

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: P197209

Luminaire Tested: **NAV-AF-01-D-UNV-T2-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197209
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-T2-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3215 lumens
Efficiency: N/A
Efficacy: 94.6 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

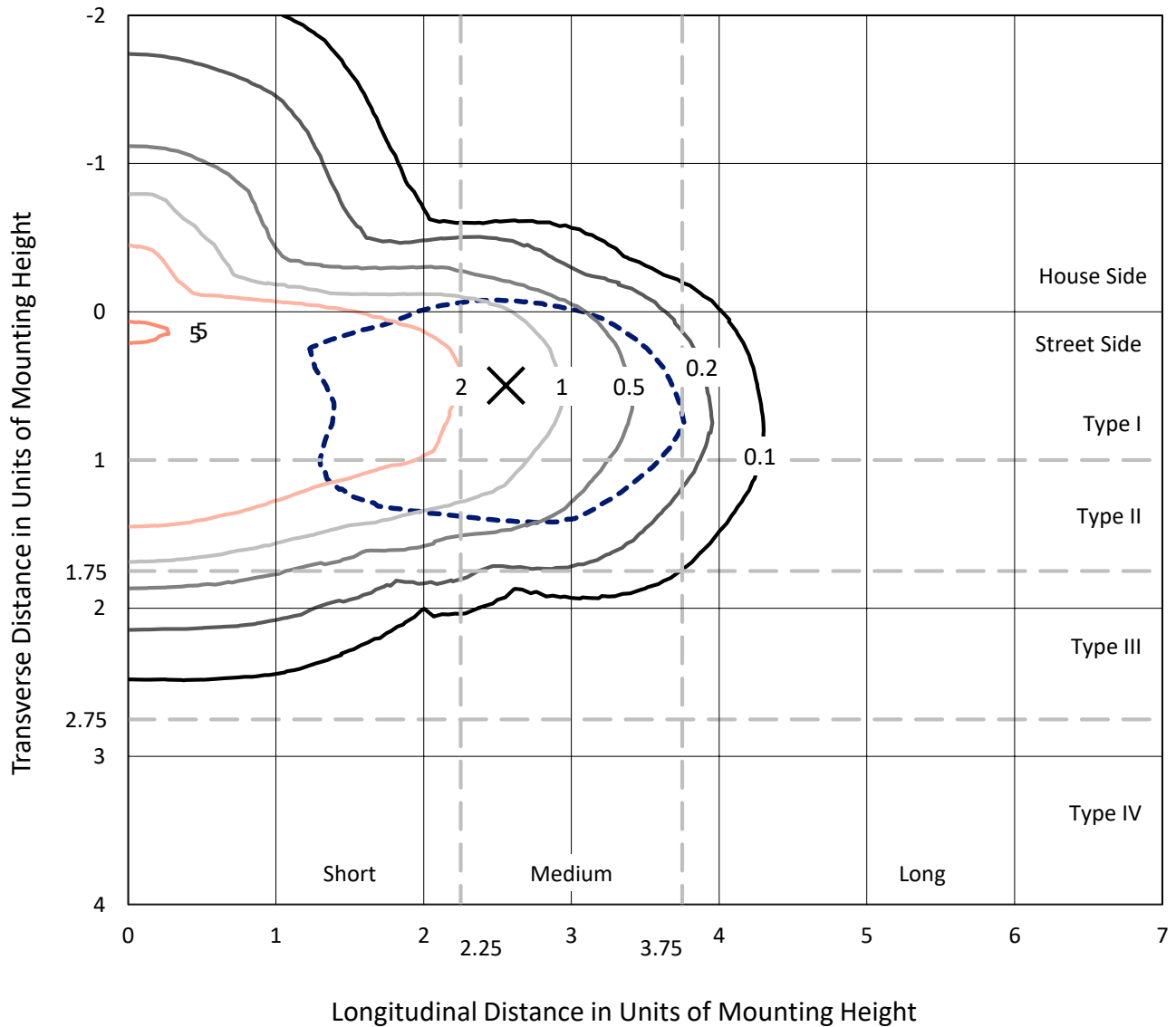
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

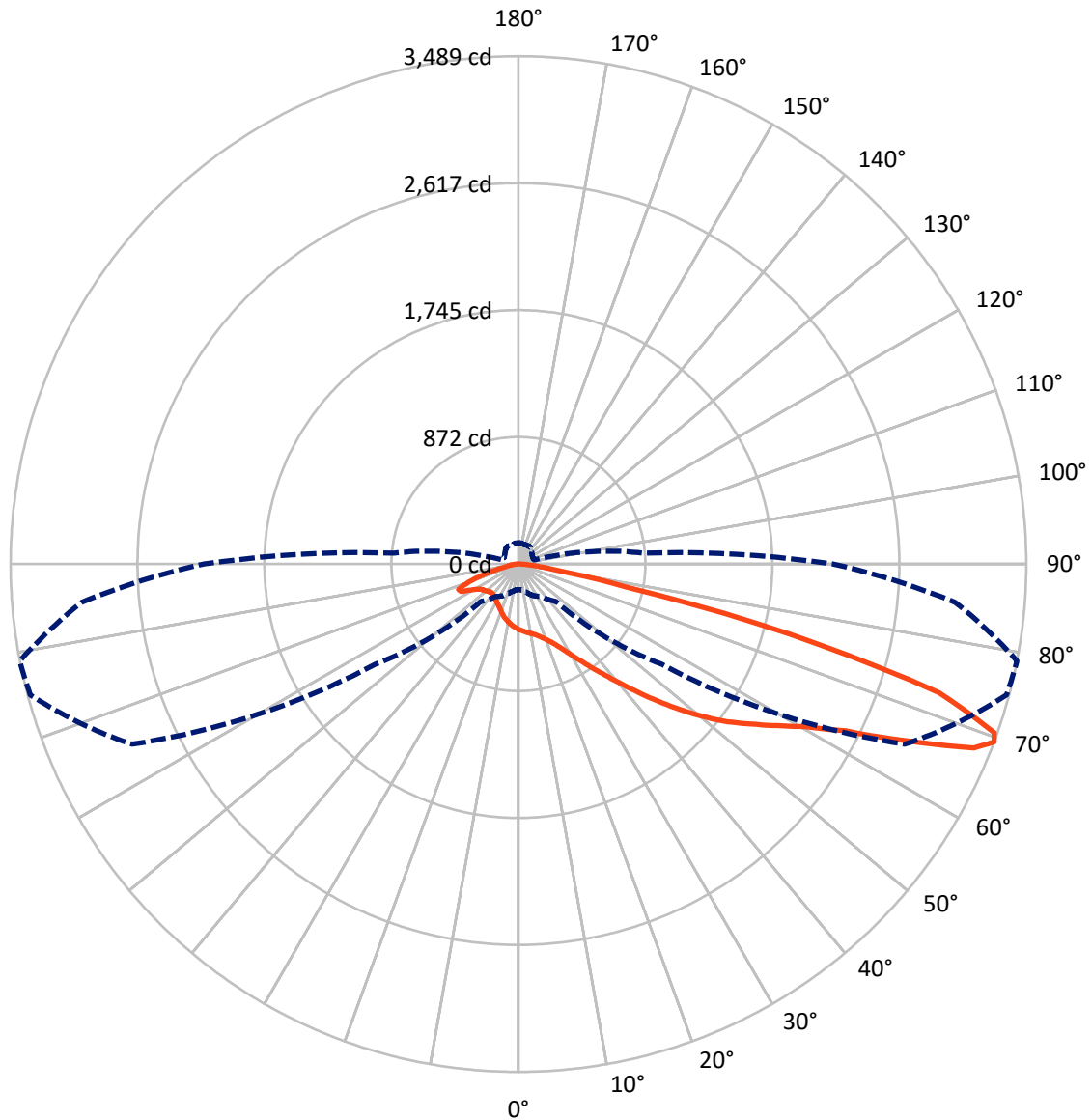
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.5 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	604.8	0.0	604.8
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	2610.2	0.0	2610.2
	% Fixture	81.2	0.0	81.2
Total	Lumens	3215.0	0.0	3215.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	41.8	1.3
10°-20°	119.9	3.7
20°-30°	198.1	6.2
30°-40°	320.8	10.0
40°-50°	512.6	15.9
50°-60°	734.0	22.8
60°-70°	817.8	25.4
70°-80°	409.1	12.7
80°-90°	60.7	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°	3215.0	100.0
0°-180°	3215.0	100.0

Coefficient of Utilization



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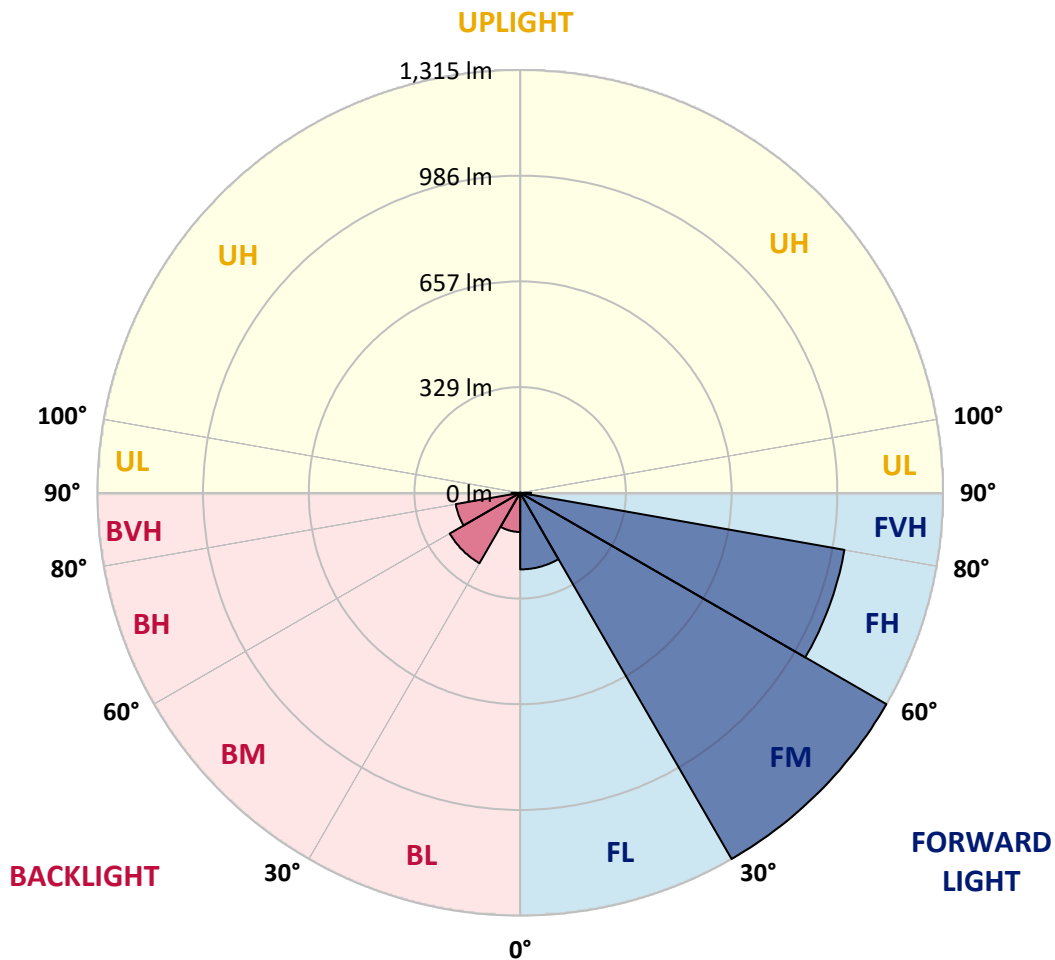
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	238.0	7.4			
FM (30°-60°)	1314.6	40.9			
FH (60°-80°)	1023.6	31.8			G1/1800
FVH (80°-90°)	33.9	1.1			G1/100
BL (0°-30°)	121.8	3.8	B1/500		
