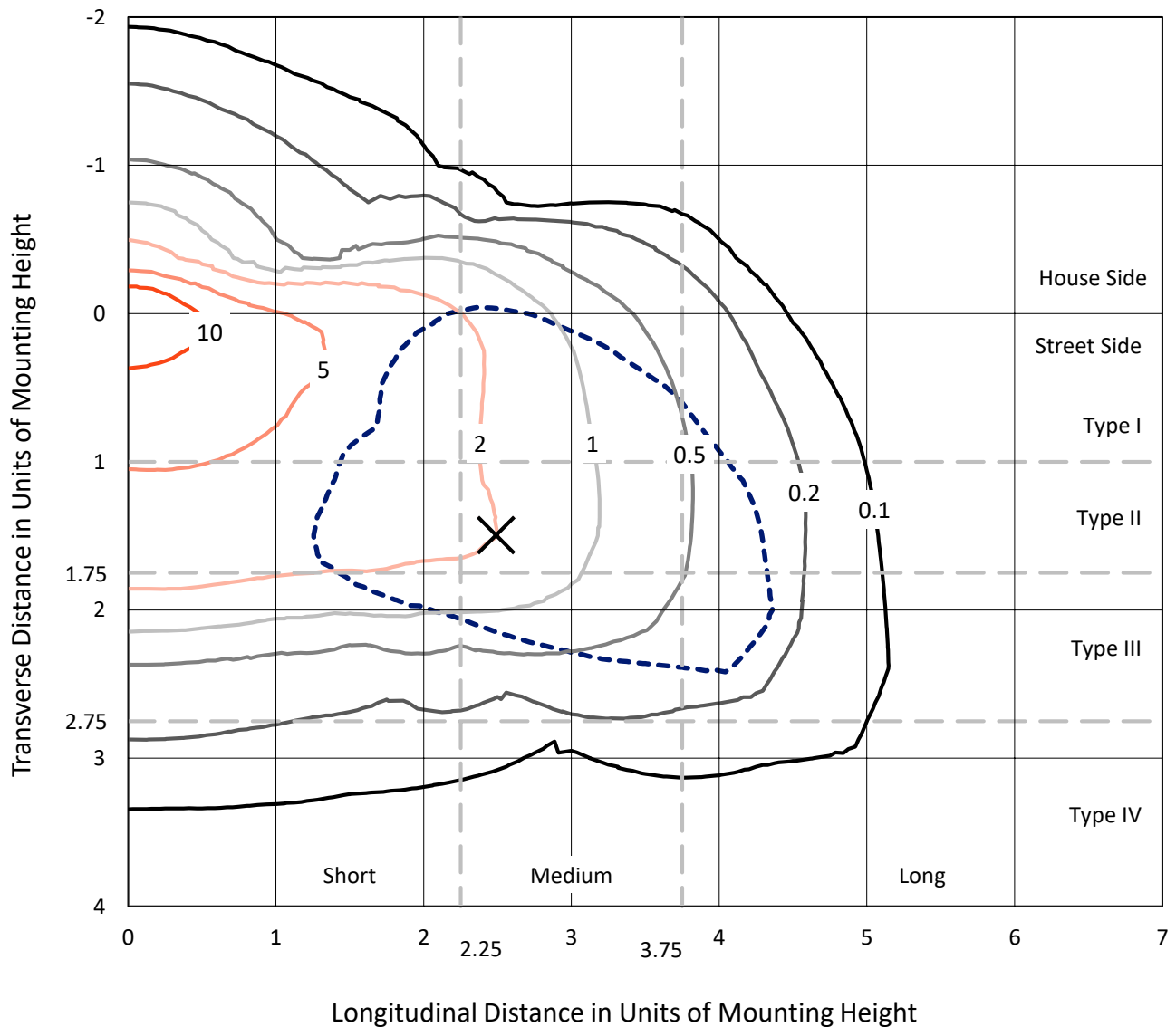
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

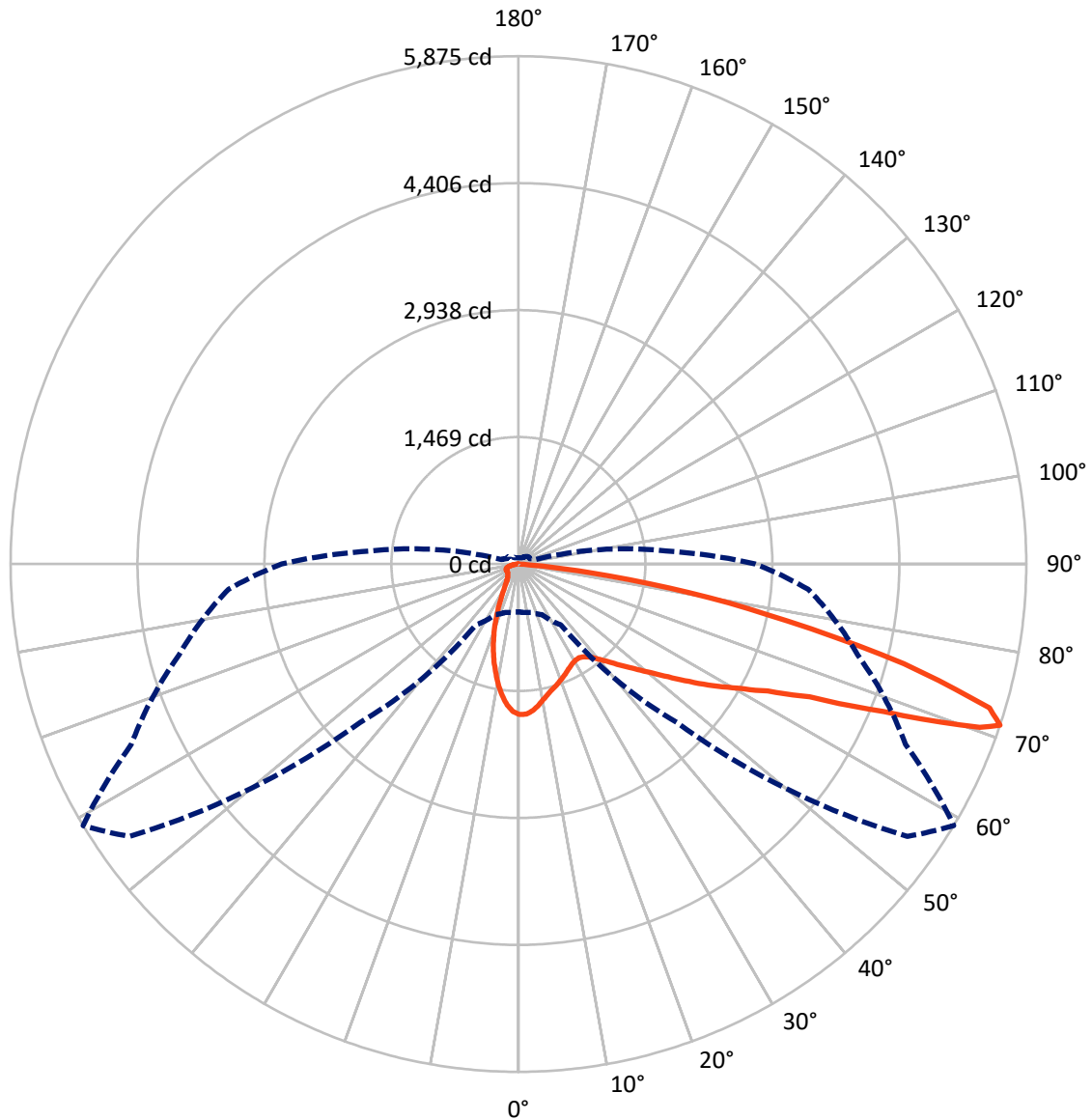
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 17.4 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1030.2	0.0	1030.2
	% Fixture	17.0	0.0	17.0
Street Side	Lumens	5039.8	0.0	5039.8
	% Fixture	83.0	0.0	83.0
Total	Lumens	6070.0	0.0	6070.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	150.4	2.5
10°-20°	338.0	5.6
20°-30°	429.6	7.1
30°-40°	549.2	9.0
40°-50°	762.2	12.6
50°-60°	1128.5	18.6
60°-70°	1525.3	25.1
70°-80°	1081.6	17.8
80°-90°	105.1	1.7
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°	6070.0	100.0
0°-180°	6070.0	100.0



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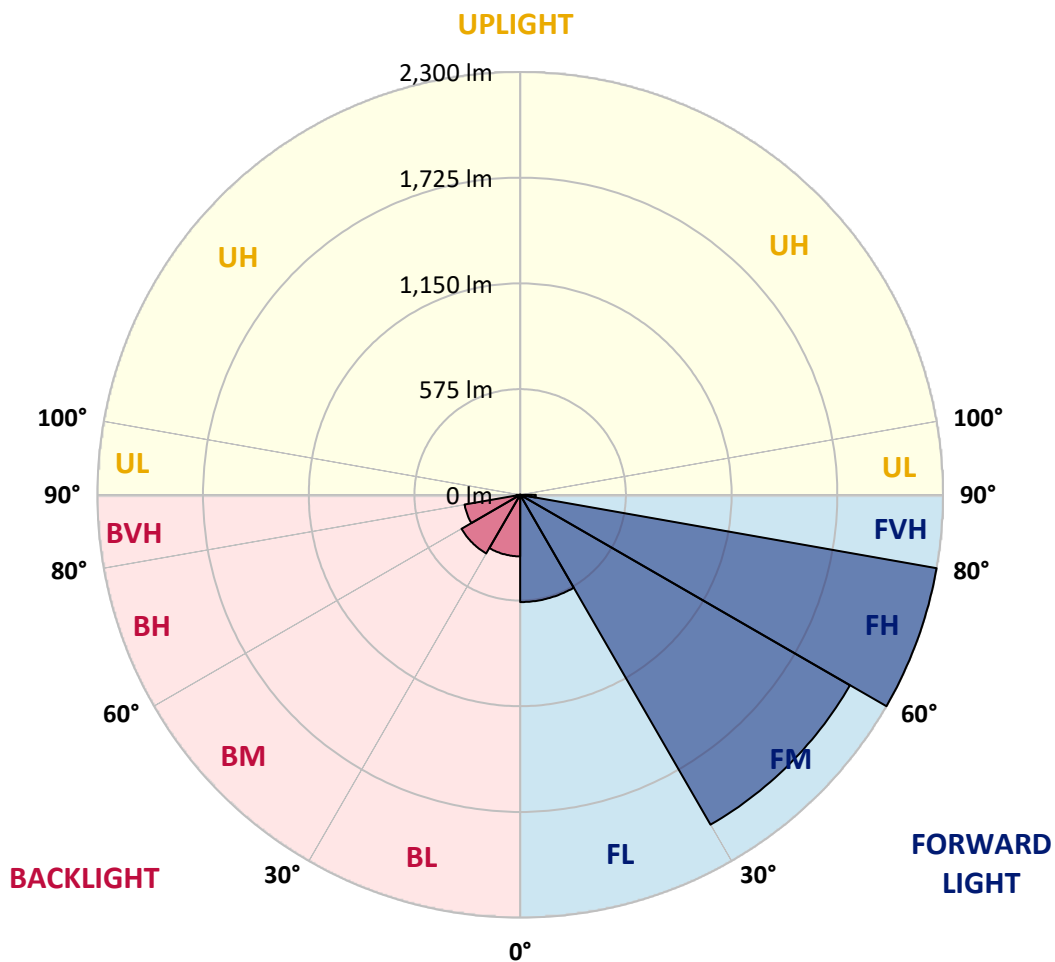
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	583.4	9.6			
FM	(30°-60°)	2071.4	34.1			
FH	(60°-80°)	2299.9	37.9			G2/5000
FVH	(80°-90°)	85.0	1.4			G1/100
BL	(0°-30°)	334.7	5.5	B1/500		
BM	(30°-60°)	368.5	6.1	B1/1000		
BH	(60°-80°)	307.0	5.1	B1/500		G1/500
BVH	(80°-90°)	20.0	0.3			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°	59°	65°	75°	85°
0°	1741.5	1741.5	1741.5	1741.5	1741.5	1741.5	1741.5	1741.5	1741.5	1741.5	1741.5
2.5°	1726.5	1732.7	1735.3	1739.7	1739.7	1741.5	1739.7	1738.8	1742.3	1738.8	1729.2
5°	1650.0	1652.6	1660.6	1669.3	1678.1	1696.6	1701.9	1705.4	1713.3	1715.1	1705.4
