

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: P270299

Luminaire Tested: **NAV-AF-01-D-UNV-T2-7027-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270299
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24136)
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-T2-7027-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4196.8 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Medium - Full Cutoff
BUG Rating: B1 - U0 - G1

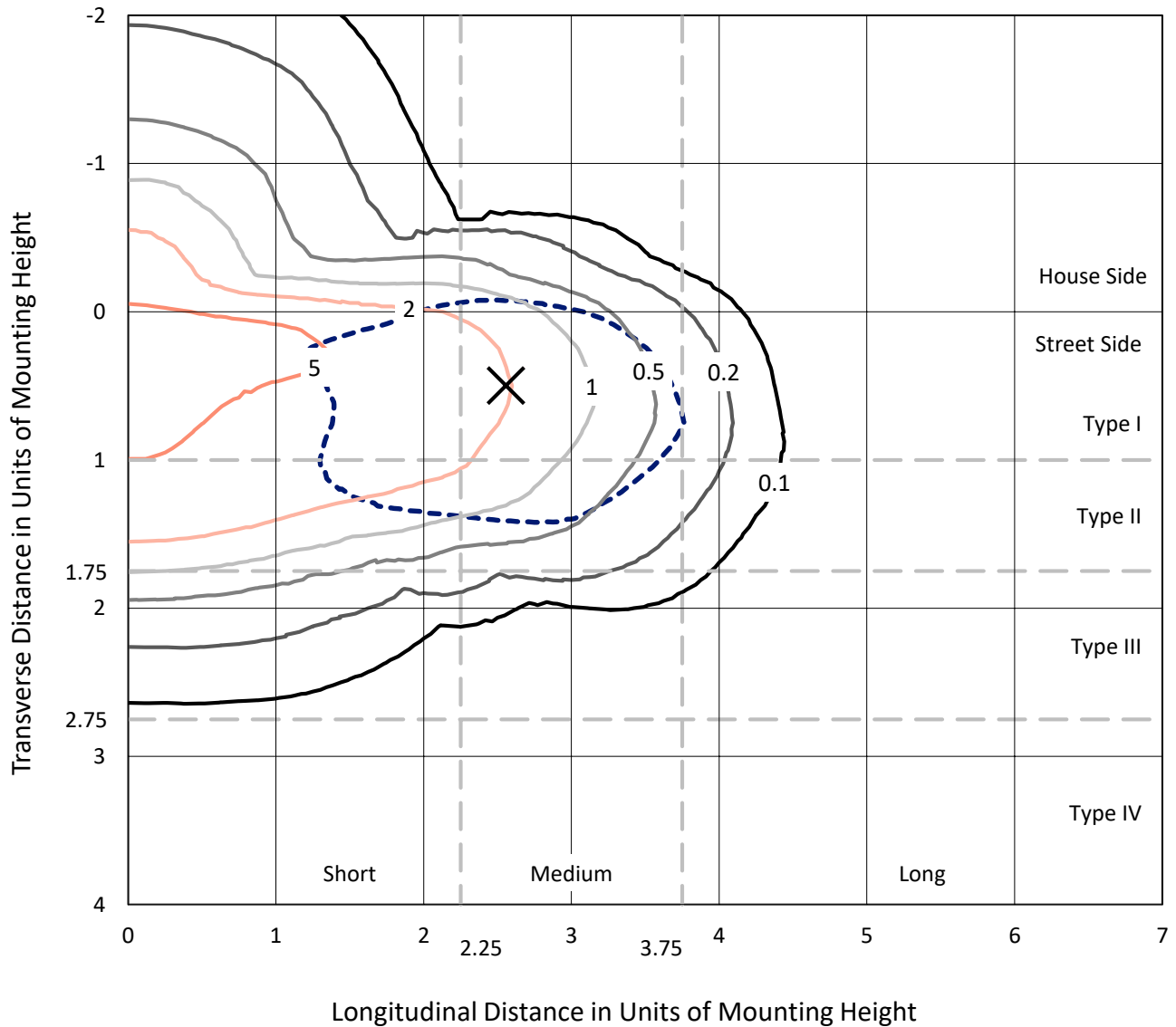
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

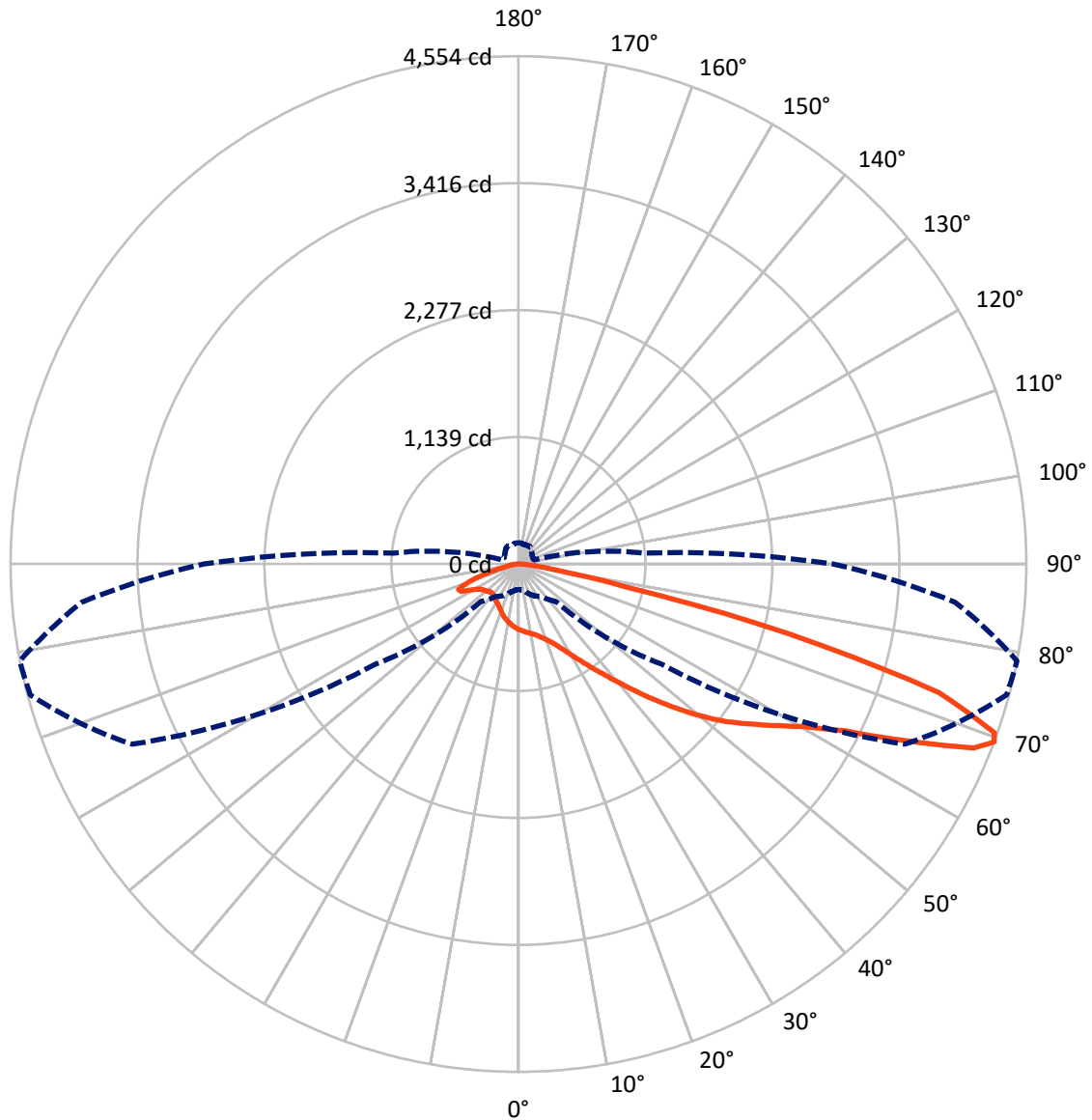
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.1 fc
 Type II - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 79-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	789.5	0.0	789.5
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	3407.3	0.0	3407.3
	% Fixture	81.2	0.0	81.2
Total	Lumens	4196.8	0.0	4196.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	54.6	1.3
10°-20°	156.5	3.7
20°-30°	258.7	6.2
30°-40°	418.8	10.0
40°-50°	669.1	15.9
50°-60°	958.2	22.8
60°-70°	1067.6	25.4
70°-80°	534.1	12.7
80°-90°	79.3	1.9
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°	4196.8	100.0
0°-180°	4196.8	100.0



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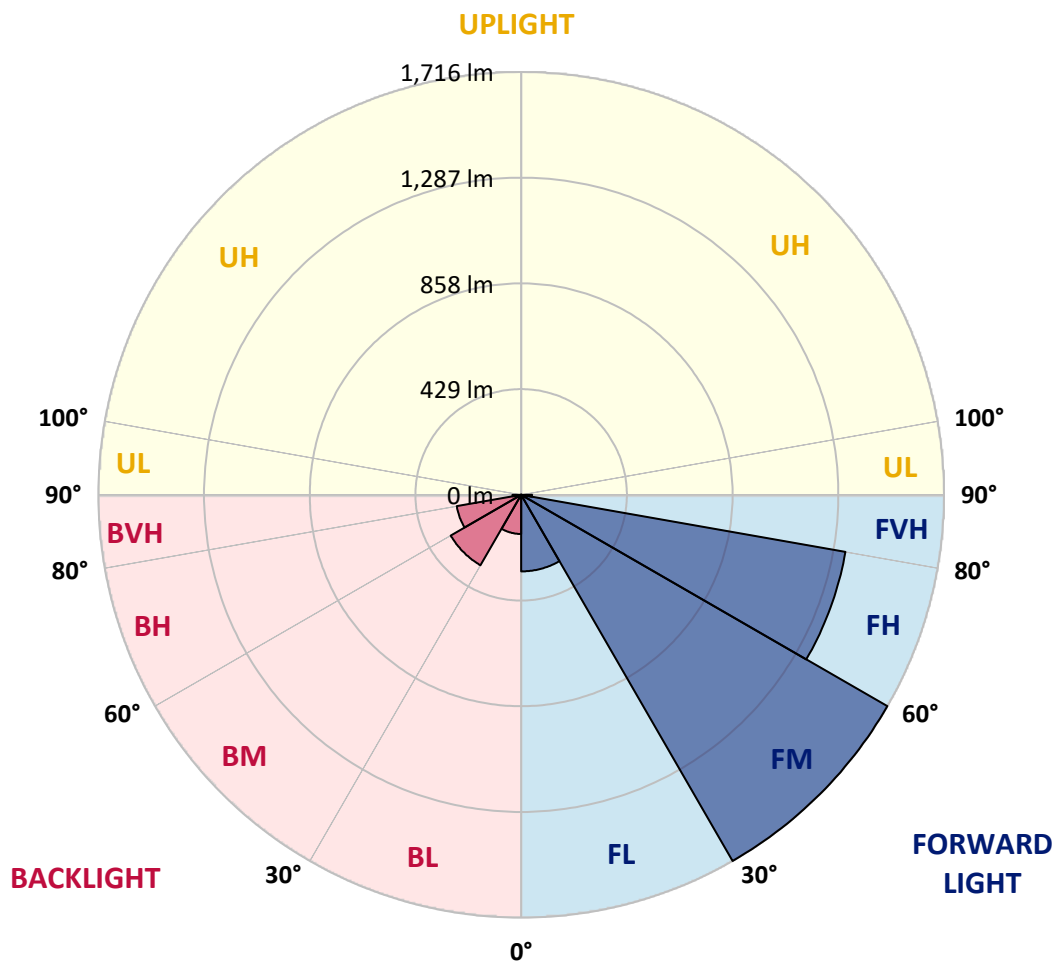
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	310.7	7.4			
FM (30°-60°)	1716.1	40.9			
FH (60°-80°)	1336.2	31.8			G1/1800
