

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: P195889

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195889
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)
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-T4W-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3978 lumens
Efficiency: N/A
Efficacy: 117.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Semi-Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 34
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

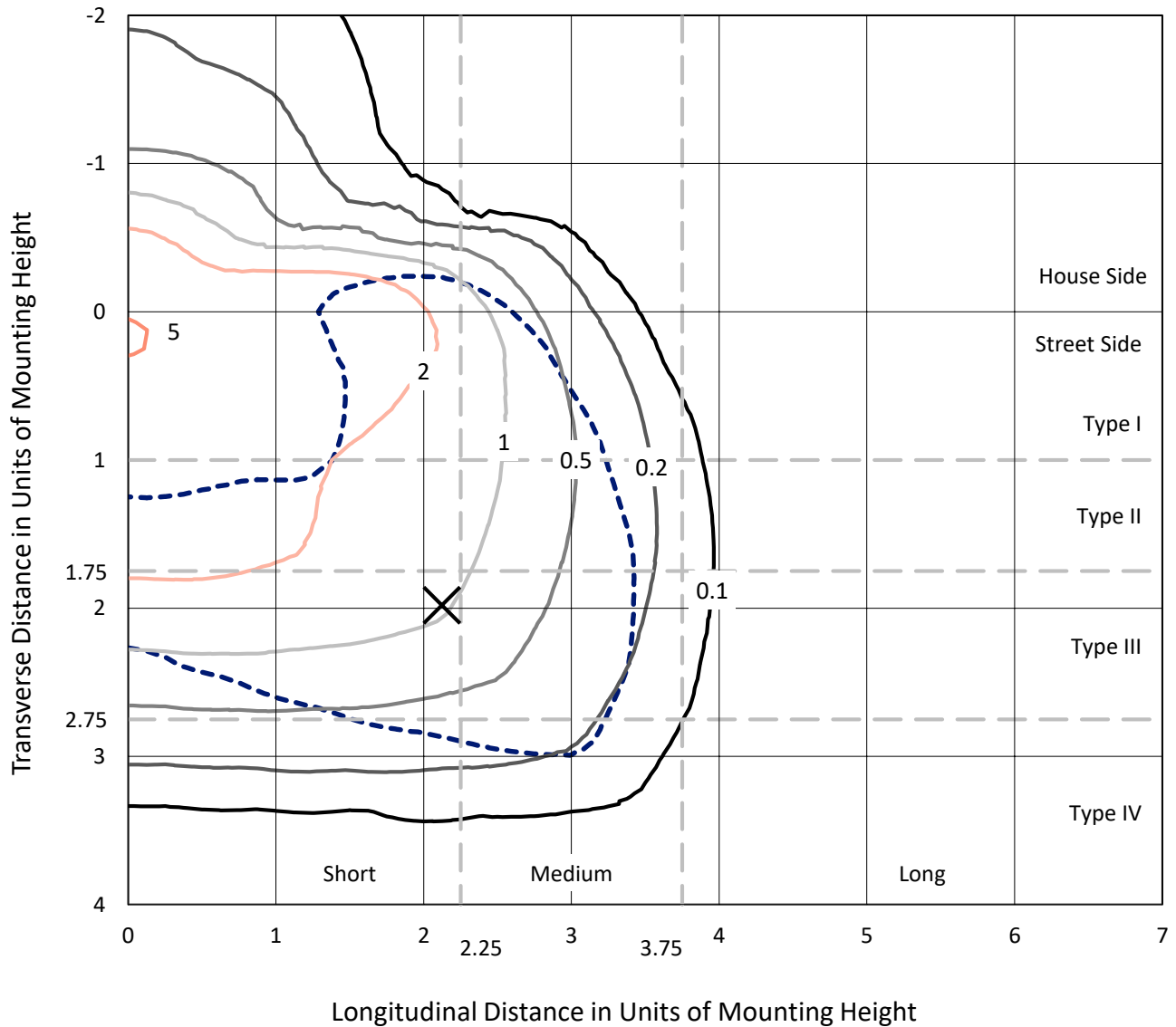


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Iso-Footcandle Lines of Horizontal Illumination

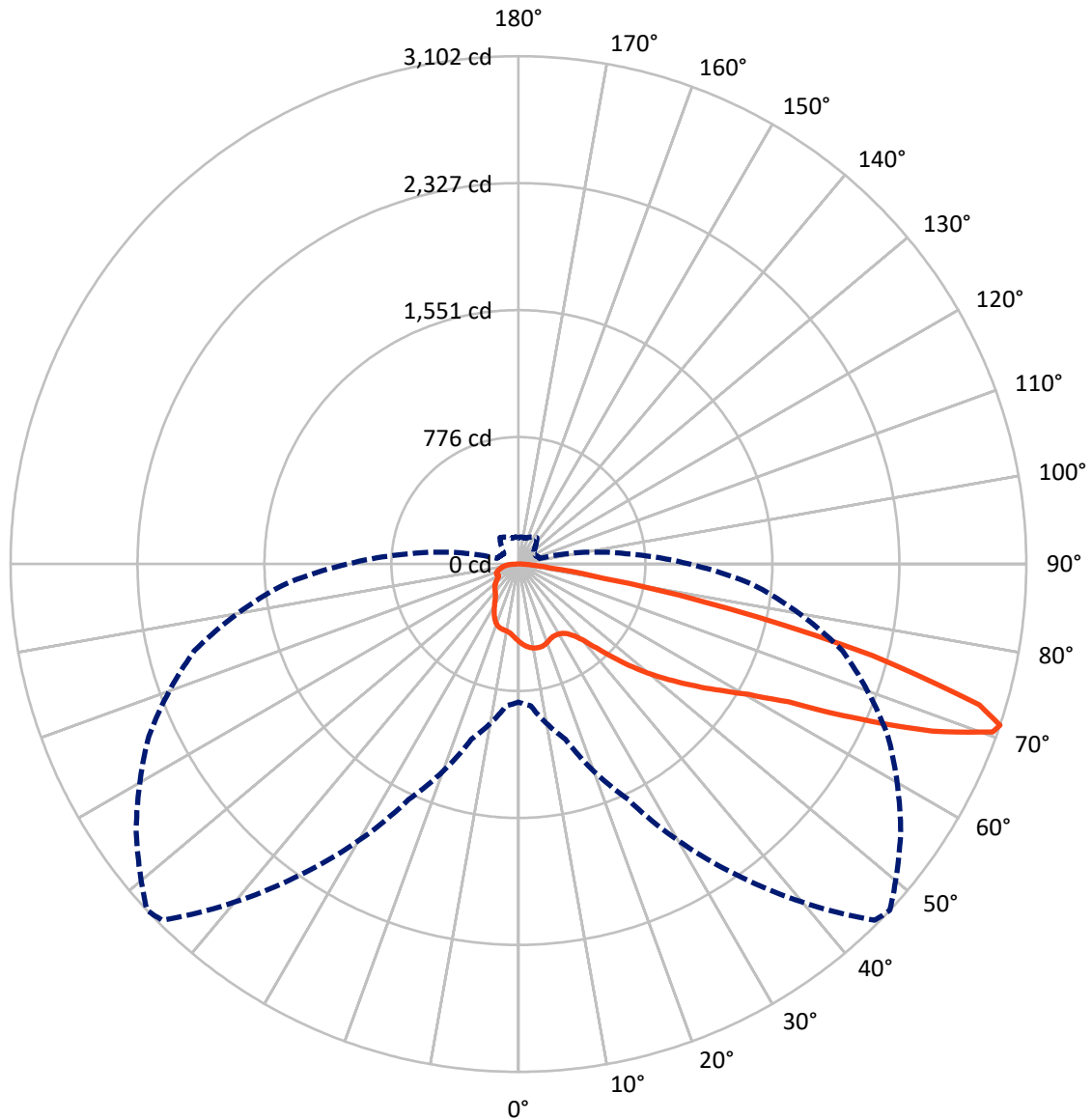
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.4 fc
 Type IV - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral - - - Horizontal Cone Through 71-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	852.5	0.0	852.5
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	3125.5	0.0	3125.5
	% Fixture	78.6	0.0	78.6
Total	Lumens	3978.0	0.0	3978.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	45.2	1.1
10°-20°	132.1	3.3
20°-30°	196.4	4.9
30°-40°	281.9	7.1
40°-50°	499.9	12.6
50°-60°	855.4	21.5
60°-70°	1214.3	30.5
70°-80°	665.1	16.7
80°-90°	87.8	2.2
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°	3978.0	100.0
0°-180°	3978.0	100.0



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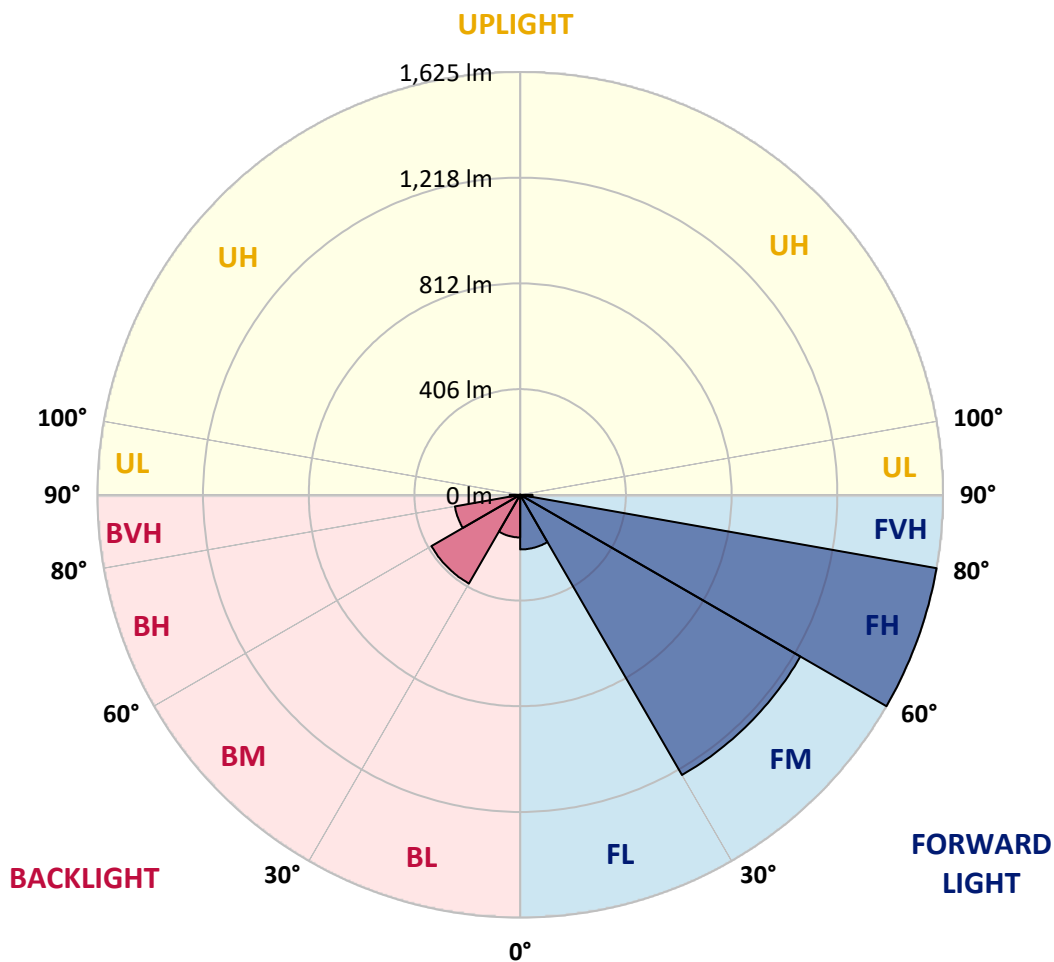
