

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: LUMARK

Report Number: P195883

Luminaire Tested: **NAV-AF-01-D-UNV-T4FT-7050-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195883
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-01-D-UNV-T4FT-7050-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6754 lumens
Efficiency: N/A
Efficacy: 100.8 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

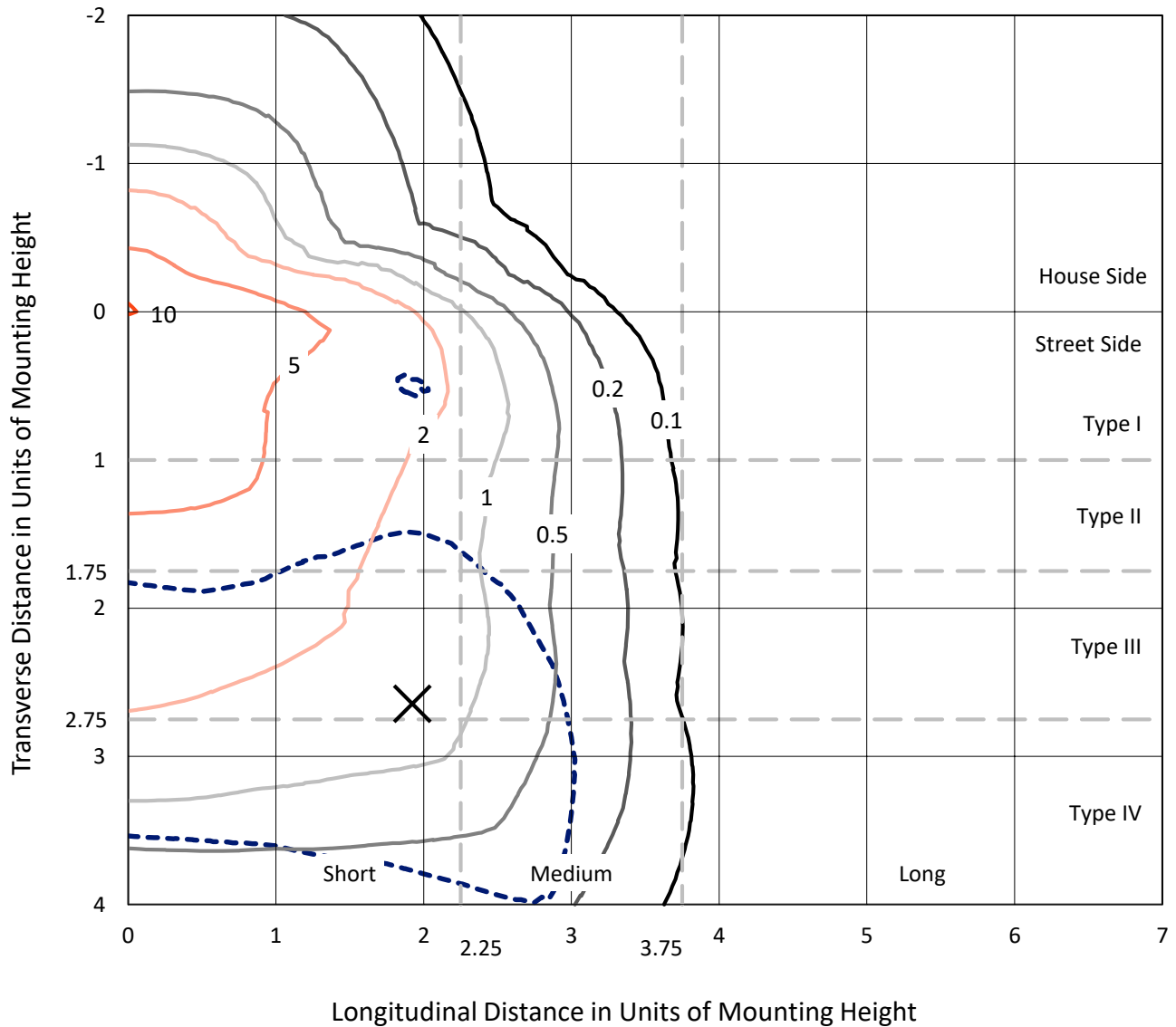
Input Watts (W): 67
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

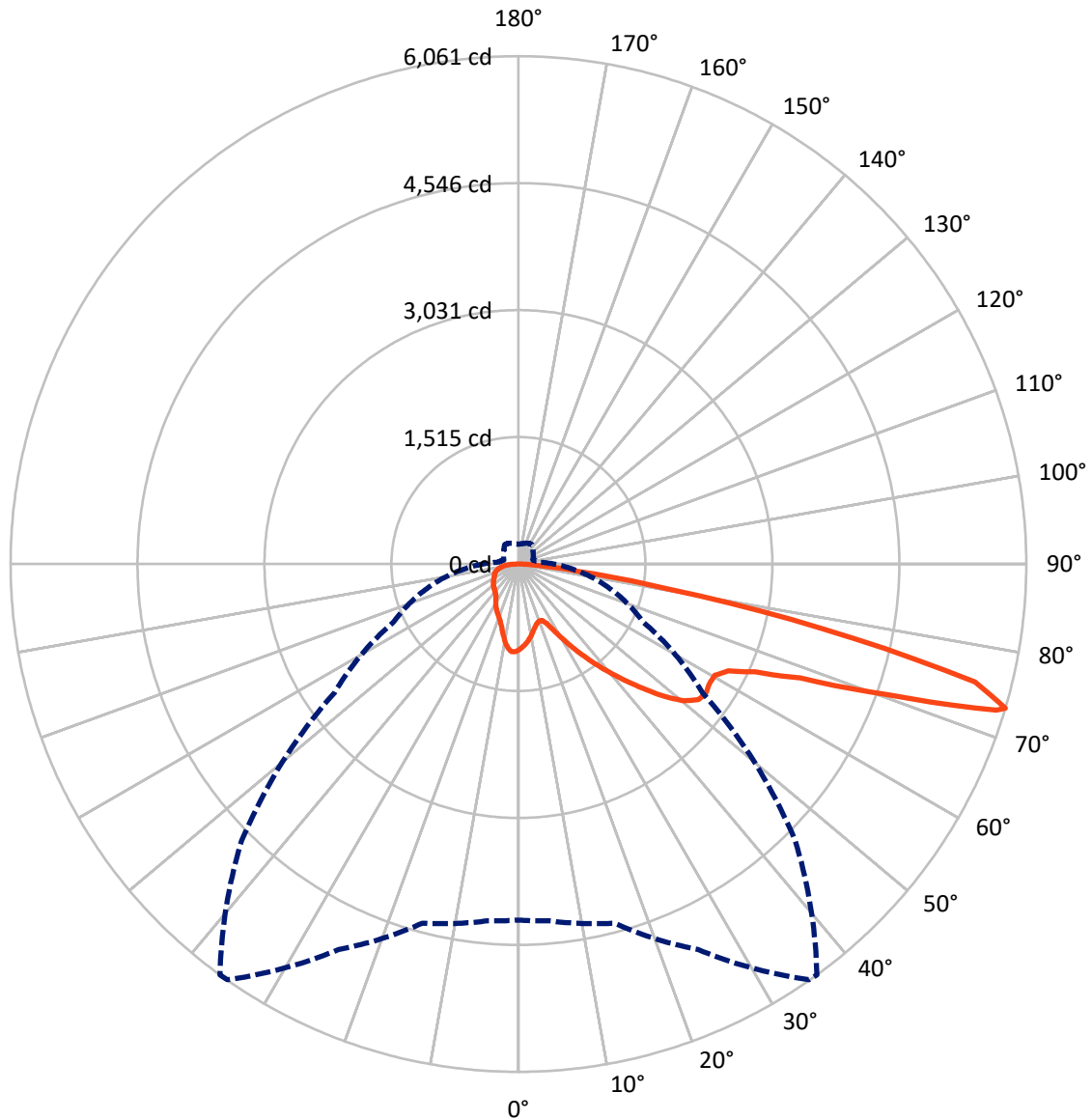
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 10.2 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral - - - Horizontal Cone Through 73-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1302.4	0.0	1302.4
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	5451.6	0.0	5451.6
	% Fixture	80.7	0.0	80.7
Total	Lumens	6754.0	0.0	6754.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	92.9	1.4
10°-20°	233.4	3.5
20°-30°	374.2	5.5
30°-40°	618.9	9.2
40°-50°	957.7	14.2
50°-60°	1282.0	19.0
60°-70°	1674.7	24.8
70°-80°	1368.0	20.3
80°-90°	152.3	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°	6754.0	100.0
0°-180°	6754.0	100.0



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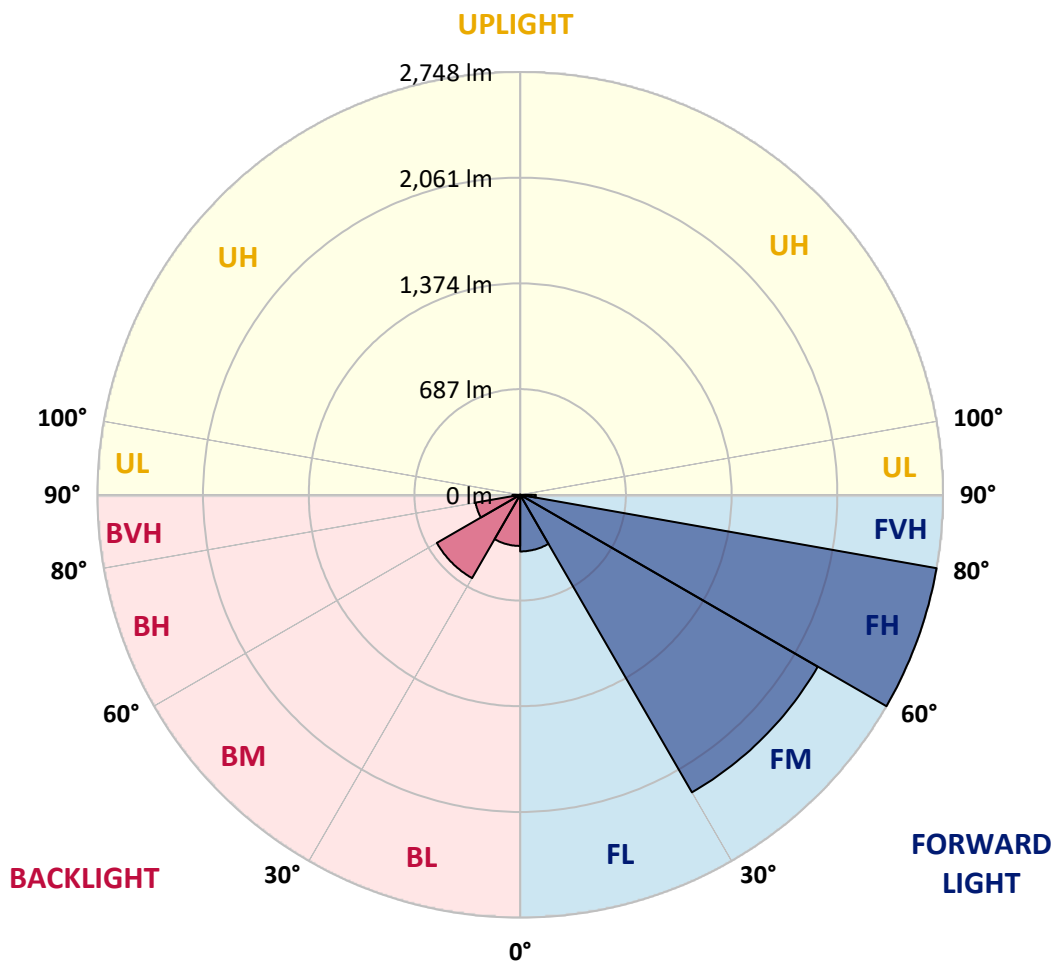
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	368.0	5.4			
FM (30°-60°)	2233.1	33.1			
FH (60°-80°)	2748.4	40.7			G2/5000