FVH (80°-90°)	44.3	1.1			G1/100
BL (0°-30°)	159.0	3.8	B1/500		
BM (30°-60°)	330.0	7.9	B1/1000		
BH (60°-80°)	265.5	6.3	B1/500		G1/500
BVH (80°-90°)	35.0	0.8			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 II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	79°	85°
0°	589.0	589.0	589.0	589.0	589.0	589.0	589.0	589.0	589.0	589.0	589.0
2.5°	646.6	645.3	645.0	640.9	638.6	633.9	623.0	611.7	601.2	595.8	590.0
5°	700.7	698.0	696.5	689.7	683.7	673.2	655.9	638.1	619.4	609.8	598.4
7.5°	733.3	733.6	733.6	728.2	722.1	709.5	687.6	663.0	635.3	622.7	604.6
10°	736.2	736.4	740.6	741.9	743.3	736.7	716.4	685.5	650.0	633.5	609.8
12.5°	708.9	710.9	717.7	727.5	741.6	748.7	739.9	709.8	668.6	648.5	619.7
15°	672.4	674.4	683.2	698.3	720.7	744.7	757.0	737.5	693.0	669.3	634.3
17.5°	654.5	656.8	662.8	674.8	696.8	729.0	766.1	767.2	721.9	694.7	651.5
20°	646.1	647.7	655.5	665.3	682.1	712.7	766.9	798.5	756.2	724.7	672.7
22.5°	665.6	666.2	670.0	675.4	686.7	710.3	766.3	830.8	799.0	762.2	699.9
25°	722.6	719.2	716.4	709.5	712.3	729.0	775.1	865.4	853.8	811.6	736.2
27.5°	790.1	789.7	782.6	766.7	756.5	767.2	800.1	904.1	921.2	874.5	783.6
30°	865.4	865.6	858.3	838.7	818.1	819.3	839.8	948.9	1001.6	950.2	842.2
32.5°	944.3	949.1	935.5	915.9	890.9	883.0	897.0	1003.0	1094.8	1039.8	910.0
35°	1038.4	1039.2	1024.2	995.6	970.6	958.0	970.9	1070.5	1202.0	1144.9	992.5
37.5°	1136.1	1136.7	1121.1	1084.6	1053.0	1044.6	1059.0	1152.6	1315.7	1264.6	1089.7