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	209.9	5.3			
FM	(30°-60°)	1243.2	31.3			
FH	(60°-80°)	1624.7	40.8			G1/1800
FVH	(80°-90°)	47.6	1.2			G1/100
BL	(0°-30°)	163.7	4.1	B1/500		
BM	(30°-60°)	393.9	9.9	B1/1000		
BH	(60°-80°)	254.7	6.4	B1/500		G1/500
BVH	(80°-90°)	40.2	1.0			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1
2.5°	501.9	500.9	501.4	499.6	495.2	490.6	490.6	485.7	480.5	475.4	469.7
5°	533.1	531.6	530.3	524.6	516.1	506.6	505.0	495.2	484.7	474.1	463.8
7.5°	559.2	557.6	553.7	543.4	531.1	516.9	515.1	502.2	488.3	473.6	459.1
10°	577.7	576.7	569.2	556.1	541.6	524.9	521.8	508.6	492.1	473.8	455.5
12.5°	588.0	586.5	577.5	562.0	545.0	528.0	524.9	512.2	493.4	473.3	451.9
15°	583.9	583.1	574.6	558.9	541.9	527.2	524.6	511.7	492.6	471.5	448.6
17.5°	566.4	568.2	561.5	546.0	532.1	521.8	518.9	506.8	488.8	467.1	443.4
20°	542.1	544.2	540.9	525.1	517.1	510.4	508.9	499.1	482.3	460.7	437.2
22.5°	516.4	518.2	518.4	503.7	501.2	498.6	497.3	490.3	476.7	456.8	433.1
25°	498.6	500.6	501.2	488.3	489.8	490.6	490.3	485.4	475.6	456.8	433.6
27.5°	493.9	495.0	494.4	482.6	485.4	489.8	490.1	489.0	479.8	462.0	440.8
30°	509.9	510.4	504.0	486.2	489.0	494.7	495.0	494.4	488.5	475.4	457.1
32.5°	579.0	578.5	556.3	510.4	500.6	502.7	503.5	508.1	508.6	497.5	480.5
35°	684.2	683.9	658.1	579.8	533.6	522.8	523.8	531.1	537.5	530.0	520.2
37.5°	799.9	800.7	785.0	678.8	604.8	559.7	558.6	564.1	575.7	578.2	579.5
