

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: P401940

Luminaire Tested: **ENT-SA1F-830-U-SL4**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401940
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-SA1F-830-U-SL4
Description: ENTRI LED LUMINAIRE
(1) 80 CRI, 3000K, 1200mA 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: 5867 lumens
Efficiency: N/A
Efficacy: 88.8 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 - G2

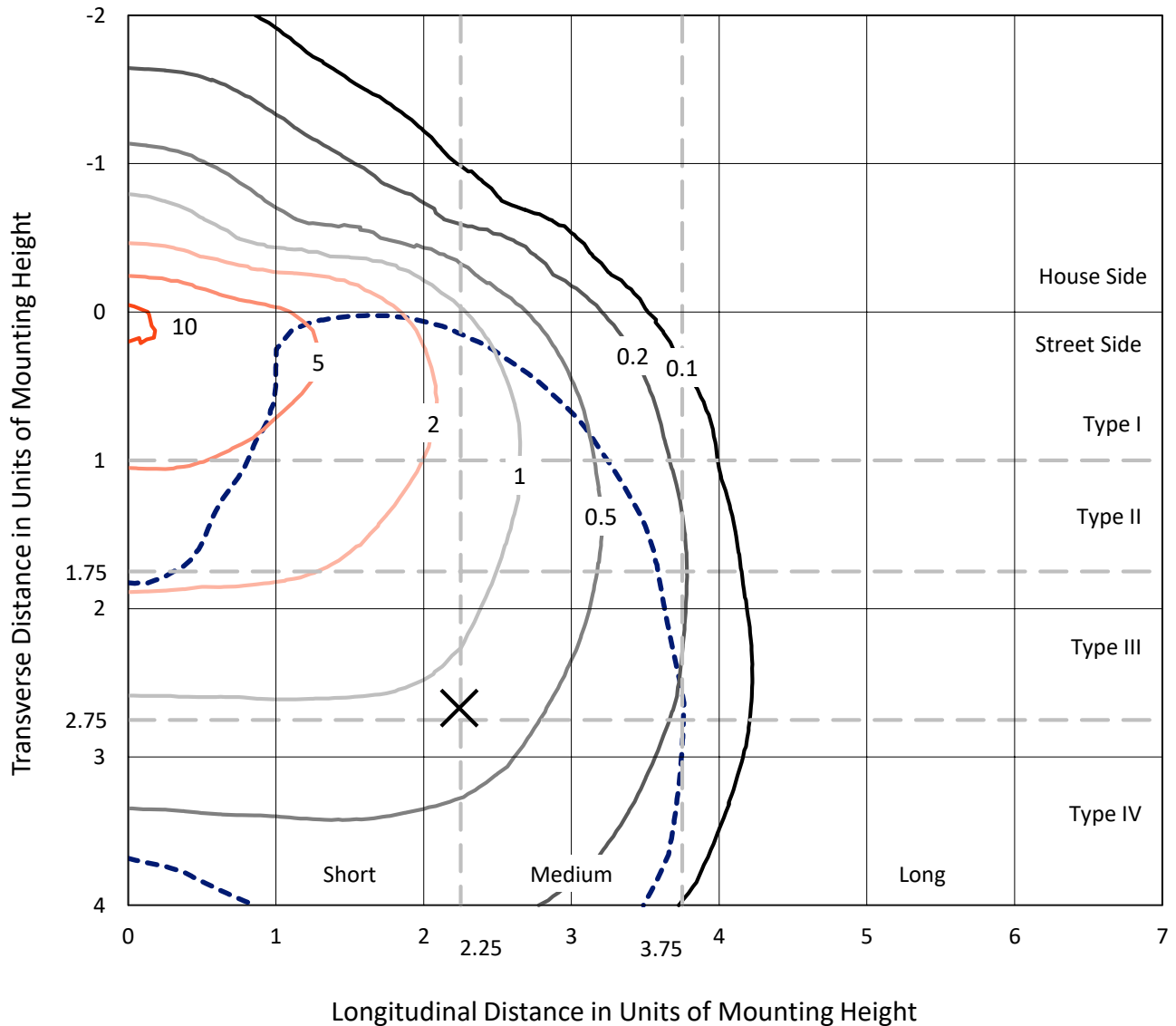
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

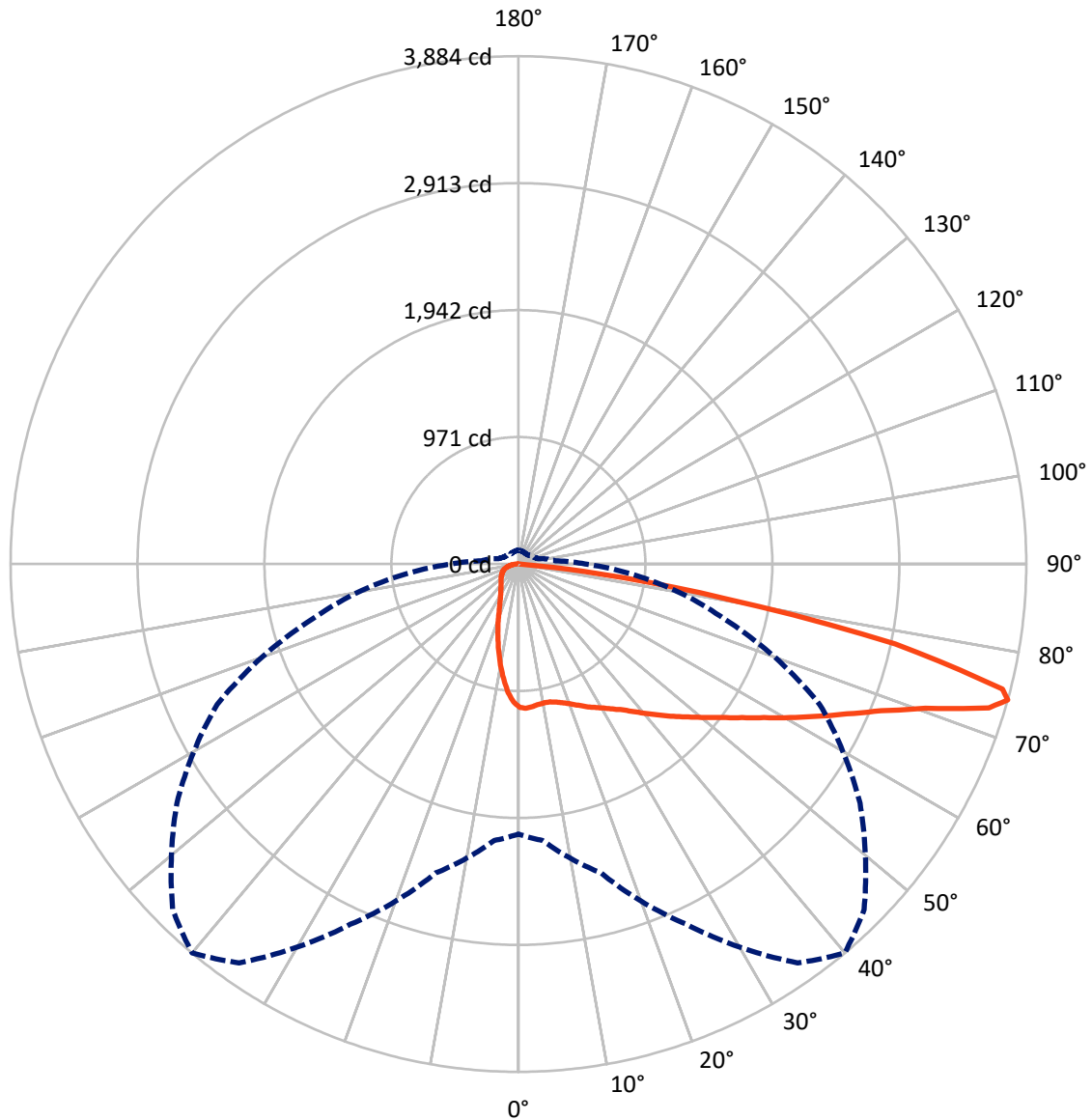
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 11 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
House Side	Lumens	914.8	0.0	914.8
	% Fixture	15.6	0.0	15.6
Street Side	Lumens	4952.2	0.0	4952.2
	% Fixture	84.4	0.0	84.4
Total	Lumens	5867.0	0.0	5867.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	96.7	1.6
10°-20°	249.0	4.2
20°-30°	381.9	6.5
30°-40°	551.5	9.4
40°-50°	793.5	13.5
50°-60°	1095.6	18.7
60°-70°	1381.3	23.5
70°-80°	1197.8	20.4
80°-90°	119.9	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°	5867.0	100.0
0°-180°	5867.0	100.0



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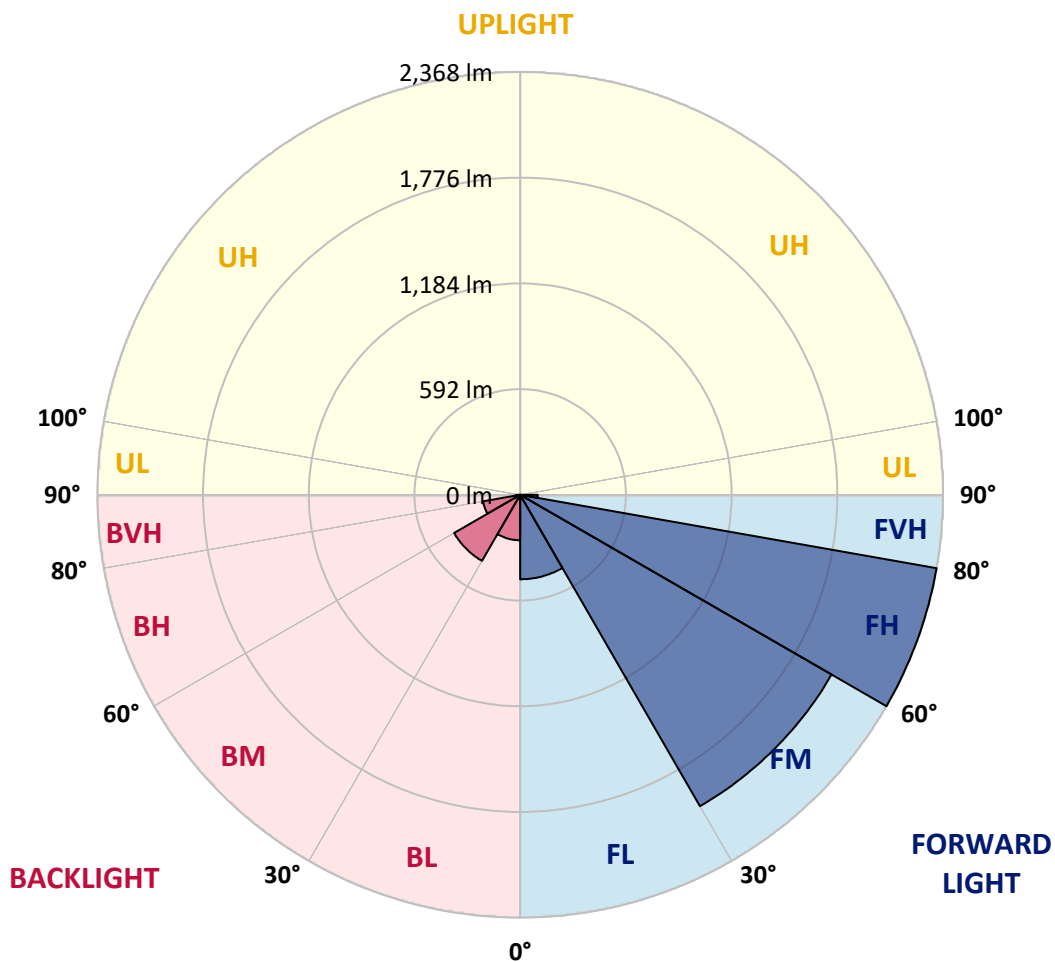
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	473.0	8.1			
FM	(30°-60°)	2013.3	34.3			
FH	(60°-80°)	2367.9	40.4			G2/5000
FVH	(80°-90°)	98.0	1.7			G1/100
BL	(0°-30°)	254.6	4.3	B1/500		
BM	(30°-60°)	427.2	7.3	B1/1000		
