

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: P197215

Luminaire Tested: **NAV-AF-01-D-UNV-T2-8030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197215
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-T2-8030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3942 lumens
Efficiency: N/A
Efficacy: 89.6 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

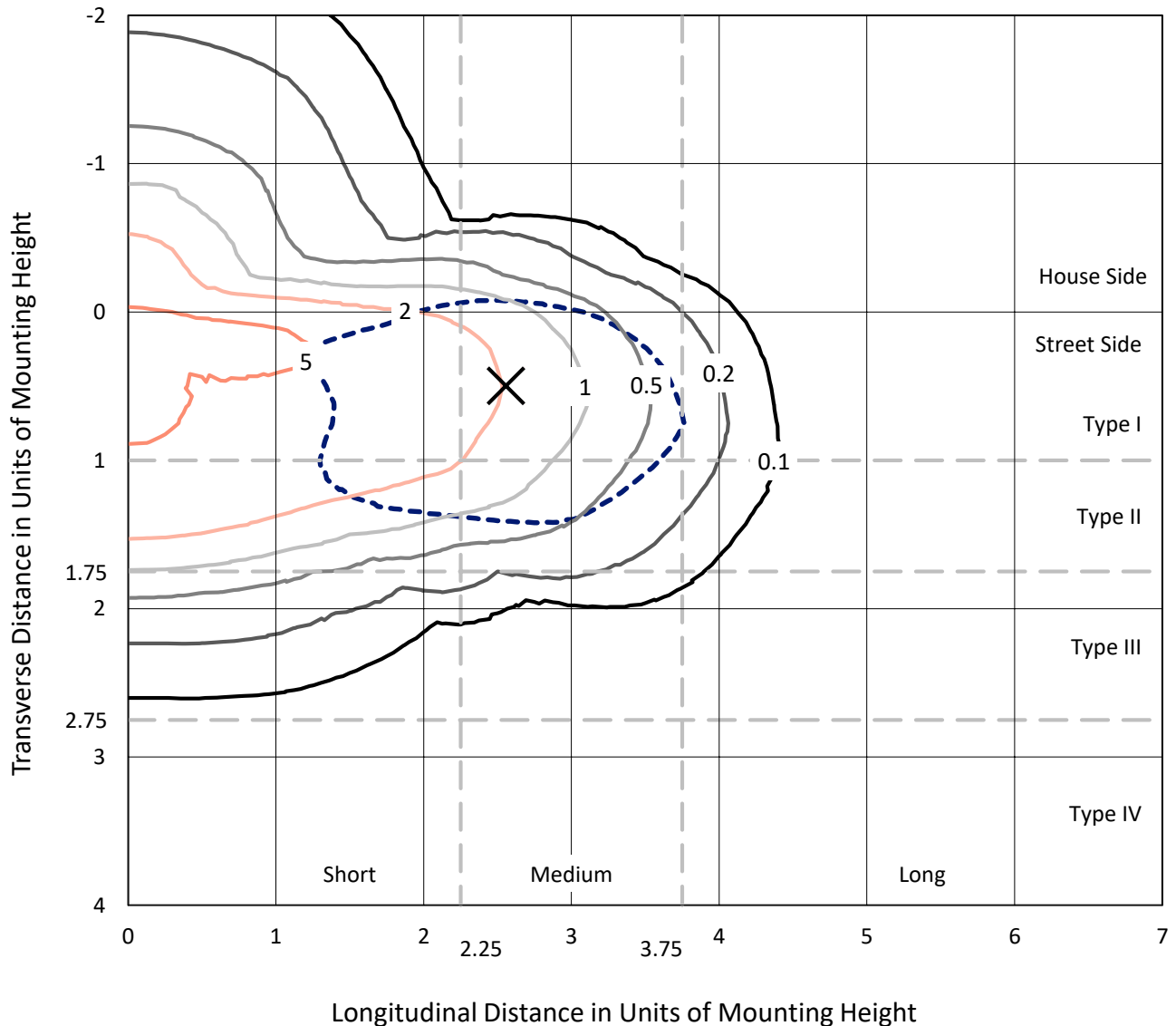
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

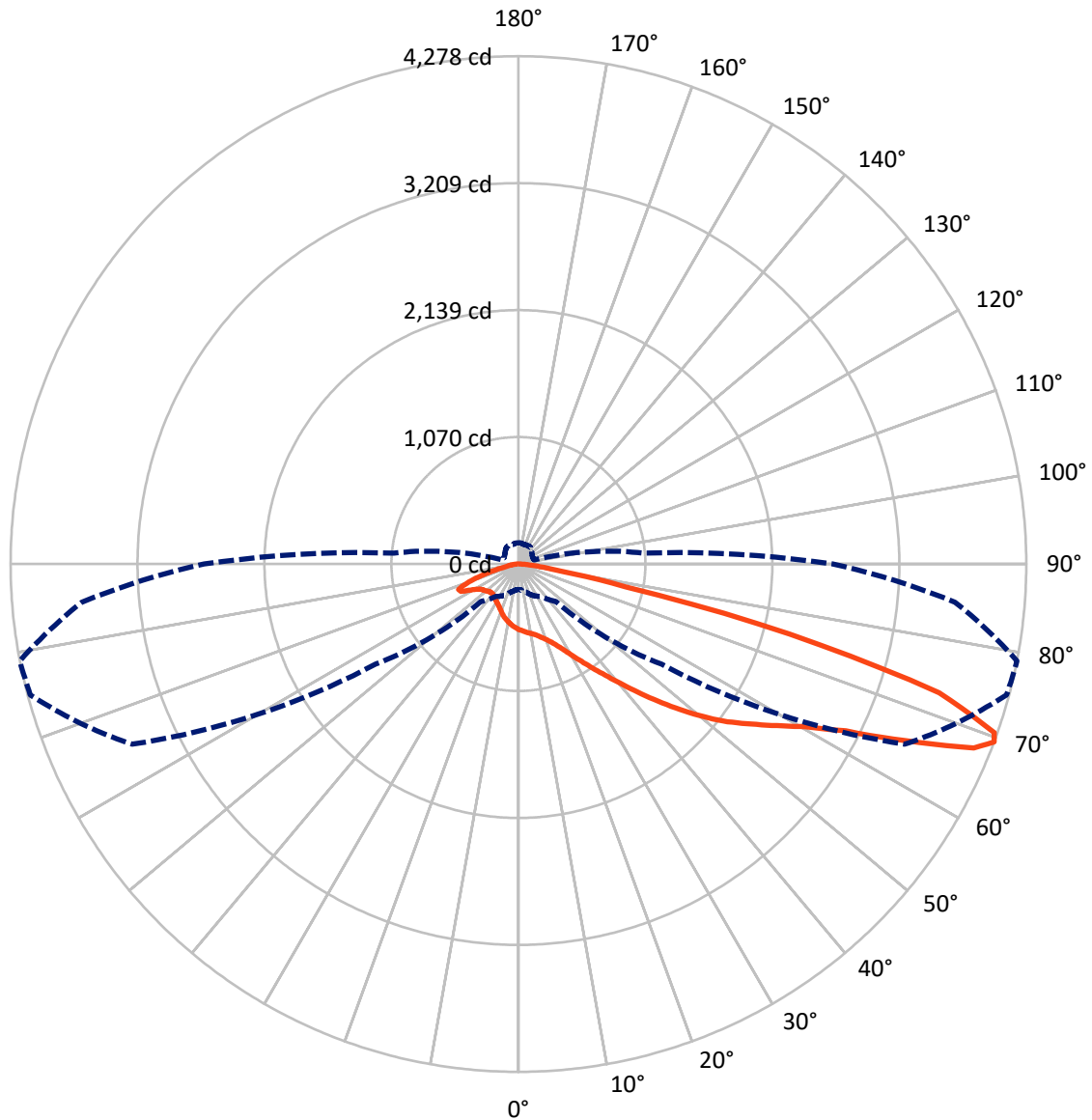
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 6.7 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	741.6	0.0	741.6
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	3200.4	0.0	3200.4
	% Fixture	81.2	0.0	81.2
Total	Lumens	3942.0	0.0	3942.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.3	1.3
10°-20°	147.0	3.7
20°-30°	242.9	6.2
30°-40°	393.4	10.0
40°-50°	628.5	15.9
50°-60°	900.0	22.8
60°-70°	1002.8	25.4
70°-80°	501.7	12.7
80°-90°	74.4	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°	3942.0	100.0
0°-180°	3942.0	100.0



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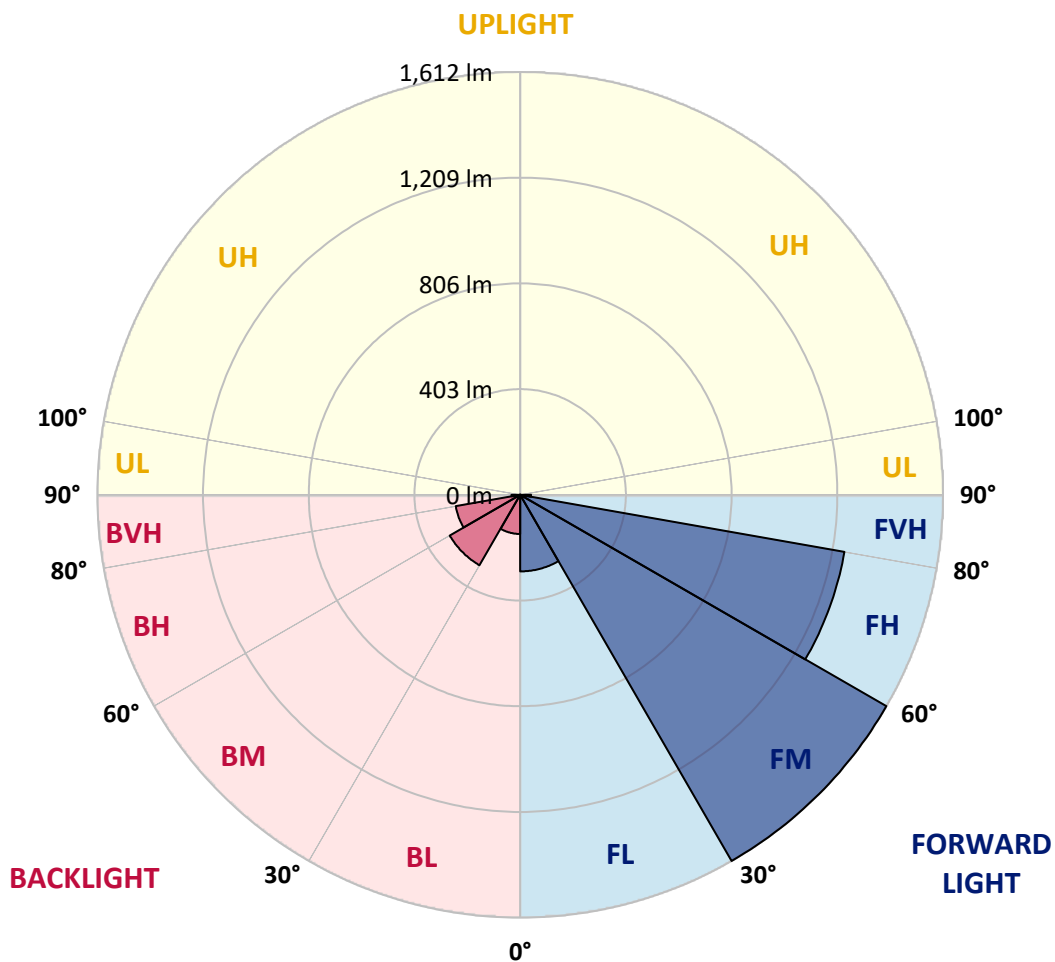
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	291.9	7.4			
FM (30°-60°)	1611.9	40.9			
FH (60°-80°)	1255.1	31.8			G1/1800
FVH (80°-90°)	41.6	1.1			G1/100
BL (0°-30°)	149.4	3.8	B1/500		
BM (30°-60°)	310.0	7.9	B1/1000		
