

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: P197317

Luminaire Tested: **NAV-AF-01-D-UNV-T4FT-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197317
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-8030
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1050mA 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: 5024 lumens
Efficiency: N/A
Efficacy: 85.2 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

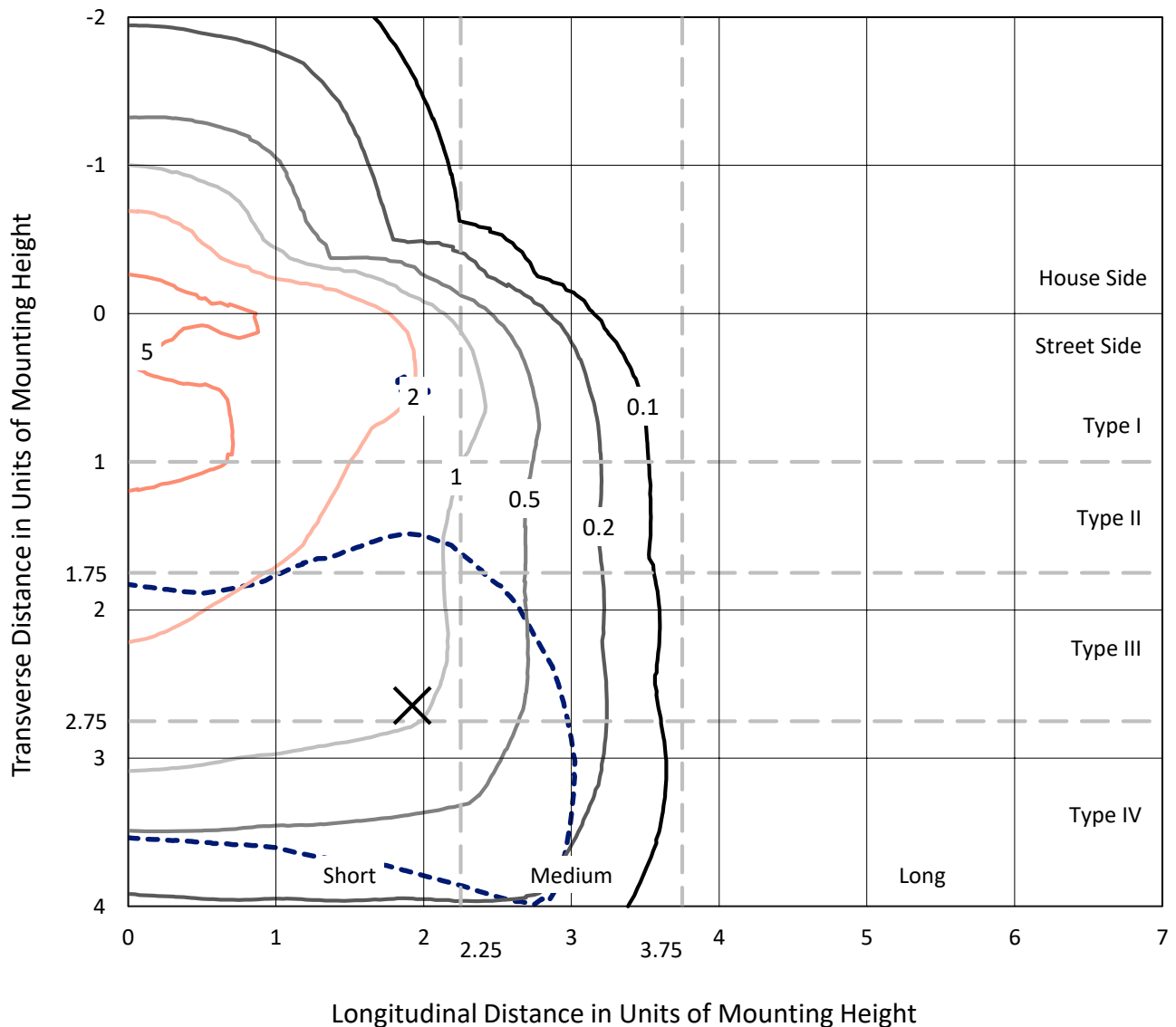
Input Watts (W): 59
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

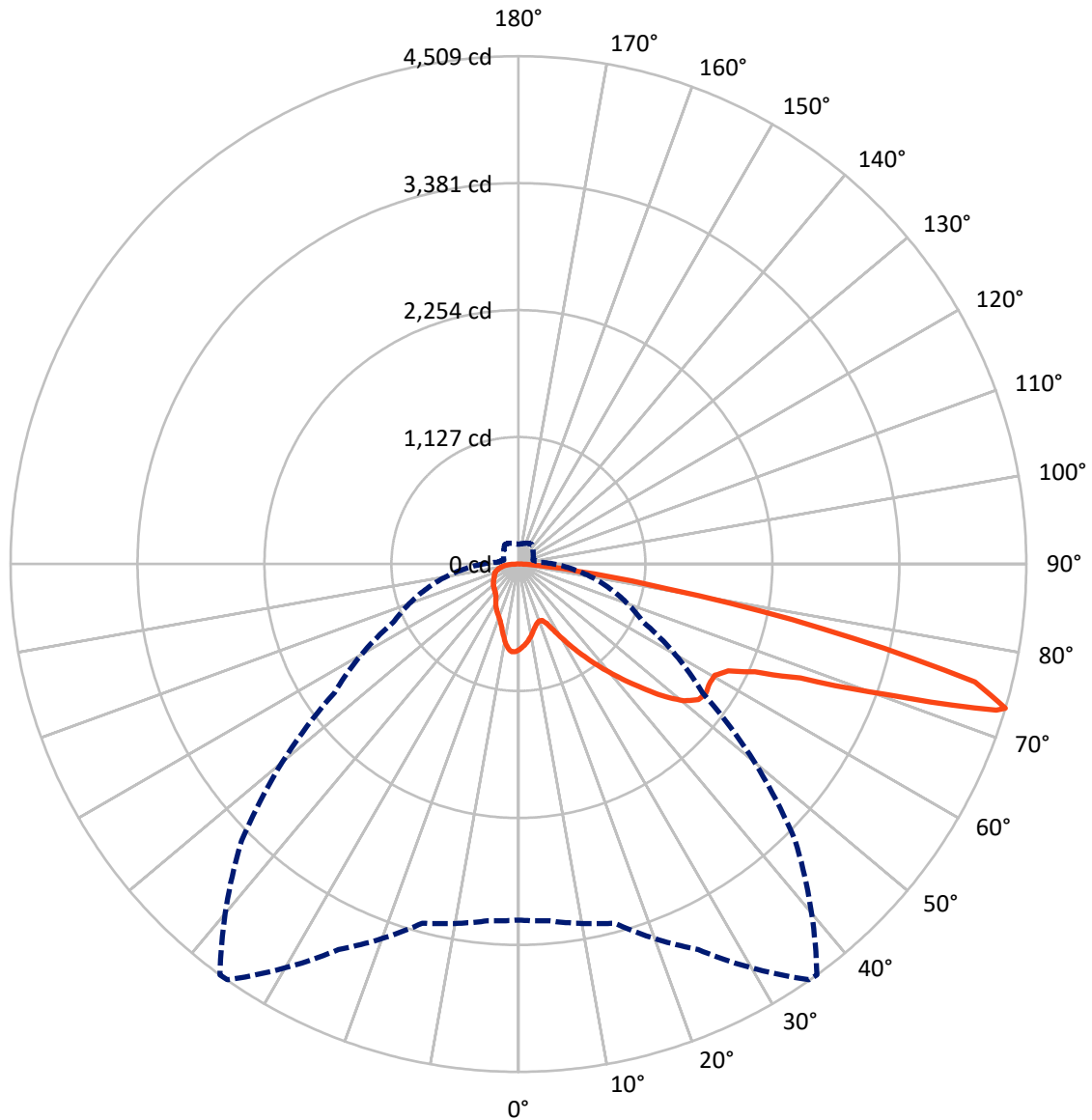
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.6 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	968.8	0.0	968.8
	% Fixture	19.3	0.0	19.3
Street Side	Lumens	4055.2	0.0	4055.2
	% Fixture	80.7	0.0	80.7
Total	Lumens	5024.0	0.0	5024.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	69.1	1.4
10°-20°	173.6	3.5
20°-30°	278.3	5.5
30°-40°	460.4	9.2
40°-50°	712.4	14.2
50°-60°	953.6	19.0
60°-70°	1245.8	24.8
70°-80°	1017.6	20.3
80°-90°	113.3	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°	5024.0	100.0
0°-180°	5024.0	100.0



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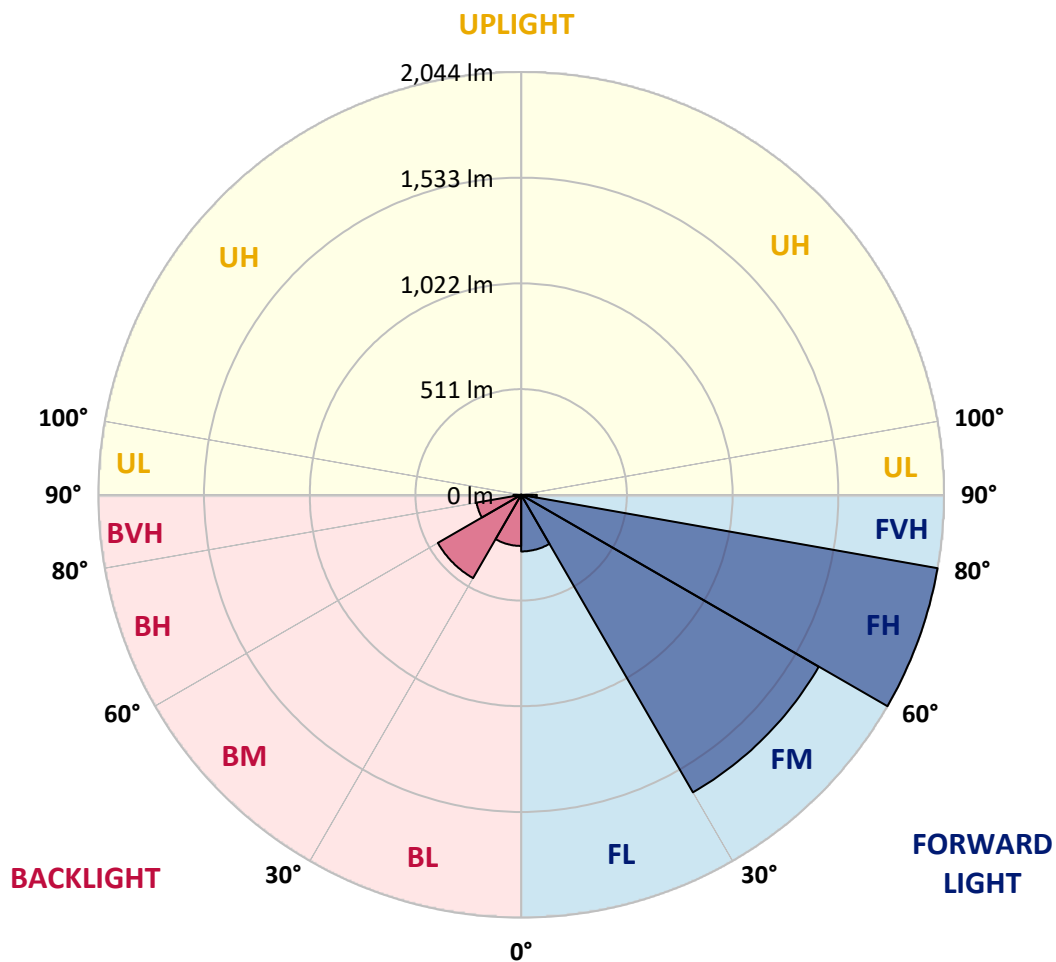
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	273.8	5.4			
FM (30°-60°)	1661.1	33.1			
FH (60°-80°)	2044.4	40.7			G2/5000
FVH (80°-90°)	76.0	1.5			G1/100
BL (0°-30°)	247.3	4.9	B1/500		