7.5°	1546.2	1555.9	1566.4	1577.9	1596.3	1621.9	1643.8	1652.6	1667.6	1676.4	1662.3
10°	1458.3	1463.5	1468.8	1489.0	1518.1	1553.2	1576.1	1592.8	1616.6	1628.0	1614.8
12.5°	1370.3	1374.7	1385.3	1412.5	1442.4	1484.6	1526.0	1539.2	1567.3	1590.2	1579.6
15°	1302.6	1302.6	1310.5	1340.4	1372.1	1428.4	1476.7	1497.0	1532.1	1564.7	1551.5
17.5°	1242.8	1245.4	1250.7	1270.0	1314.0	1372.9	1434.5	1460.0	1504.0	1546.2	1528.6
20°	1209.4	1207.6	1211.1	1220.8	1256.0	1318.4	1392.3	1422.2	1476.7	1534.8	1506.6
22.5°	1197.9	1196.2	1193.5	1192.6	1215.5	1268.3	1347.4	1384.4	1452.1	1528.6	1486.4
25°	1206.7	1206.7	1198.8	1183.8	1194.4	1230.5	1307.0	1346.6	1424.8	1524.2	1467.9
27.5°	1230.5	1230.5	1219.0	1199.7	1195.3	1211.1	1271.8	1314.0	1402.0	1526.9	1453.0
30°	1263.0	1262.1	1250.7	1234.0	1220.8	1215.5	1255.1	1293.8	1386.1	1538.3	1445.9
32.5°	1299.9	1298.2	1292.9	1281.5	1265.6	1242.8	1256.8	1291.1	1382.6	1558.5	1446.8
35°	1343.9	1341.3	1343.9	1337.8	1322.8	1298.2	1289.4	1316.7	1400.2	1596.3	1461.8
37.5°	1382.6	1380.9	1394.1	1397.6	1394.1	1361.5	1350.1	1367.7	1441.5	1656.2	1492.6
40°	1415.2	1416.9	1440.7	1466.2	1471.5	1443.3	1435.4	1450.3	1508.4	1729.2	1548.0
42.5°	1451.2	1456.5	1491.7	1537.4	1555.0	1536.5	1540.9	1551.5	1592.8	1828.5	1628.0
45°	1486.4	1497.8	1546.2	1605.1	1650.0	1650.0	1664.9	1675.5	1701.9	1953.4	1745.0