BH (60°-80°)	249.3	6.3	B1/500		G1/500
BVH (80°-90°)	32.8	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°	553.2	553.2	553.2	553.2	553.2	553.2	553.2	553.2	553.2	553.2	553.2
2.5°	607.3	606.1	605.8	601.9	599.9	595.5	585.2	574.6	564.8	559.6	554.2
5°	658.2	655.6	654.3	647.8	642.2	632.4	616.1	599.4	581.8	572.8	562.0
7.5°	688.8	689.1	689.1	683.9	678.3	666.4	645.8	622.8	596.8	584.9	567.9
10°	691.4	691.7	695.5	696.8	698.1	691.9	672.9	644.0	610.4	595.0	572.8
12.5°	665.9	667.7	674.1	683.4	696.6	703.3	695.0	666.7	628.0	609.2	582.1
15°	631.6	633.4	641.6	655.8	677.0	699.4	711.0	692.7	650.9	628.8	595.7
17.5°	614.8	616.9	622.6	633.9	654.5	684.7	719.5	720.6	678.0	652.5	612.0
20°	606.8	608.4	615.6	624.9	640.6	669.5	720.3	750.0	710.2	680.6	631.8
22.5°	625.1	625.7	629.3	634.4	645.0	667.2	719.8	780.4	750.5	715.9	657.4
25°	678.8	675.4	672.9	666.4	669.0	684.7	728.0	812.9	802.1	762.3	691.4
27.5°	742.2	741.7	735.0	720.0	710.5	720.6	751.5	849.3	865.2	821.4	736.0
30°	812.9	813.1	806.2	787.9	768.5	769.6	788.9	891.3	940.8	892.6	791.0
32.5°	886.9	891.5	878.7	860.3	836.9	829.4	842.5	942.1	1028.2	976.7	854.7
35°	975.4	976.1	962.0	935.1	911.7	899.8	911.9	1005.5	1129.1	1075.4	932.3
37.5°	1067.2	1067.7	1053.0	1018.7	989.0	981.3	994.7	1082.6	1235.8	1187.9	1023.6
40°	1142.2	1147.6	1136.0	1103.8	1073.9	1069.2	1088.6	1175.0	1372.3	1320.9	1132.2
42.5°	1227.3	1233.5	1219.6	1186.1	1162.3	1160.8	1191.0	1280.2	1507.9	1474.9	1255.2