40°	1216.0	1221.9	1209.5	1175.2	1143.4	1138.3	1159.0	1250.9	1461.0	1406.3	1205.3
42.5°	1306.7	1313.2	1298.4	1262.7	1237.4	1235.8	1268.0	1363.0	1605.5	1570.2	1336.3
45°	1408.8	1418.2	1397.6	1357.5	1336.0	1372.3	1374.1	1487.1	1771.7	1753.6	1483.8
47.5°	1520.3	1527.9	1511.2	1468.1	1444.7	1497.2	1478.3	1621.4	1951.6	1950.2	1643.3
50°	1606.2	1614.8	1616.4	1597.5	1573.0	1579.6	1592.4	1762.5	2130.9	2152.2	1808.3
52.5°	1590.5	1598.9	1635.9	1685.6	1724.8	1707.8	1723.5	1912.3	2304.2	2349.4	1965.1
55°	1464.2	1468.6	1538.1	1656.1	1823.4	1904.6	1905.8	2075.4	2468.9	2532.3	2113.9
57.5°	1236.6	1237.1	1327.5	1501.5	1766.0	2032.3	2193.5	2280.3	2640.7	2734.4	2298.5
60°	875.0	877.3	982.3	1209.9	1560.4	2017.0	2502.9	2646.9	2839.8	2961.5	2536.2
62.5°	519.5	524.4	603.8	786.3	1159.0	1819.2	2685.8	3298.9	3133.1	3294.5	2916.7
65°	338.0	342.2	389.7	481.3	684.8	1323.7	2625.7	3930.4	3688.0	3818.3	3463.7
67.5°	260.2	263.7	300.9	356.4	420.0	715.5	2099.2	4062.8	4363.3	4404.0	3925.2
69°	228.7	231.5	258.9	312.3	353.7	473.6	1564.5	3822.5	4532.3	4554.4	3931.0
70°	212.0	214.2	239.9	286.1	324.7	378.0	1197.4	3543.5	4470.4	4527.4	3817.5
72.5°	174.6	176.5	194.9	230.3	265.4	269.3	530.4	2587.5	3764.3	3946.1	3230.6
75°	145.7	147.0	159.0	184.8	215.0	214.4	271.0	1465.7	2297.1	2513.6	1994.7
77.5°	121.6	122.4	130.4	146.3	169.7	168.8	190.8	632.5	1014.2	978.6	686.7
80°	107.3	107.8	112.0	116.2	131.0	130.2	141.5	290.5	412.7	381.4	259.7