47.5°	1548.0	1555.9	1608.7	1679.9	1748.5	1770.5	1811.8	1808.3	1828.5	2090.6	1882.2
50°	1628.0	1641.2	1694.9	1768.7	1855.8	1918.3	1965.7	1972.8	1980.7	2231.4	2044.9
52.5°	1738.8	1754.7	1798.6	1867.2	1970.1	2072.2	2172.4	2168.0	2157.5	2384.4	2231.4
55°	1850.5	1867.2	1908.6	1964.0	2085.4	2241.9	2405.5	2399.4	2351.0	2541.0	2403.8
57.5°	1964.0	1978.1	2021.2	2069.5	2212.9	2442.5	2651.8	2656.2	2556.8	2715.1	2574.4
60°	2011.5	2032.6	2139.0	2232.2	2411.7	2665.0	2903.3	2914.8	2770.5	2891.0	2762.6
62.5°	1796.9	1822.4	1998.3	2249.8	2684.3	3094.2	3230.5	3237.5	3028.2	3085.4	2968.4
65°	1329.8	1329.0	1511.0	1887.5	2629.8	3670.3	3813.6	3702.8	3348.4	3343.1	3240.2
67.5°	761.7	784.5	842.6	1125.8	2003.6	3776.7	4851.5	4562.1	3915.7	3744.2	3602.6
70°	613.9	608.6	626.2	701.9	1092.4	3105.6	5527.8	5659.8	4721.3	4071.3	3520.8
71°	553.2	561.1	578.7	647.3	861.9	2591.1	5494.4	5875.3	4941.2	4062.5	3365.1
72.5°	475.8	477.6	518.0	599.0	708.0	1827.7	5080.2	5697.6	5171.6	3947.3	3136.4
75°	323.7	328.1	391.4	482.0	646.5	868.1	3635.1	4608.7	4707.2	3688.7	2590.2
77.5°	185.6	189.1	234.8	352.7	550.6	612.2	2231.4	3184.8	3384.4	2697.5	1388.8
80°	95.9	100.3	130.2	222.5	420.4	495.2	1279.7	2002.7	1925.3	932.3	321.9
82.5°	25.5	29.0	37.8	80.0	203.2	322.8	567.3	828.5	591.9	193.5	117.0
85°	0.0	0.0	0.0	0.9	1.8	44.9	119.6	148.6	82.7	37.8	31.7
87.5°	0.0	0.0	0.0	0.0	0.9	1.8	1.8	1.8	1.8	2.6	3.5
