

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: P401856

Luminaire Tested: **ENT-SA1F-740-U-SL4**

Issue Date: 5/20/2020

Test Information

Test Method: LM-79-08
Report Number: P401856
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-740-U-SL4
Description: ENTRI LED LUMINAIRE
(1) 70 CRI, 4000K, 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: 7383 lumens
Efficiency: N/A
Efficacy: 111.7 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

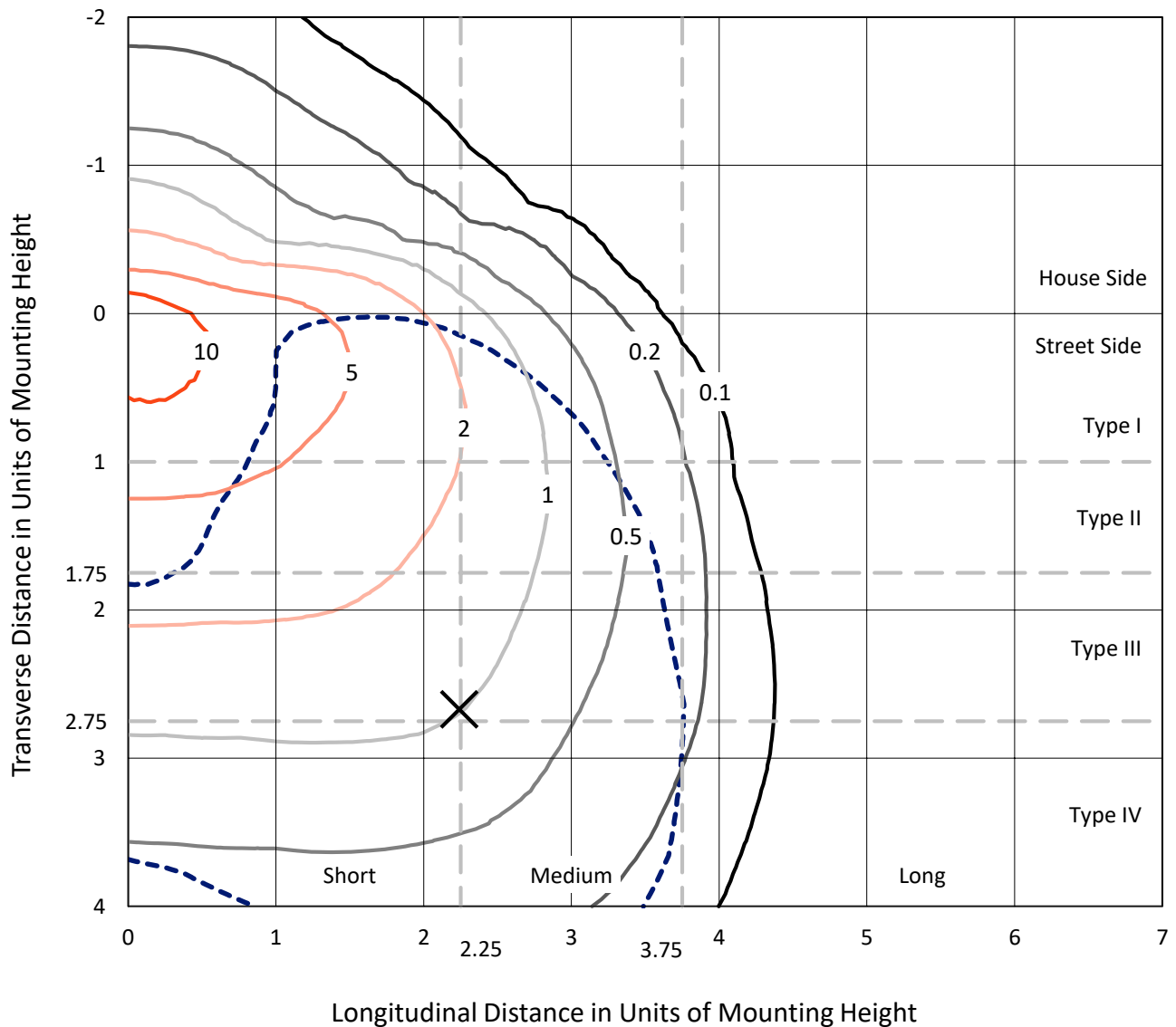
Input Watts (W): 66.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

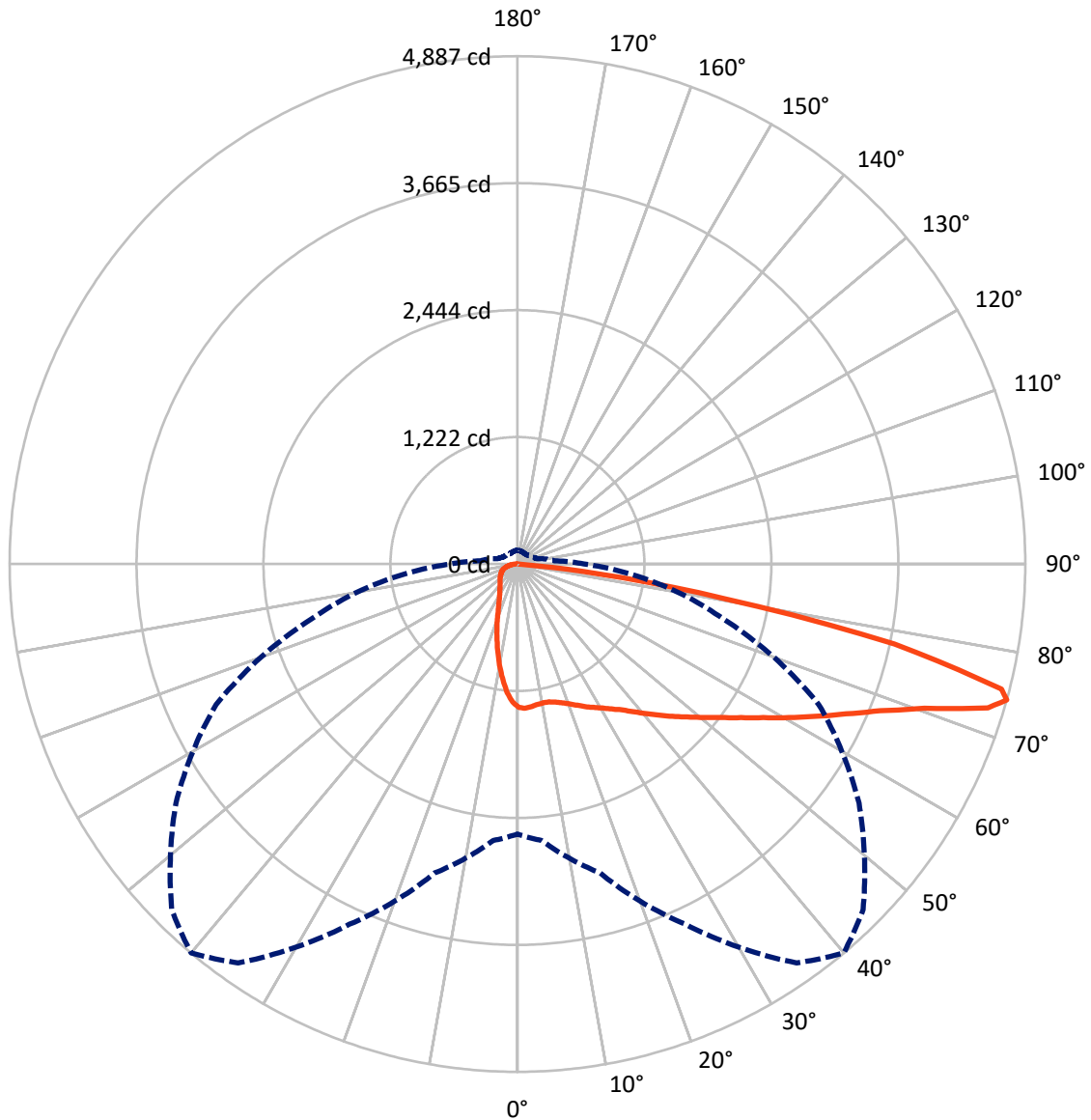
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 13.8 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	1151.1	0.0	1151.1
	% Fixture	15.6	0.0	15.6
Street Side	Lumens	6231.9	0.0	6231.9
	% Fixture	84.4	0.0	84.4
Total	Lumens	7383.0	0.0	7383.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	121.7	1.6
10°-20°	313.3	4.2
20°-30°	480.5	6.5
30°-40°	694.0	9.4
40°-50°	998.5	13.5
50°-60°	1378.7	18.7
60°-70°	1738.2	23.5
70°-80°	1507.3	20.4
80°-90°	150.9	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°	7383.0	100.0
0°-180°	7383.0	100.0



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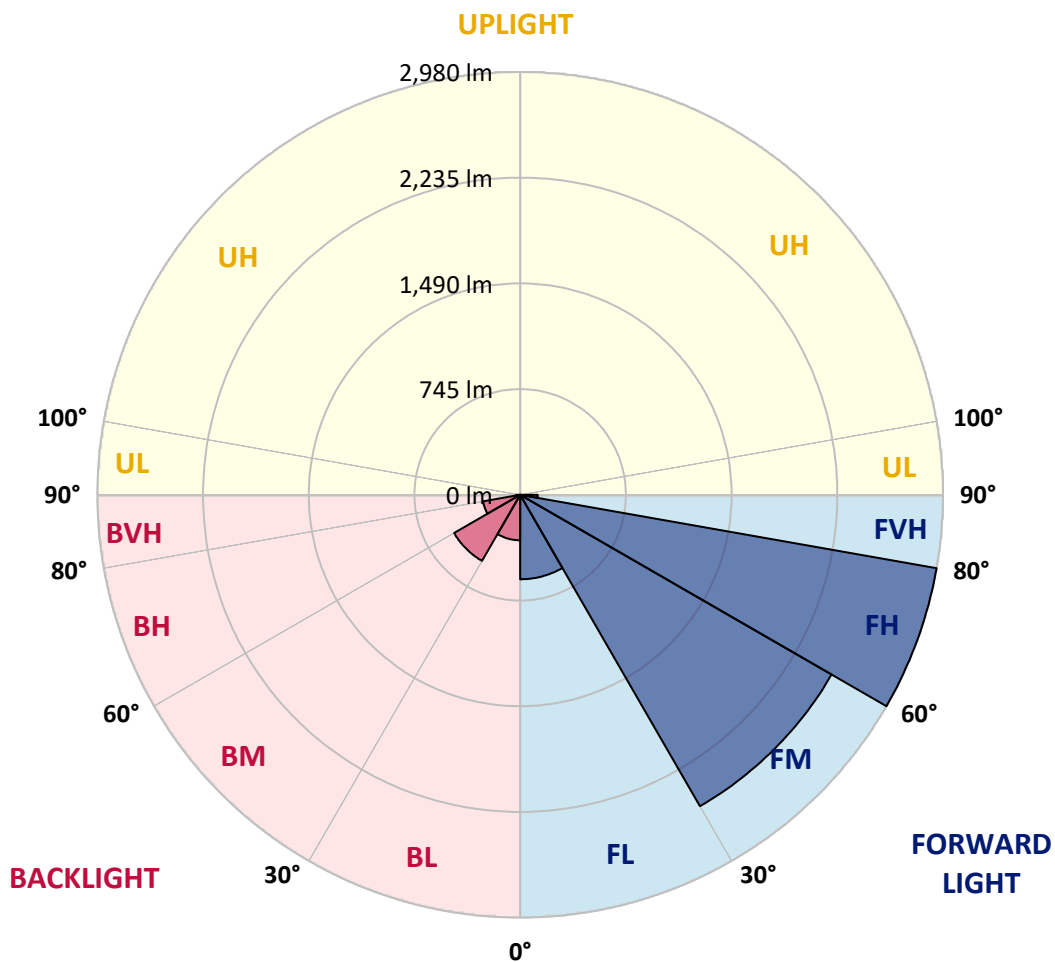
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	595.2	8.1			
FM (30°-60°)	2533.6	34.3			
FH (60°-80°)	2979.8	40.4			G2/5000
FVH (80°-90°)	123.4	1.7			G2/225
BL (0°-30°)	320.3	4.3	B1/500		