FVH (80°-90°)	102.1	1.5			G2/225
BL (0°-30°)	332.4	4.9	B1/500		
BM (30°-60°)	625.5	9.3	B1/1000		
BH (60°-80°)	294.3	4.4	B1/500		G1/500
BVH (80°-90°)	50.1	0.7			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°	36°	45°	55°	65°	75°	85°
0°	1023.0	1023.0	1023.0	1023.0	1023.0	1023.0	1023.0	1023.0	1023.0	1023.0	1023.0
2.5°	984.0	986.6	987.0	990.0	990.0	989.6	990.9	996.0	998.6	1004.6	1009.7
5°	935.5	938.5	939.8	944.9	951.4	951.8	956.5	966.4	975.8	989.1	1000.3
7.5°	881.0	884.4	887.9	898.6	908.0	908.9	917.9	933.8	946.2	962.5	982.7
10°	828.2	829.1	832.5	846.2	858.7	860.0	872.8	890.9	907.6	930.3	953.1
12.5°	784.9	787.4	786.6	796.9	807.6	808.5	825.6	848.4	872.8	898.6	925.6
15°	769.9	769.4	760.4	760.0	764.7	765.6	782.3	808.9	836.4	868.1	902.9
17.5°	780.1	776.7	753.1	738.5	735.5	736.4	748.8	778.0	807.2	843.7	885.3
20°	836.8	823.5	768.1	732.9	723.1	723.1	730.4	754.0	786.2	828.6	881.0
22.5°	971.1	950.5	832.5	769.9	735.1	731.7	726.1	744.1	779.7	830.8	898.6
25°	1140.2	1130.3	950.5	868.1	796.5	785.3	748.4	754.8	793.0	854.0	946.7
27.5°	1296.8	1279.7	1105.4	1011.0	909.7	892.6	814.5	788.3	824.8	896.9	1016.2
30°	1388.2	1376.6	1264.6	1174.5	1053.9	1032.0	920.0	854.4	881.4	967.7	1114.9
32.5°	1487.8	1480.9	1424.3	1342.3	1210.1	1184.8	1056.5	962.1	968.1	1061.7	1233.7
35°	1584.3	1593.3	1561.2	1501.1	1378.4	1354.7	1239.7	1102.9	1075.0	1167.2	1360.8
37.5°	1700.2	1702.3	1682.2	1643.1	1555.1	1535.8	1441.0	1253.0	1191.3	1279.7	1483.5
40°	1931.5	1897.6	1818.6	1787.7	1735.4	1723.4	1615.2	1390.8	1299.4	1395.1	1599.3