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°	1741.5	1741.5	1741.5	1741.5	1741.5	1741.5	1741.5	1741.5	1741.5	1741.5	1741.5
2.5°	1727.4	1727.4	1722.1	1714.2	1705.4	1685.2	1688.7	1672.9	1674.6	1672.9	1672.9
5°	1697.5	1692.2	1679.0	1654.4	1627.1	1591.1	1585.8	1556.8	1540.1	1534.8	1540.9
7.5°	1656.2	1641.2	1607.8	1564.7	1512.8	1466.2	1423.1	1384.4	1355.4	1343.0	1337.8
10°	1601.6	1583.2	1528.6	1453.0	1381.7	1308.7	1241.0	1197.0	1139.0	1121.4	1116.1
12.5°	1556.8	1525.1	1443.3	1337.8	1226.9	1130.2	1038.7	946.4	891.0	851.4	845.2
15°	1518.1	1473.2	1356.2	1219.9	1081.8	948.1	824.1	700.1	621.8	588.4	564.7
17.5°	1483.8	1425.7	1269.2	1092.4	921.7	745.0	593.7	474.9	425.7	400.2	401.1
20°	1448.6	1374.7	1178.6	964.8	763.4	567.3	419.5	364.1	339.5	334.2	331.6
22.5°	1415.2	1316.7	1082.7	839.1	601.6	416.9	337.7	310.5	304.3	304.3	304.3
25°	1377.3	1257.7	986.0	710.7	455.6	328.9	290.2	280.6	282.3	285.8	286.7
27.5°	1346.6	1206.7	890.1	562.0	353.6	279.7	259.5	257.7	264.7	272.7	272.7
30°	1319.3	1160.1	786.3	438.9	281.4	245.4	238.4	241.0	248.0	255.1	257.7
32.5°	1300.8	1117.9	693.1	341.3	240.1	221.6	219.9	223.4	230.4	234.0	236.6
35°	1292.9	1087.1	592.8	275.3	213.7	204.1	203.2	205.8	209.3	210.2	209.3
37.5°	1301.7	1066.0	489.9	233.1	197.0	191.7	190.9	190.9	190.9	191.7	190.9
40°	1327.2	1058.1	397.5	205.8	186.5	182.1	179.4	176.8	175.0	175.0	174.1
42.5°	1380.9	1070.4	319.3	190.0	178.5	173.3	168.0	164.5	161.8	161.0	161.0