BM (30°-60°)	465.3	9.3	B1/1000		
BH (60°-80°)	218.9	4.4	B1/500		G1/500
BVH (80°-90°)	37.3	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°	761.0	761.0	761.0	761.0	761.0	761.0	761.0	761.0	761.0	761.0	761.0
2.5°	731.9	733.9	734.2	736.4	736.4	736.1	737.0	740.9	742.8	747.3	751.1
5°	695.9	698.1	699.1	702.9	707.7	708.0	711.5	718.9	725.9	735.8	744.1
7.5°	655.3	657.9	660.4	668.4	675.4	676.1	682.8	694.6	703.9	716.0	731.0
10°	616.1	616.7	619.3	629.5	638.7	639.7	649.3	662.7	675.1	692.0	709.0
12.5°	583.8	585.7	585.1	592.8	600.7	601.4	614.2	631.1	649.3	668.4	688.5
15°	572.7	572.3	565.6	565.3	568.8	569.5	581.9	601.7	622.1	645.8	671.6
17.5°	580.3	577.8	560.2	549.4	547.1	547.8	557.0	578.7	600.4	627.6	658.5
20°	622.5	612.6	571.4	545.2	537.9	537.9	543.3	560.8	584.8	616.4	655.3
22.5°	722.4	707.0	619.3	572.7	546.8	544.2	540.1	553.5	580.0	618.0	668.4
25°	848.1	840.8	707.0	645.8	592.4	584.1	556.7	561.5	589.9	635.2	704.2
27.5°	964.6	951.9	822.3	752.1	676.7	664.0	605.9	586.4	613.5	667.1	755.9
30°	1032.6	1024.0	940.7	873.7	784.0	767.7	684.4	635.5	655.7	719.8	829.3
32.5°	1106.7	1101.6	1059.4	998.5	900.2	881.3	785.9	715.7	720.1	789.7	917.7
35°	1178.5	1185.2	1161.3	1116.6	1025.3	1007.7	922.2	820.4	799.6	868.2	1012.2
37.5°	1264.7	1266.3	1251.3	1222.2	1156.8	1142.4	1071.9	932.1	886.1	951.9	1103.5
40°	1436.8	1411.5	1352.8	1329.8	1290.9	1281.9	1201.5	1034.6	966.6	1037.7	1189.7