BH	(60°-80°)	211.1	3.6	B1/500		G1/500
BVH	(80°-90°)	21.9	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-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	1095.2	1095.2	1095.2	1095.2	1095.2	1095.2	1095.2	1095.2	1095.2	1095.2	1095.2
2.5°	1109.2	1108.3	1111.0	1109.2	1106.6	1104.8	1103.9	1098.7	1096.9	1091.6	1084.6
5°	1104.8	1104.8	1104.8	1103.1	1097.8	1096.0	1094.3	1086.4	1081.1	1072.3	1059.1
7.5°	1089.9	1092.5	1091.6	1090.8	1086.4	1084.6	1082.0	1072.3	1065.2	1052.0	1035.3
10°	1075.8	1075.8	1076.7	1080.2	1078.4	1079.3	1078.4	1067.9	1058.2	1041.5	1020.4
12.5°	1055.6	1059.1	1064.4	1074.0	1078.4	1082.0	1082.0	1074.0	1063.5	1043.3	1018.6
15°	1043.3	1047.7	1060.8	1078.4	1089.0	1095.2	1096.9	1087.2	1074.0	1053.8	1026.5
17.5°	1038.0	1043.3	1067.9	1092.5	1111.0	1116.3	1117.1	1106.6	1092.5	1067.9	1036.2
20°	1043.3	1049.4	1082.0	1115.4	1137.4	1141.8	1143.5	1128.6	1111.0	1087.2	1045.9
22.5°	1063.5	1072.3	1108.3	1144.4	1167.3	1173.4	1171.7	1150.6	1133.0	1107.5	1058.2
25°	1107.5	1112.7	1145.3	1184.0	1201.6	1208.6	1204.2	1180.5	1157.6	1132.1	1075.8
27.5°	1158.5	1165.5	1199.8	1228.9	1240.3	1242.1	1237.7	1213.0	1187.5	1166.4	1103.1
30°	1220.1	1226.2	1254.4	1276.4	1277.2	1278.1	1275.5	1247.3	1226.2	1209.5	1142.7
32.5°	1285.2	1286.0	1315.1	1325.6	1318.6	1321.2	1318.6	1287.8	1272.8	1267.6	1194.6
35°	1345.0	1345.8	1375.8	1379.3	1367.8	1368.7	1374.0	1337.9	1337.9	1350.2	1272.0
37.5°	1402.1	1404.8	1431.2	1427.7	1423.3	1431.2	1438.2	1407.4	1425.0	1460.2	1366.1