45°	1323.3	1332.0	1312.7	1275.0	1254.9	1289.0	1290.8	1396.8	1664.2	1647.2	1393.7
47.5°	1428.0	1435.2	1419.5	1379.0	1357.0	1406.3	1388.5	1522.9	1833.1	1831.8	1543.5
50°	1508.7	1516.7	1518.2	1500.4	1477.5	1483.7	1495.8	1655.4	2001.5	2021.6	1698.5
52.5°	1494.0	1501.7	1536.5	1583.2	1620.1	1604.1	1618.8	1796.2	2164.3	2206.8	1845.8
55°	1375.4	1379.5	1444.7	1555.6	1712.7	1789.0	1790.1	1949.4	2319.0	2378.6	1985.5
57.5°	1161.6	1162.1	1246.9	1410.4	1658.8	1908.9	2060.3	2141.8	2480.4	2568.4	2158.8
60°	821.9	824.0	922.8	1136.5	1465.6	1894.5	2351.0	2486.1	2667.4	2781.7	2382.2
62.5°	487.9	492.6	567.1	738.6	1088.6	1708.8	2522.7	3098.6	2942.9	3094.5	2739.6
65°	317.5	321.3	366.0	452.1	643.2	1243.3	2466.3	3691.8	3464.1	3586.6	3253.4
67.5°	244.5	247.6	282.7	334.7	394.6	672.1	1971.9	3816.1	4098.5	4136.7	3686.9
69°	214.8	217.4	243.2	293.2	332.2	444.9	1469.5	3590.4	4257.1	4278.0	3692.3
70°	199.1	201.2	225.4	268.7	305.1	355.1	1124.7	3328.4	4199.1	4252.4	3585.8
72.5°	164.0	165.8	183.1	216.4	249.4	253.0	498.3	2430.4	3535.8	3706.5	3034.4
75°	136.9	138.0	149.3	173.6	201.9	201.4	254.5	1376.6	2157.6	2361.0	1873.6
77.5°	114.2	115.0	122.5	137.5	159.4	158.6	179.2	594.2	952.7	919.1	645.0
80°	100.8	101.4	105.2	109.1	123.0	122.2	132.8	272.9	387.6	358.2	244.0
82.5°	76.6	77.6	97.2	99.0	95.4	92.1	92.6	158.9	198.6	180.8	131.0
85°	43.3	43.6	62.4	73.0	83.0	62.4	60.1	82.0	98.0	85.9	57.3