BM (30°-60°)	537.6	7.3	B1/1000		
BH (60°-80°)	265.7	3.6	B1/500		G1/500
BVH (80°-90°)	27.5	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°	1378.1	1378.1	1378.1	1378.1	1378.1	1378.1	1378.1	1378.1	1378.1	1378.1	1378.1
2.5°	1395.8	1394.7	1398.1	1395.8	1392.5	1390.3	1389.2	1382.6	1380.3	1373.7	1364.8
5°	1390.3	1390.3	1390.3	1388.1	1381.5	1379.2	1377.0	1367.1	1360.4	1349.4	1332.7
7.5°	1371.5	1374.8	1373.7	1372.6	1367.1	1364.8	1361.5	1349.4	1340.5	1323.9	1302.9
10°	1353.8	1353.8	1354.9	1359.3	1357.1	1358.2	1357.1	1343.8	1331.6	1310.6	1284.0
12.5°	1328.3	1332.7	1339.4	1351.6	1357.1	1361.5	1361.5	1351.6	1338.3	1312.8	1281.8
15°	1312.8	1318.4	1335.0	1357.1	1370.4	1378.1	1380.3	1368.2	1351.6	1326.1	1291.8
17.5°	1306.2	1312.8	1343.8	1374.8	1398.1	1404.7	1405.8	1392.5	1374.8	1343.8	1304.0
20°	1312.8	1320.6	1361.5	1403.6	1431.3	1436.8	1439.0	1420.2	1398.1	1368.2	1316.1
22.5°	1338.3	1349.4	1394.7	1440.1	1468.9	1476.6	1474.4	1447.9	1425.7	1393.6	1331.6
25°	1393.6	1400.3	1441.2	1489.9	1512.1	1520.9	1515.4	1485.5	1456.7	1424.6	1353.8
27.5°	1457.8	1466.7	1509.9	1546.4	1560.8	1563.0	1557.5	1526.5	1494.4	1467.8	1388.1
30°	1535.3	1543.1	1578.5	1606.2	1607.3	1608.4	1605.1	1569.6	1543.1	1522.0	1437.9
32.5°	1617.2	1618.3	1654.9	1668.1	1659.3	1662.6	1659.3	1620.6	1601.7	1595.1	1503.2
35°	1692.5	1693.6	1731.2	1735.7	1721.3	1722.4	1729.0	1683.6	1683.6	1699.1	1600.6
37.5°	1764.5	1767.8	1801.0	1796.6	1791.0	1801.0	1809.8	1771.1	1793.2	1837.5	1719.1