BM (30°-60°)	252.8	7.9	B1/1000		
BH (60°-80°)	203.4	6.3	B1/500		G1/500
BVH (80°-90°)	26.8	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°	451.2	451.2	451.2	451.2	451.2	451.2	451.2	451.2	451.2	451.2	451.2
2.5°	495.3	494.3	494.1	490.9	489.2	485.7	477.2	468.6	460.6	456.4	452.0
5°	536.8	534.7	533.6	528.4	523.7	515.7	502.5	488.8	474.5	467.2	458.3
7.5°	561.8	562.0	562.0	557.8	553.2	543.5	526.7	508.0	486.7	477.0	463.2
10°	563.9	564.1	567.3	568.3	569.4	564.3	548.8	525.2	497.9	485.2	467.2
12.5°	543.1	544.6	549.8	557.4	568.1	573.6	566.8	543.7	512.2	496.8	474.7
15°	515.1	516.6	523.3	534.9	552.1	570.4	579.9	565.0	530.9	512.8	485.9
17.5°	501.4	503.1	507.7	517.0	533.8	558.4	586.8	587.7	553.0	532.1	499.1
20°	494.9	496.2	502.1	509.6	522.5	546.0	587.5	611.7	579.3	555.1	515.3
22.5°	509.8	510.3	513.2	517.4	526.0	544.1	587.0	636.5	612.1	583.9	536.1
25°	553.6	550.9	548.8	543.5	545.6	558.4	593.8	663.0	654.1	621.7	563.9
27.5°	605.3	604.9	599.5	587.3	579.5	587.7	612.9	692.6	705.7	669.9	600.3
30°	663.0	663.2	657.5	642.6	626.8	627.6	643.4	726.9	767.3	728.0	645.1
32.5°	723.3	727.1	716.6	701.7	682.5	676.4	687.2	768.3	838.6	796.5	697.0
35°	795.5	796.1	784.5	762.7	743.5	733.9	743.7	820.1	920.8	877.1	760.4
37.5°	870.4	870.8	858.8	830.8	806.6	800.3	811.3	883.0	1007.9	968.8	834.8
40°	931.6	936.0	926.5	900.2	875.8	872.0	887.8	958.3	1119.2	1077.3	923.4