87.5°	19.3	20.1	29.9	34.6	44.9	36.6	34.3	34.8	42.3	35.1	22.7
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°	553.2	553.2	553.2	553.2	553.2	553.2	553.2	553.2	553.2	553.2	553.2
2.5°	549.1	544.7	534.4	523.8	513.2	506.5	499.5	493.1	490.5	490.3	485.4
5°	551.4	541.1	517.6	491.8	467.3	448.2	432.2	421.9	411.9	410.1	405.7
7.5°	552.2	535.4	497.2	456.0	418.6	392.3	376.3	369.3	364.4	363.1	361.6
10°	551.9	528.2	474.5	418.0	375.5	355.6	349.7	351.3	353.3	354.3	354.3
12.5°	556.0	524.8	451.8	382.5	347.6	338.1	342.7	350.7	356.9	359.5	360.0
15°	563.5	522.8	426.8	351.5	328.0	330.4	341.7	353.3	362.1	366.0	367.0
17.5°	572.8	519.9	397.9	326.0	316.7	324.7	339.4	354.1	364.7	369.6	370.3
20°	583.1	515.8	368.0	306.9	306.6	316.7	331.4	347.9	359.2	364.7	364.4
22.5°	597.0	511.9	340.2	293.0	295.5	304.8	317.0	331.9	342.5	347.4	346.4
25°	615.6	508.3	315.1	280.6	282.9	289.1	297.6	309.0	316.4	319.0	317.2
27.5°	640.6	505.5	295.5	269.2	269.0	271.8	277.0	283.2	286.8	286.0	283.2
30°	671.3	502.6	281.1	259.2	255.6	255.3	257.6	261.2	263.6	258.9	256.6
32.5°	705.6	497.7	268.2	250.4	244.0	241.6	242.7	247.6	257.1	252.5	250.7
35°	746.1	492.1	255.3	240.9	236.0	231.6	232.4	242.9	271.8	268.5	266.7
37.5°	794.8	486.9	243.5	230.6	230.3	224.9	224.4	237.0	275.7	268.5	266.9
40°	853.4	485.9	232.9	219.2	223.3	221.3	219.5	227.2	254.3	239.6	236.7
42.5°	924.0	490.5	225.1	208.4	215.3	220.2	216.9	218.7	229.8	216.6	214.3