42.5°	1622.8	1583.6	1491.7	1454.0	1438.3	1430.0	1309.4	1102.9	1041.9	1123.6	1274.3
45°	1772.9	1741.0	1650.9	1604.3	1606.3	1592.8	1403.6	1163.8	1123.6	1209.8	1368.8
47.5°	1920.7	1867.4	1766.5	1759.8	1782.1	1762.3	1493.6	1224.8	1208.8	1303.6	1463.2
50°	1930.2	1881.7	1840.9	1894.5	1932.8	1908.2	1575.3	1304.6	1297.3	1417.3	1585.2
52.5°	1813.7	1806.7	1869.0	1959.3	2022.8	2000.8	1642.0	1386.6	1387.6	1559.3	1733.6
55°	1771.3	1762.3	1837.0	1948.1	2034.0	2020.9	1691.8	1479.2	1487.8	1731.7	1892.9
57.5°	1842.8	1820.4	1835.1	1927.1	2007.8	2000.2	1743.5	1582.0	1597.6	1930.2	2040.1
60°	2064.6	2019.0	1941.1	1958.3	2008.8	2004.3	1817.6	1696.6	1722.8	2137.1	2133.3
62.5°	2396.9	2345.2	2186.6	2110.0	2098.8	2090.2	1939.8	1837.4	1850.4	2286.5	2079.0
65°	2761.5	2705.9	2517.3	2391.8	2326.1	2307.5	2137.1	2007.2	1925.1	2286.2	1867.7
67.5°	3170.7	3112.0	2923.9	2804.2	2733.1	2701.5	2457.3	2144.4	1900.9	2092.7	1494.5
70°	3589.8	3533.9	3447.8	3489.6	3520.9	3472.7	2961.6	2190.1	1726.6	1640.7	1003.6
72.5°	3367.3	3362.8	3428.3	3824.7	4427.7	4437.3	3465.3	2061.1	1334.0	975.2	535.0
73°	3160.8	3179.6	3300.9	3775.3	4505.3	4508.5	3475.2	1994.4	1224.8	840.2	469.9
75°	1637.5	1765.2	2215.3	3061.2	4171.7	4186.7	3063.4	1509.8	730.0	466.7	316.7
77.5°	438.6	432.8	713.7	1491.3	2781.3	2761.5	1935.7	731.0	349.9	292.7	222.2
80°	150.3	152.3	242.9	545.5	1298.2	1344.5	840.2	318.9	230.1	204.0	157.4
82.5°	76.6	79.2	127.0	232.1	543.0	531.5	270.4	187.7	154.2	123.9	88.1