40°	928.3	932.2	931.4	792.5	704.5	622.6	612.3	606.1	628.5	642.7	661.0
42.5°	1075.0	1074.0	1074.5	917.2	818.5	721.6	702.5	673.6	699.7	724.1	764.4
45°	1201.1	1205.2	1208.3	1050.0	946.1	834.7	815.4	762.8	786.3	822.9	884.2
47.5°	1327.9	1320.7	1326.3	1197.7	1088.1	963.9	938.9	868.0	889.9	941.5	1034.8
50°	1475.6	1472.3	1446.5	1390.5	1259.8	1094.8	1062.1	977.8	1009.8	1078.6	1220.7
52.5°	1608.1	1590.1	1570.0	1542.1	1428.7	1227.4	1185.8	1092.0	1150.8	1236.1	1451.4
55°	1656.6	1644.5	1668.7	1704.8	1607.3	1362.4	1316.0	1225.3	1309.8	1416.3	1722.8
57.5°	1708.1	1712.3	1766.9	1839.9	1776.5	1506.5	1456.3	1383.1	1484.4	1617.9	2026.3
60°	1733.9	1750.4	1859.5	1996.4	1937.3	1664.6	1616.4	1564.3	1678.0	1840.6	2328.9
62.5°	1738.3	1760.5	1914.9	2051.3	2158.8	1906.6	1851.0	1794.5	1919.8	2086.8	2548.0
65°	1657.9	1691.9	1910.0	2118.8	2360.6	2311.1	2275.8	2177.3	2243.6	2303.6	2585.4
67.5°	1421.5	1458.6	1721.0	2091.0	2522.5	2730.8	2724.1	2578.7	2493.6	2387.4	2308.3
70°	1043.3	1073.2	1325.3	1787.5	2451.9	3060.3	3072.1	2838.8	2563.5	2209.5	1716.4
71°	843.8	869.5	1107.2	1587.0	2314.2	3077.3	3102.0	2850.4	2490.8	2048.9	1436.9
72.5°	525.1	539.6	735.2	1197.7	1992.7	2902.0	2943.7	2701.9	2261.9	1731.9	1015.7
75°	198.2	203.9	272.7	528.2	1189.5	2180.2	2230.7	2042.0	1589.0	988.6	425.1
77.5°	106.5	109.3	135.3	219.6	476.7	1249.8	1314.7	1164.7	762.3	346.0	173.8
80°	71.4	73.2	93.6	130.2	219.1	475.9	530.0	467.6	285.4	197.5	123.7
82.5°	46.1	47.2	63.7	85.6	141.5	167.3	191.0	199.5	178.1	141.5	74.8