82.5°	81.6	82.6	103.6	105.5	101.6	98.1	98.5	169.2	211.5	192.4	139.4
85°	46.2	46.4	66.5	77.8	88.5	66.5	64.0	87.3	104.4	91.4	60.9
87.5°	20.7	21.4	31.9	36.8	47.8	38.9	36.6	37.1	45.0	37.3	24.2
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°	589.0	589.0	589.0	589.0	589.0	589.0	589.0	589.0	589.0	589.0	589.0
2.5°	584.5	579.9	568.8	557.7	546.3	539.3	531.8	525.0	522.3	521.9	516.7
5°	587.0	576.1	551.1	523.6	497.5	477.2	460.2	449.2	438.6	436.5	431.8
7.5°	587.9	570.1	529.5	485.4	445.6	417.6	400.6	393.2	388.0	386.6	385.0
10°	587.6	562.2	505.1	445.1	399.7	378.6	372.3	374.0	376.2	377.3	377.3
12.5°	592.0	558.7	481.0	407.2	370.1	360.0	364.9	373.4	380.1	382.8	383.2
15°	599.9	556.5	454.5	374.2	349.3	351.7	363.9	376.2	385.6	389.7	390.8
17.5°	609.8	553.5	423.7	347.0	337.1	345.7	361.3	377.0	388.2	393.5	394.3
20°	620.8	549.1	391.8	326.8	326.4	337.1	352.9	370.5	382.5	388.2	388.0
22.5°	635.6	545.0	362.1	311.9	314.6	324.6	337.5	353.4	364.6	369.8	368.8
25°	655.5	541.1	335.5	298.7	301.2	307.8	316.8	328.9	336.9	339.6	337.8
27.5°	682.1	538.2	314.6	286.6	286.4	289.4	294.9	301.6	305.3	304.4	301.6
30°	714.7	535.1	299.2	275.9	272.0	271.7	274.3	278.1	280.6	275.7	273.2
32.5°	751.3	529.9	285.5	266.5	259.7	257.3	258.4	263.7	273.8	268.9	266.8
35°	794.3	523.9	271.7	256.5	251.3	246.6	247.5	258.6	289.4	285.8	284.0
37.5°	846.3	518.4	259.3	245.4	245.1	239.4	238.9	252.3	293.4	285.8	284.1
40°	908.5	517.2	247.9	233.4	237.8	235.5	233.6	242.0	270.7	255.1	252.1