40°	1818.7	1826.4	1870.7	1868.5	1880.7	1890.6	1898.4	1878.5	1913.9	2000.2	1865.2
42.5°	1854.1	1869.6	1932.7	1948.2	1969.2	1986.9	2000.2	1999.1	2061.1	2180.7	2020.2
45°	1890.6	1906.1	1990.3	2027.9	2063.3	2091.0	2116.5	2129.7	2228.3	2371.1	2200.6
47.5°	1934.9	1948.2	2042.3	2116.5	2161.8	2199.5	2244.9	2273.6	2398.7	2564.8	2367.7
50°	2002.4	2011.3	2095.4	2210.5	2268.1	2320.1	2376.6	2435.3	2582.5	2762.9	2513.8
52.5°	2089.9	2095.4	2157.4	2305.7	2397.6	2453.0	2537.1	2614.6	2769.5	2942.2	2633.4
55°	2189.5	2185.1	2232.7	2419.8	2527.1	2610.1	2714.2	2792.8	2966.6	3098.3	2728.6
57.5°	2289.1	2285.8	2323.5	2529.3	2691.0	2788.4	2895.7	2978.8	3147.0	3244.4	2797.2
60°	2384.3	2372.2	2425.3	2657.7	2889.1	3000.9	3097.2	3173.6	3317.5	3349.6	2833.8
62.5°	2468.5	2468.5	2545.9	2816.0	3126.0	3226.7	3303.1	3354.0	3480.2	3427.1	2819.4
65°	2545.9	2555.9	2666.6	2993.1	3371.7	3474.7	3541.1	3561.0	3641.8	3430.4	2697.6
67.5°	2633.4	2648.9	2805.0	3200.1	3655.1	3764.7	3822.2	3815.6	3756.9	3379.5	2436.4
70°	2718.6	2744.1	2976.5	3466.9	4004.9	4153.2	4216.3	4085.7	3816.7	3097.2	2023.5
72.5°	2780.6	2823.8	3117.1	3733.7	4506.3	4734.4	4708.9	4159.9	3536.7	2552.6	1530.9
74°	2599.1	2671.0	3078.4	3825.6	4686.8	4887.1	4704.5	4012.6	3199.0	2055.6	1084.8
75°	2387.7	2457.4	2882.5	3789.0	4721.1	4810.7	4476.4	3753.6	2869.2	1592.9	708.4
77.5°	1767.8	1822.0	2213.9	2987.6	3733.7	3707.1	3333.0	2543.7	1413.6	480.4	298.9
80°	780.4	821.3	1092.5	1503.2	2022.4	2014.6	1876.3	1168.9	456.1	251.3	182.6
82.5°	235.8	234.7	314.4	438.3	768.2	782.6	665.3	402.9	218.1	104.1	88.6