85°	40.9	42.1	69.9	120.3	199.2	201.4	95.1	100.2	98.0	70.2	43.4
87.5°	20.1	20.7	33.5	53.0	73.7	71.2	33.2	43.4	48.2	39.6	23.9
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°	761.0	761.0	761.0	761.0	761.0	761.0	761.0	761.0	761.0	761.0	761.0
2.5°	755.9	755.9	760.0	767.1	772.2	777.0	780.1	785.2	788.1	787.8	787.5
5°	750.8	754.0	762.3	770.9	776.6	780.5	780.5	782.7	782.7	781.7	780.5
7.5°	739.0	744.4	756.5	764.2	765.8	761.6	753.3	746.9	739.0	734.8	733.2
10°	720.1	727.2	742.5	746.0	737.7	723.0	702.9	685.7	670.3	663.3	661.1
12.5°	701.6	710.9	725.2	719.8	700.0	671.3	640.3	616.7	599.5	592.8	590.5
15°	686.3	697.5	708.6	691.7	657.2	617.3	583.2	561.2	548.1	543.0	541.7
17.5°	676.1	689.2	693.0	661.4	613.5	568.8	538.5	524.1	518.4	516.2	515.5
20°	676.7	691.4	682.1	632.0	571.4	526.4	506.3	502.1	502.1	502.1	501.8
22.5°	694.3	707.0	677.7	604.6	530.8	490.6	482.0	485.5	488.1	488.1	487.7
25°	730.7	737.7	680.9	578.1	492.9	459.7	460.0	466.7	468.9	468.9	468.3
27.5°	786.2	780.5	686.6	548.7	455.5	431.6	436.0	442.1	443.7	442.7	442.4
30°	855.8	832.8	691.4	514.2	420.4	405.4	409.2	412.7	411.5	409.2	408.9
32.5°	933.7	886.1	688.5	475.6	389.4	378.3	380.5	382.4	380.5	375.1	375.1
35°	1010.9	934.3	672.9	433.5	364.9	352.1	351.8	357.8	357.5	351.1	351.4
37.5°	1078.6	972.3	642.6	394.9	343.8	332.9	334.2	338.0	340.0	331.3	330.4
40°	1137.7	998.5	599.8	362.0	326.9	327.5	324.0	317.9	315.7	311.9	311.2
42.5°	1193.2	1016.7	554.5	334.5	318.2	325.6	313.8	299.4	293.4	296.9	299.1