42.5°	983.7	522.3	239.7	221.8	229.2	234.5	231.0	232.8	244.7	230.7	228.2
45°	1071.7	535.7	233.6	211.7	220.3	233.6	229.5	227.9	229.7	222.2	220.4
47.5°	1174.1	559.6	229.5	203.1	211.7	231.5	229.0	225.7	224.8	220.4	219.4
50°	1283.6	591.8	226.8	195.6	204.1	227.6	228.7	224.0	222.7	220.8	220.3
52.5°	1392.4	626.6	223.5	189.0	197.6	223.0	229.0	222.4	220.4	219.4	218.8
55°	1500.4	662.8	217.5	183.2	193.0	217.5	228.7	220.3	218.0	218.0	218.0
57.5°	1640.8	717.9	209.5	178.5	186.9	210.4	225.1	217.7	214.8	215.0	215.2
60°	1843.4	810.5	200.7	173.3	179.0	202.1	219.6	213.3	209.8	210.8	211.1
62.5°	2182.1	972.2	188.6	165.8	170.8	193.2	212.4	207.2	204.1	205.9	206.3
65°	2633.4	1167.9	172.7	156.6	162.2	183.4	203.5	200.1	196.5	201.3	201.0
67.5°	2908.7	1225.4	155.9	146.7	154.0	173.0	192.1	190.8	188.4	196.5	196.0
69°	2818.4	1121.7	146.3	140.3	148.3	165.8	185.1	184.5	182.5	190.5	190.0
70°	2678.1	1024.6	140.3	136.3	145.3	161.4	180.4	180.4	178.5	185.3	184.0
72.5°	2151.3	760.0	126.3	125.8	134.8	149.4	167.8	169.2	168.1	170.5	169.2
75°	1262.9	458.0	112.6	114.3	122.2	136.5	153.8	154.9	153.8	153.5	153.8
77.5°	438.0	205.4	99.4	101.9	108.8	123.2	138.3	140.6	139.0	137.0	137.6
80°	171.3	119.5	85.1	88.8	94.4	108.4	123.0	124.3	121.9	121.6	119.5
82.5°	102.9	72.8	66.1	72.0	79.1	94.2	106.3	105.7	103.8	115.1	100.8
85°	44.7	40.3	48.2	54.1	57.6	70.5	89.8	87.3	82.6	72.8	71.1
87.5°	18.1	20.9	26.6	32.1	34.6	45.5	61.5	59.3	60.1	49.4	49.1
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)