40°	1445.2	1451.4	1486.6	1484.8	1494.5	1502.4	1508.6	1492.7	1520.9	1589.5	1482.2
42.5°	1473.4	1485.7	1535.9	1548.2	1564.9	1579.0	1589.5	1588.6	1637.9	1732.9	1605.3
45°	1502.4	1514.7	1581.6	1611.5	1639.6	1661.6	1681.9	1692.4	1770.7	1884.2	1748.7
47.5°	1537.6	1548.2	1622.9	1681.9	1717.9	1747.8	1783.9	1806.8	1906.2	2038.1	1881.5
50°	1591.3	1598.3	1665.2	1756.6	1802.4	1843.7	1888.6	1935.2	2052.2	2195.6	1997.7
52.5°	1660.8	1665.2	1714.4	1832.3	1905.3	1949.3	2016.1	2077.7	2200.9	2338.1	2092.7
55°	1739.9	1736.4	1774.2	1922.9	2008.2	2074.2	2156.9	2219.3	2357.4	2462.1	2168.3
57.5°	1819.1	1816.5	1846.4	2010.0	2138.4	2215.8	2301.1	2367.1	2500.8	2578.2	2222.8
60°	1894.7	1885.1	1927.3	2112.0	2295.9	2384.7	2461.2	2521.9	2636.3	2661.8	2251.9
62.5°	1961.6	1961.6	2023.2	2237.8	2484.1	2564.1	2624.8	2665.3	2765.6	2723.4	2240.4
65°	2023.2	2031.1	2119.1	2378.5	2679.4	2761.2	2814.0	2829.8	2894.0	2726.0	2143.7
67.5°	2092.7	2105.0	2229.0	2543.0	2904.6	2991.7	3037.4	3032.1	2985.5	2685.5	1936.1
70°	2160.4	2180.6	2365.4	2755.0	3182.5	3300.4	3350.5	3246.8	3033.0	2461.2	1608.0
72.5°	2209.7	2244.0	2477.1	2967.0	3581.0	3762.2	3742.0	3305.7	2810.4	2028.4	1216.5
74°	2065.4	2122.6	2446.3	3040.0	3724.4	3883.6	3738.5	3188.7	2542.2	1633.5	862.0
75°	1897.4	1952.8	2290.6	3011.0	3751.7	3822.9	3557.3	2982.9	2280.0	1265.8	563.0
77.5°	1404.8	1447.9	1759.3	2374.1	2967.0	2945.9	2648.6	2021.4	1123.3	381.8	237.5
80°	620.1	652.7	868.2	1194.6	1607.1	1600.9	1491.0	928.9	362.4	199.7	145.1