85°	30.4	31.2	42.0	54.7	87.6	82.5	84.6	110.6	121.4	93.3	38.2
87.5°	17.5	18.0	25.3	28.1	39.4	30.9	33.5	52.6	72.2	60.8	21.9
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°	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1	473.1
2.5°	467.1	465.1	460.4	457.6	456.3	455.8	455.3	456.3	456.3	455.8	454.7
5°	458.6	454.7	447.0	441.6	438.8	438.0	439.0	440.3	441.1	441.1	440.3
7.5°	452.4	446.8	436.4	429.0	424.6	423.3	426.1	430.8	433.9	435.4	435.7
10°	447.3	439.5	428.2	420.5	416.9	416.3	419.9	425.9	432.3	435.2	435.7
12.5°	442.6	433.9	421.5	414.3	411.7	413.0	417.9	423.3	430.8	434.9	435.2
15°	438.2	429.2	416.1	408.6	408.1	410.1	414.8	419.2	424.8	430.0	430.0
17.5°	433.1	423.3	409.6	402.7	402.7	404.5	407.6	409.9	413.5	418.4	418.1
20°	426.9	416.9	402.9	395.7	394.2	393.1	393.1	393.7	396.7	401.1	401.9
22.5°	422.3	412.0	397.3	388.5	381.5	374.8	372.0	371.0	373.8	377.9	379.0
25°	422.3	412.0	395.5	380.8	363.7	350.9	345.4	343.9	346.7	350.6	352.1
27.5°	429.2	418.9	399.6	373.8	342.6	322.0	315.5	314.3	316.8	319.9	321.5
30°	445.5	435.4	411.4	365.8	319.1	292.1	284.9	283.6	284.9	286.2	288.0
32.5°	472.5	464.0	430.8	358.6	295.4	265.0	256.2	254.2	254.7	255.0	256.5
35°	516.6	512.8	456.6	350.1	273.0	242.8	233.8	229.7	229.4	230.7	232.5
37.5°	584.2	586.5	489.8	337.7	254.4	227.1	218.1	214.0	211.9	214.5	216.5
40°	679.5	685.0	528.2	321.0	239.2	217.8	208.3	204.4	201.6	200.8	201.9