42.5°	2181.7	2128.9	2005.3	1954.7	1933.6	1922.5	1760.3	1482.6	1400.7	1510.5	1713.1
45°	2383.4	2340.4	2219.4	2156.8	2159.4	2141.3	1886.9	1564.6	1510.5	1626.4	1840.1
47.5°	2582.0	2510.4	2374.8	2365.8	2395.8	2369.2	2007.9	1646.6	1625.1	1752.5	1967.1
50°	2594.9	2529.7	2474.8	2546.9	2598.4	2565.3	2117.7	1753.8	1744.0	1905.3	2131.0
52.5°	2438.3	2428.8	2512.5	2634.0	2719.4	2689.8	2207.4	1864.1	1865.4	2096.3	2330.6
55°	2381.2	2369.2	2469.6	2619.0	2734.4	2716.8	2274.4	1988.6	2000.2	2328.0	2544.7
57.5°	2477.3	2447.3	2467.0	2590.6	2699.2	2688.9	2343.9	2126.7	2147.8	2594.9	2742.5
60°	2775.6	2714.2	2609.5	2632.7	2700.5	2694.5	2443.4	2280.8	2316.0	2873.0	2867.8
62.5°	3222.3	3152.8	2939.5	2836.5	2821.5	2809.9	2607.8	2470.0	2487.6	3073.8	2794.9
65°	3712.4	3637.7	3384.1	3215.4	3127.0	3102.1	2873.0	2698.3	2588.1	3073.4	2510.8
67.5°	4262.5	4183.5	3930.8	3769.9	3674.2	3631.7	3303.4	2882.9	2555.4	2813.3	2009.2
70°	4825.9	4750.8	4635.0	4691.2	4733.3	4668.5	3981.4	2944.2	2321.1	2205.7	1349.2
72.5°	4526.8	4520.8	4608.8	5141.8	5952.4	5965.3	4658.6	2770.9	1793.3	1311.0	719.2
73°	4249.2	4274.5	4437.6	5075.3	6056.7	6061.0	4671.9	2681.2	1646.6	1129.5	631.7
75°	2201.4	2373.1	2978.1	4115.3	5608.2	5628.4	4118.3	2029.8	981.4	627.4	425.7
77.5°	589.6	581.9	959.5	2004.9	3739.0	3712.4	2602.2	982.7	470.3	393.5	298.7
80°	202.1	204.7	326.6	733.4	1745.3	1807.5	1129.5	428.7	309.4	274.2	211.6
82.5°	103.0	106.4	170.8	312.0	729.9	714.5	363.5	252.3	207.3	166.5	118.4