82.5°	187.4	186.5	249.8	348.3	610.5	621.9	528.7	320.2	173.3	82.7	70.4
85°	0.9	0.9	0.9	0.9	2.6	22.9	19.4	61.6	31.7	15.0	25.5
87.5°	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	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°	1095.2	1095.2	1095.2	1095.2	1095.2	1095.2	1095.2	1095.2	1095.2	1095.2	1095.2
2.5°	1080.2	1079.3	1076.7	1070.5	1066.1	1052.9	1057.3	1048.5	1047.7	1045.9	1045.0
5°	1052.9	1049.4	1038.9	1026.5	1012.5	990.5	983.4	970.2	962.3	959.7	961.4
7.5°	1024.8	1016.9	996.6	970.2	942.1	909.5	885.8	867.3	854.1	849.7	843.6
10°	1007.2	994.0	959.7	915.7	870.0	824.2	784.6	757.4	737.1	721.3	721.3
12.5°	1001.0	983.4	933.3	869.1	803.1	738.0	680.8	644.8	610.5	593.8	591.1
15°	1004.5	979.9	911.3	826.9	738.9	654.5	584.1	532.2	499.6	479.4	486.4
17.5°	1008.1	977.3	888.4	782.0	676.4	578.8	497.0	438.1	398.5	387.9	383.5
20°	1012.5	972.0	859.4	733.6	612.2	505.8	419.6	359.8	329.9	316.7	316.7
22.5°	1018.6	965.0	829.5	680.0	546.3	434.5	354.5	309.6	285.9	278.0	278.0
25°	1027.4	960.6	798.7	626.3	483.8	378.2	311.4	276.2	263.9	258.6	257.7
27.5°	1044.1	961.4	768.8	571.8	422.2	330.7	280.6	257.7	248.1	245.4	244.5
30°	1069.6	970.2	737.1	513.7	367.7	294.7	259.5	243.7	237.5	235.7	235.7
32.5°	1104.8	986.1	710.7	461.8	327.2	265.7	241.9	231.3	227.8	226.1	226.9
35°	1159.4	1013.3	679.1	414.3	289.4	245.4	227.8	219.9	217.3	217.3	218.2
37.5°	1230.6	1055.6	648.3	370.3	263.9	227.8	214.6	210.2	207.6	209.4	210.2
40°	1320.3	1105.7	619.3	330.7	242.8	213.8	203.2	199.7	198.8	200.6	202.3