45°	1467.1	1104.7	265.6	179.4	171.5	163.6	157.4	153.9	151.3	152.2	151.3
47.5°	1585.8	1161.9	234.8	172.4	164.5	153.9	147.8	144.2	143.4	146.0	146.9
50°	1720.4	1242.8	216.4	167.1	159.2	146.0	139.0	136.3	137.2	142.5	143.4
52.5°	1878.7	1347.4	208.4	163.6	154.8	139.0	132.8	130.2	131.9	138.1	139.0
55°	2049.3	1467.1	219.9	165.4	150.4	134.6	127.5	124.0	126.7	131.9	132.8
57.5°	2222.6	1614.8	258.6	166.2	145.1	131.0	122.3	117.0	118.7	123.1	124.0
60°	2397.6	1761.7	325.4	167.1	143.4	127.5	117.9	109.9	110.8	113.5	114.3
62.5°	2603.4	1948.2	413.4	170.6	145.1	124.9	109.9	101.1	101.1	102.9	102.9
65°	2915.6	2226.1	471.4	168.9	149.5	122.3	102.0	93.2	92.4	93.2	93.2
67.5°	3139.9	2263.0	328.9	159.2	152.2	123.1	97.6	86.2	84.4	83.6	83.6
70°	2902.4	1904.2	217.2	150.4	147.8	124.9	94.1	81.8	78.3	75.6	74.8
71°	2738.0	1716.0	201.4	146.9	144.2	123.1	92.4	79.2	75.6	73.9	73.0
72.5°	2494.3	1531.3	185.6	141.6	136.3	119.6	89.7	76.5	72.1	69.5	68.6
75°	1971.0	1174.2	162.7	130.2	117.9	98.5	82.7	71.2	66.8	63.3	62.4
77.5°	891.0	467.0	124.9	112.6	95.9	78.3	72.1	66.0	60.7	58.0	57.2
80°	248.9	177.7	91.5	88.8	72.1	60.7	58.0	56.3	54.5	51.0	51.0
82.5°	115.2	103.8	65.1	62.4	49.3	43.1	45.7	46.6	46.6	43.1	42.2
85°	31.7	34.3	29.9	33.4	31.7	29.0	33.4	36.1	37.8	34.3	31.7
87.5°	2.6	6.2	7.9	13.2	15.8	16.7	21.1	25.5	26.4	21.1	22.0
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)