45°	1247.8	1037.1	510.7	311.9	307.4	319.8	303.6	287.6	280.6	282.2	284.4
47.5°	1314.5	1065.5	458.1	287.6	290.8	309.3	297.2	279.9	269.4	263.0	261.1
50°	1402.3	1106.7	389.8	261.4	273.2	297.8	291.8	268.8	257.3	244.5	241.3
52.5°	1512.1	1145.6	320.8	240.4	258.9	287.9	282.8	259.2	245.2	229.8	227.3
55°	1621.6	1151.1	261.4	222.2	242.6	274.5	272.0	251.5	231.7	219.3	216.7
57.5°	1698.2	1099.7	221.5	206.8	227.0	257.9	262.1	242.3	220.6	211.0	209.4
60°	1699.5	976.8	197.3	196.6	215.1	243.6	251.9	231.4	213.5	207.2	205.9
62.5°	1564.4	787.2	181.6	189.0	206.5	231.7	244.2	225.4	212.0	209.4	208.1
65°	1311.3	581.6	169.2	181.9	198.5	221.8	237.8	223.4	211.3	210.4	209.4
67.5°	968.2	398.7	158.6	173.0	189.6	211.6	231.7	220.6	207.5	211.3	210.0
70°	609.0	266.2	148.8	162.8	177.8	199.8	223.8	215.5	202.7	200.5	196.3
72.5°	343.8	192.5	136.9	149.7	162.5	184.2	212.9	206.8	191.8	182.9	178.8
73°	310.6	182.3	134.1	146.5	159.0	181.0	210.4	204.3	188.7	178.8	174.9
75°	227.3	149.1	121.0	133.4	144.3	166.3	198.2	191.5	174.6	162.8	160.2
77.5°	164.7	114.9	104.1	115.2	124.8	145.9	180.0	172.4	155.8	149.4	146.8
80°	118.7	87.1	86.2	97.0	105.3	126.7	160.6	152.6	136.6	155.5	151.3
82.5°	70.9	55.9	63.2	75.3	84.0	106.3	139.5	130.2	114.9	116.2	99.0
85°	33.8	31.6	39.3	49.5	55.5	72.8	116.2	108.8	91.9	75.3	73.7
87.5°	15.0	14.4	18.8	22.0	29.7	43.7	79.5	70.5	66.7	39.9	31.3
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)