42.5°	1417.1	1166.4	592.9	298.2	226.1	202.3	193.5	191.8	190.9	191.8	194.4
45°	1529.7	1235.9	570.9	273.6	213.8	192.6	184.7	183.0	182.1	183.8	185.6
47.5°	1633.5	1298.3	553.3	256.9	203.2	185.6	177.7	175.0	175.0	175.0	176.8
50°	1717.9	1347.6	542.7	245.4	194.4	177.7	170.7	168.0	167.1	166.3	167.1
52.5°	1790.9	1384.6	539.2	238.4	187.4	170.7	163.6	161.9	160.1	158.3	159.2
55°	1839.3	1403.0	532.2	232.2	181.2	162.7	156.6	154.8	153.1	150.4	150.4
57.5°	1867.5	1401.3	516.3	228.7	177.7	155.7	149.5	149.5	147.8	143.4	144.3
60°	1870.1	1370.5	477.6	224.3	175.0	148.7	141.6	143.4	143.4	139.9	139.9
62.5°	1825.3	1289.6	402.9	212.9	171.5	143.4	135.5	139.9	141.6	138.1	138.1
65°	1687.1	1098.7	323.7	196.2	162.7	137.2	128.4	137.2	142.5	139.9	139.0
67.5°	1422.4	870.0	267.4	177.7	153.1	129.3	121.4	132.8	139.9	139.9	139.0
70°	1141.8	660.6	219.9	157.5	138.1	119.6	113.5	123.1	129.3	131.1	131.1
72.5°	786.4	403.8	178.6	135.5	121.4	108.2	102.9	109.1	112.6	116.1	115.2
74°	507.6	283.2	156.6	123.1	110.8	99.4	96.8	99.4	101.2	104.7	105.6
75°	339.5	231.3	146.0	114.4	104.7	93.2	91.5	94.1	95.9	98.5	98.5
77.5°	195.3	165.4	117.9	95.0	87.1	80.0	79.2	80.0	82.7	85.3	84.4
80°	135.5	125.8	93.2	73.9	68.6	65.1	66.0	66.9	71.3	72.1	71.3
82.5°	81.8	90.6	66.0	55.4	51.9	51.0	53.7	55.4	58.9	59.8	58.9
85°	32.5	43.1	32.5	30.8	34.3	37.8	42.2	44.9	46.6	46.6	46.6
87.5°	0.0	6.2	7.9	12.3	19.4	22.9	29.9	32.5	34.3	33.4	32.5
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)