42.5°	1001.0	1006.0	994.7	967.3	948.0	946.7	971.3	1044.1	1229.8	1202.9	1023.7
45°	1079.2	1086.4	1070.6	1039.9	1023.5	1051.2	1052.7	1139.2	1357.3	1343.4	1136.6
47.5°	1164.6	1170.5	1157.7	1124.7	1106.8	1147.0	1132.4	1242.0	1495.1	1494.0	1258.8
50°	1230.5	1237.0	1238.2	1223.7	1205.0	1210.1	1219.9	1350.1	1632.4	1648.8	1385.3
52.5°	1218.5	1224.8	1253.2	1291.2	1321.3	1308.3	1320.3	1465.0	1765.1	1799.8	1505.4
55°	1121.7	1125.1	1178.3	1268.7	1396.8	1459.1	1459.9	1589.9	1891.3	1939.9	1619.4
57.5°	947.3	947.8	1017.0	1150.3	1352.9	1556.9	1680.4	1746.8	2023.0	2094.7	1760.7
60°	670.3	672.0	752.6	926.9	1195.3	1545.1	1917.4	2027.6	2175.5	2268.7	1942.9
62.5°	398.0	401.7	462.5	602.4	887.8	1393.7	2057.5	2527.2	2400.1	2523.8	2234.4
65°	258.9	262.1	298.5	368.7	524.6	1014.0	2011.4	3010.9	2825.2	2925.1	2653.4
67.5°	199.4	201.9	230.5	273.0	321.8	548.1	1608.2	3112.3	3342.6	3373.8	3006.9
69°	175.2	177.3	198.3	239.1	270.9	362.8	1198.5	2928.3	3472.0	3489.0	3011.3
70°	162.4	164.1	183.8	219.2	248.8	289.6	917.3	2714.6	3424.7	3468.2	2924.5
72.5°	133.8	135.2	149.3	176.5	203.4	206.3	406.4	1982.2	2883.7	3022.9	2474.8
75°	111.7	112.5	121.8	141.6	164.7	164.3	207.6	1122.8	1759.7	1925.6	1528.1
77.5°	93.2	93.8	99.9	112.1	130.0	129.4	146.2	484.6	777.0	749.6	526.0
80°	82.2	82.7	85.8	89.0	100.3	99.7	108.3	222.5	316.1	292.2	199.0
82.5°	62.5	63.3	79.3	80.8	77.8	75.1	75.5	129.6	162.0	147.4	106.8
85°	35.3	35.5	50.9	59.5	67.7	50.9	49.0	66.9	79.9	70.0	46.7