85°	54.9	56.6	94.0	161.8	267.8	270.8	127.9	134.7	131.7	94.4	58.4
87.5°	27.0	27.9	45.1	71.2	99.1	95.7	44.6	58.4	64.8	53.2	32.2
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°	1023.0	1023.0	1023.0	1023.0	1023.0	1023.0	1023.0	1023.0	1023.0	1023.0	1023.0
2.5°	1016.2	1016.2	1021.7	1031.2	1038.1	1044.5	1048.8	1055.6	1059.5	1059.1	1058.7
5°	1009.3	1013.6	1024.8	1036.3	1044.1	1049.2	1049.2	1052.2	1052.2	1050.9	1049.2
7.5°	993.4	1000.7	1017.0	1027.3	1029.5	1023.9	1012.7	1004.2	993.4	987.8	985.7
10°	968.1	977.5	998.1	1002.9	991.7	972.0	944.9	921.8	901.2	891.7	888.7
12.5°	943.2	955.7	975.0	967.7	941.1	902.5	860.8	829.1	805.9	796.9	793.9
15°	922.6	937.6	952.7	929.9	883.6	829.9	784.0	754.4	736.8	729.9	728.2
17.5°	908.9	926.5	931.6	889.1	824.8	764.7	723.9	704.6	696.9	693.9	693.0
20°	909.7	929.5	917.0	849.7	768.1	707.6	680.6	675.0	675.0	675.0	674.6
22.5°	933.3	950.5	911.0	812.8	713.6	659.6	648.0	652.7	656.1	656.1	655.7
25°	982.3	991.7	915.3	777.1	662.6	617.9	618.4	627.4	630.4	630.4	629.5
27.5°	1056.9	1049.2	923.0	737.7	612.4	580.2	586.2	594.3	596.5	595.2	594.8
30°	1150.5	1119.6	929.5	691.3	565.2	545.0	550.1	554.9	553.1	550.1	549.7
32.5°	1255.2	1191.3	925.6	639.4	523.5	508.5	511.5	514.1	511.5	504.2	504.2
35°	1359.0	1256.0	904.6	582.8	490.5	473.3	472.9	481.0	480.6	472.0	472.5
37.5°	1450.0	1307.1	863.8	530.8	462.2	447.6	449.3	454.4	457.0	445.4	444.1
40°	1529.4	1342.3	806.3	486.6	439.4	440.3	435.6	427.4	424.4	419.3	418.4