42.5°	803.5	802.0	567.4	299.6	222.7	211.6	201.6	197.5	192.8	186.9	185.6
45°	950.5	928.3	600.1	273.3	203.9	205.7	195.4	189.7	182.5	173.8	172.7
47.5°	1124.0	1062.9	620.3	245.2	186.4	198.0	188.4	179.7	169.1	163.4	162.7
50°	1333.0	1220.4	634.4	216.5	170.7	188.2	178.7	167.1	156.7	155.2	154.9
52.5°	1580.5	1406.3	652.0	190.8	158.3	175.6	168.9	157.0	148.7	149.5	149.5
55°	1843.7	1598.6	652.5	170.4	147.5	160.9	161.6	152.1	145.7	148.2	149.0
57.5°	2083.7	1766.7	601.2	156.0	137.1	149.3	159.3	153.9	149.0	158.0	158.8
60°	2293.1	1896.1	490.8	144.1	128.6	144.9	164.5	165.0	164.0	188.4	190.3
62.5°	2369.6	1897.4	348.5	134.1	124.0	147.5	175.3	176.1	176.1	198.8	202.1
65°	2262.4	1739.3	232.0	128.1	120.9	153.1	184.1	180.7	172.7	188.4	184.8
67.5°	1884.5	1353.9	169.6	124.3	116.5	153.4	191.8	183.3	169.6	183.0	176.8
70°	1295.2	861.5	142.0	120.6	111.4	146.7	195.9	182.5	165.0	170.7	162.4
71°	1042.5	687.5	134.8	119.4	109.3	142.8	196.4	181.5	162.7	166.3	158.8
72.5°	686.8	423.6	126.1	116.5	106.2	136.1	195.1	179.2	159.6	159.8	154.9
75°	270.9	175.6	113.4	110.1	97.4	125.3	189.5	174.3	153.6	148.5	146.4
77.5°	136.9	114.7	99.8	101.1	87.1	114.2	181.5	166.3	145.4	138.4	136.9
80°	100.0	87.1	85.3	87.6	75.5	103.4	171.4	155.4	134.8	142.0	139.0
82.5°	60.8	53.1	66.8	72.4	63.2	92.3	159.6	142.8	121.4	111.9	108.3
85°	28.9	31.2	48.2	53.4	46.7	73.7	145.9	128.9	106.0	91.5	93.1
87.5°	14.2	17.3	27.6	32.0	30.7	54.1	110.1	100.0	83.5	68.8	67.3
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)