87.5°	15.8	16.4	24.4	28.2	36.6	29.9	28.0	28.4	34.5	28.6	18.5
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°	451.2	451.2	451.2	451.2	451.2	451.2	451.2	451.2	451.2	451.2	451.2
2.5°	447.8	444.2	435.8	427.2	418.6	413.1	407.4	402.2	400.1	399.8	395.8
5°	449.7	441.3	422.1	401.1	381.1	365.6	352.5	344.1	335.9	334.4	330.9
7.5°	450.3	436.7	405.5	371.9	341.4	319.9	306.9	301.2	297.2	296.2	294.9
10°	450.1	430.8	387.0	341.0	306.2	290.1	285.2	286.5	288.2	289.0	289.0
12.5°	453.5	428.0	368.5	311.9	283.5	275.7	279.5	286.1	291.1	293.2	293.6
15°	459.6	426.3	348.1	286.7	267.5	269.4	278.7	288.2	295.3	298.5	299.3
17.5°	467.2	424.0	324.5	265.9	258.3	264.8	276.8	288.8	297.4	301.4	302.0
20°	475.6	420.7	300.1	250.3	250.1	258.3	270.3	283.7	293.0	297.4	297.2
22.5°	486.9	417.5	277.4	238.9	241.0	248.6	258.5	270.7	279.3	283.3	282.5
25°	502.1	414.6	257.0	228.8	230.7	235.8	242.7	252.0	258.1	260.2	258.7
27.5°	522.5	412.3	241.0	219.6	219.4	221.7	225.9	230.9	233.9	233.3	230.9
30°	547.5	409.9	229.3	211.4	208.4	208.2	210.1	213.1	215.0	211.2	209.3
32.5°	575.5	405.9	218.7	204.2	199.0	197.1	197.9	201.9	209.7	205.9	204.4
35°	608.5	401.3	208.2	196.5	192.5	188.9	189.5	198.1	221.7	219.0	217.5
37.5°	648.2	397.1	198.6	188.0	187.8	183.4	183.0	193.3	224.8	219.0	217.7
40°	696.0	396.3	189.9	178.8	182.1	180.5	179.0	185.3	207.4	195.4	193.1
42.5°	753.6	400.1	183.6	169.9	175.6	179.6	176.9	178.4	187.4	176.7	174.8