85°	1.1	1.1	1.1	1.1	3.3	28.8	24.4	77.5	39.8	18.8	32.1
87.5°	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	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°	1378.1	1378.1	1378.1	1378.1	1378.1	1378.1	1378.1	1378.1	1378.1	1378.1	1378.1
2.5°	1359.3	1358.2	1354.9	1347.1	1341.6	1325.0	1330.5	1319.5	1318.4	1316.1	1315.0
5°	1325.0	1320.6	1307.3	1291.8	1274.1	1246.4	1237.6	1220.9	1211.0	1207.7	1209.9
7.5°	1289.6	1279.6	1254.2	1220.9	1185.5	1144.6	1114.7	1091.4	1074.8	1069.3	1061.5
10°	1267.4	1250.8	1207.7	1152.3	1094.8	1037.2	987.4	953.1	927.6	907.7	907.7
12.5°	1259.7	1237.6	1174.5	1093.7	1010.6	928.7	856.8	811.4	768.2	747.2	743.9
15°	1264.1	1233.1	1146.8	1040.5	929.8	823.6	735.0	669.7	628.7	603.3	612.1
17.5°	1268.5	1229.8	1118.0	984.1	851.2	728.4	625.4	551.3	501.4	488.2	482.6
20°	1274.1	1223.2	1081.5	923.2	770.4	636.5	528.0	452.7	415.1	398.5	398.5
22.5°	1281.8	1214.3	1043.8	855.7	687.4	546.8	446.1	389.6	359.8	349.8	349.8
25°	1292.9	1208.8	1005.1	788.1	608.8	476.0	391.9	347.6	332.1	325.4	324.3
27.5°	1313.9	1209.9	967.5	719.5	531.3	416.2	353.1	324.3	312.2	308.8	307.7
30°	1346.0	1220.9	927.6	646.4	462.7	370.8	326.5	306.6	298.9	296.7	296.7
32.5°	1390.3	1240.9	894.4	581.1	411.8	334.3	304.4	291.1	286.7	284.5	285.6
35°	1458.9	1275.2	854.6	521.4	364.2	308.8	286.7	276.7	273.4	273.4	274.5
37.5°	1548.6	1328.3	815.8	466.0	332.1	286.7	270.1	264.6	261.2	263.5	264.6
40°	1661.5	1391.4	779.3	416.2	305.5	269.0	255.7	251.3	250.2	252.4	254.6