42.5°	1604.1	1366.8	745.4	449.7	427.8	437.7	421.8	402.5	394.4	399.1	402.1
45°	1677.5	1394.2	686.6	419.3	413.2	430.0	408.1	386.6	377.2	379.3	382.4
47.5°	1767.1	1432.4	615.8	386.6	390.9	415.8	399.5	376.3	362.2	353.6	351.0
50°	1885.1	1487.8	524.0	351.5	367.3	400.4	392.2	361.3	345.9	328.7	324.4
52.5°	2032.8	1540.1	431.3	323.1	348.0	387.1	380.2	348.4	329.6	309.0	305.5
55°	2180.0	1547.4	351.5	298.7	326.1	369.0	365.6	338.2	311.5	294.8	291.4
57.5°	2282.9	1478.3	297.8	278.1	305.1	346.7	352.3	325.7	296.5	283.7	281.5
60°	2284.7	1313.1	265.2	264.3	289.2	327.4	338.6	311.1	287.1	278.5	276.8
62.5°	2103.1	1058.2	244.2	254.0	277.6	311.5	328.3	303.0	284.9	281.5	279.8
65°	1762.8	781.9	227.4	244.6	266.9	298.2	319.7	300.4	284.1	282.8	281.5
67.5°	1301.5	536.0	213.3	232.6	254.9	284.5	311.5	296.5	278.9	284.1	282.4
70°	818.8	357.9	200.0	218.9	239.0	268.6	300.8	289.7	272.5	269.5	263.9
72.5°	462.2	258.8	184.1	201.3	218.4	247.6	286.2	278.1	257.9	245.9	240.3
73°	417.5	245.0	180.2	197.0	213.7	243.3	282.8	274.6	253.6	240.3	235.2
75°	305.5	200.4	162.6	179.4	194.0	223.6	266.5	257.5	234.7	218.9	215.4
77.5°	221.4	154.5	139.9	154.9	167.8	196.1	242.0	231.7	209.4	200.8	197.4
80°	159.6	117.2	115.9	130.5	141.6	170.4	215.8	205.1	183.7	209.0	203.4
82.5°	95.3	75.1	85.0	101.3	112.9	142.9	187.5	175.1	154.5	156.2	133.0
85°	45.5	42.5	52.8	66.5	74.7	97.8	156.2	146.3	123.6	101.3	99.1
87.5°	20.2	19.3	25.3	29.6	39.9	58.8	106.9	94.8	89.7	53.6	42.1
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)