45°	1006.6	503.2	219.5	198.8	206.8	219.5	215.6	214.1	215.9	208.6	207.1
47.5°	1102.8	525.6	215.6	190.8	198.8	217.4	215.1	212.0	211.2	207.1	206.1
50°	1205.7	555.8	213.0	183.6	191.6	213.8	214.8	210.4	209.2	207.3	206.8
52.5°	1307.8	588.5	209.9	177.4	185.7	209.4	215.1	208.9	207.1	206.1	205.5
55°	1409.4	622.6	204.3	172.0	181.3	204.3	214.8	206.8	204.8	204.8	204.8
57.5°	1541.2	674.4	196.8	167.6	175.6	197.5	211.5	204.5	201.7	201.9	202.2
60°	1731.5	761.3	188.5	162.7	168.1	189.8	206.3	200.4	197.0	198.1	198.3
62.5°	2049.5	913.2	177.2	155.8	160.4	181.6	199.6	194.7	191.6	193.4	193.7
65°	2473.5	1097.1	162.2	147.0	152.4	172.3	191.1	188.0	184.7	189.0	188.8
67.5°	2732.2	1151.0	146.5	137.7	144.7	162.5	180.5	179.2	176.9	184.7	184.1
69°	2647.3	1053.5	137.5	131.8	139.3	155.8	173.8	173.3	171.5	179.0	178.5
70°	2515.5	962.5	131.8	127.9	136.4	151.6	169.4	169.4	167.6	174.1	172.8
72.5°	2020.6	713.9	118.6	118.1	126.6	140.3	157.6	158.9	157.8	160.2	158.9
75°	1186.3	430.2	105.7	107.3	114.8	128.2	144.4	145.5	144.4	144.2	144.4
77.5°	411.3	192.9	93.4	95.7	102.1	115.8	130.0	132.0	130.5	128.7	129.2
80°	160.9	112.2	79.9	83.3	88.7	101.9	115.5	116.8	114.5	114.2	112.2
82.5°	96.7	68.3	62.2	67.6	74.3	88.5	99.8	99.3	97.5	108.1	94.6
85°	42.0	37.9	45.4	50.8	54.2	66.3	84.3	82.0	77.6	68.3	66.8
87.5°	17.0	19.6	25.0	30.2	32.5	42.8	57.8	55.7	56.5	46.4	46.2
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)