42.5°	1783.3	1467.8	746.1	375.3	284.5	254.6	243.5	241.3	240.2	241.3	244.6
45°	1925.0	1555.2	718.4	344.3	269.0	242.4	232.5	230.2	229.1	231.3	233.6
47.5°	2055.6	1633.8	696.3	323.2	255.7	233.6	223.6	220.3	220.3	220.3	222.5
50°	2161.8	1695.8	683.0	308.8	244.6	223.6	214.7	211.4	210.3	209.2	210.3
52.5°	2253.7	1742.3	678.6	300.0	235.8	214.7	205.9	203.7	201.5	199.2	200.4
55°	2314.6	1765.6	669.7	292.2	228.0	204.8	197.0	194.8	192.6	189.3	189.3
57.5°	2350.0	1763.3	649.8	287.8	223.6	195.9	188.2	188.2	186.0	180.4	181.5
60°	2353.3	1724.6	601.1	282.3	220.3	187.1	178.2	180.4	180.4	176.0	176.0
62.5°	2296.9	1622.8	507.0	267.9	215.9	180.4	170.5	176.0	178.2	173.8	173.8
65°	2123.1	1382.6	407.4	246.8	204.8	172.7	161.6	172.7	179.3	176.0	174.9
67.5°	1789.9	1094.8	336.5	223.6	192.6	162.7	152.8	167.1	176.0	176.0	174.9
70°	1436.8	831.3	276.7	198.1	173.8	150.5	142.8	155.0	162.7	164.9	164.9
72.5°	989.6	508.1	224.7	170.5	152.8	136.2	129.5	137.3	141.7	146.1	145.0
74°	638.7	356.4	197.0	155.0	139.5	125.1	121.8	125.1	127.3	131.7	132.8
75°	427.3	291.1	183.8	143.9	131.7	117.3	115.1	118.4	120.7	124.0	124.0
77.5°	245.7	208.1	148.3	119.5	109.6	100.7	99.6	100.7	104.1	107.4	106.3
80°	170.5	158.3	117.3	93.0	86.3	81.9	83.0	84.1	89.7	90.8	89.7
82.5°	102.9	114.0	83.0	69.7	65.3	64.2	67.5	69.7	74.2	75.3	74.2
85°	41.0	54.2	41.0	38.7	43.2	47.6	53.1	56.5	58.7	58.7	58.7
87.5°	0.0	7.7	10.0	15.5	24.4	28.8	37.6	41.0	43.2	42.1	41.0
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)