45°	820.9	410.4	179.0	162.2	168.7	179.0	175.8	174.6	176.0	170.2	168.9
47.5°	899.4	428.7	175.8	155.6	162.2	177.3	175.4	172.9	172.3	168.9	168.1
50°	983.3	453.3	173.7	149.8	156.3	174.4	175.2	171.6	170.6	169.1	168.7
52.5°	1066.6	480.0	171.2	144.7	151.4	170.8	175.4	170.4	168.9	168.1	167.6
55°	1149.5	507.7	166.6	140.3	147.9	166.6	175.2	168.7	167.0	167.0	167.0
57.5°	1257.0	550.0	160.5	136.7	143.2	161.1	172.5	166.8	164.5	164.7	164.9
60°	1412.2	620.9	153.8	132.7	137.1	154.8	168.3	163.4	160.7	161.5	161.7
62.5°	1671.5	744.8	144.5	127.0	130.8	148.1	162.8	158.8	156.3	157.8	158.0
65°	2017.3	894.8	132.3	119.9	124.3	140.5	155.9	153.3	150.6	154.2	154.0
67.5°	2228.3	938.7	119.5	112.3	118.0	132.5	147.2	146.2	144.3	150.6	150.2
69°	2159.1	859.2	112.1	107.5	113.6	127.0	141.8	141.3	139.9	146.0	145.6
70°	2051.6	785.0	107.5	104.3	111.3	123.7	138.2	138.2	136.7	142.0	140.9
72.5°	1648.0	582.2	96.8	96.3	103.3	114.4	128.5	129.6	128.7	130.6	129.6
75°	967.5	350.8	86.2	87.5	93.6	104.5	117.8	118.6	117.8	117.6	117.8
77.5°	335.5	157.3	76.1	78.0	83.3	94.4	106.0	107.7	106.4	105.0	105.4
80°	131.2	91.5	65.2	67.9	72.4	83.1	94.2	95.3	93.4	93.2	91.5
82.5°	78.9	55.7	50.7	55.1	60.6	72.1	81.4	81.0	79.5	88.1	77.2
85°	34.3	30.9	37.0	41.4	44.2	54.1	68.8	66.9	63.3	55.7	54.5
87.5°	13.9	16.0	20.4	24.6	26.5	34.9	47.1	45.4	46.1	37.9	37.6
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)