

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: P195295

Luminaire Tested: **NAV-AF-01-D-UNV-T2-7060-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195295
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-T2-7060-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5700K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE II OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4831 lumens
Efficiency: N/A
Efficacy: 109.8 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

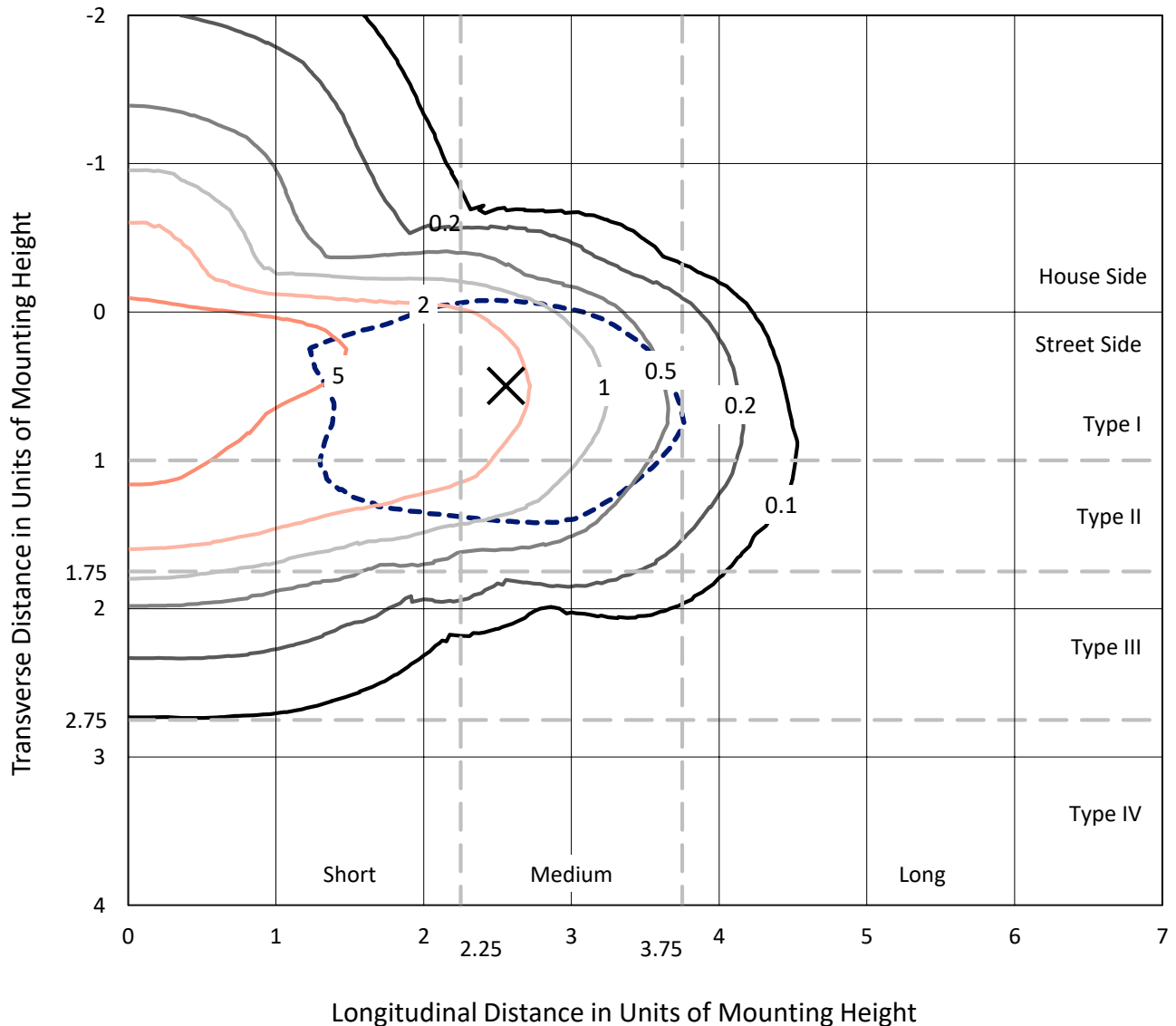
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

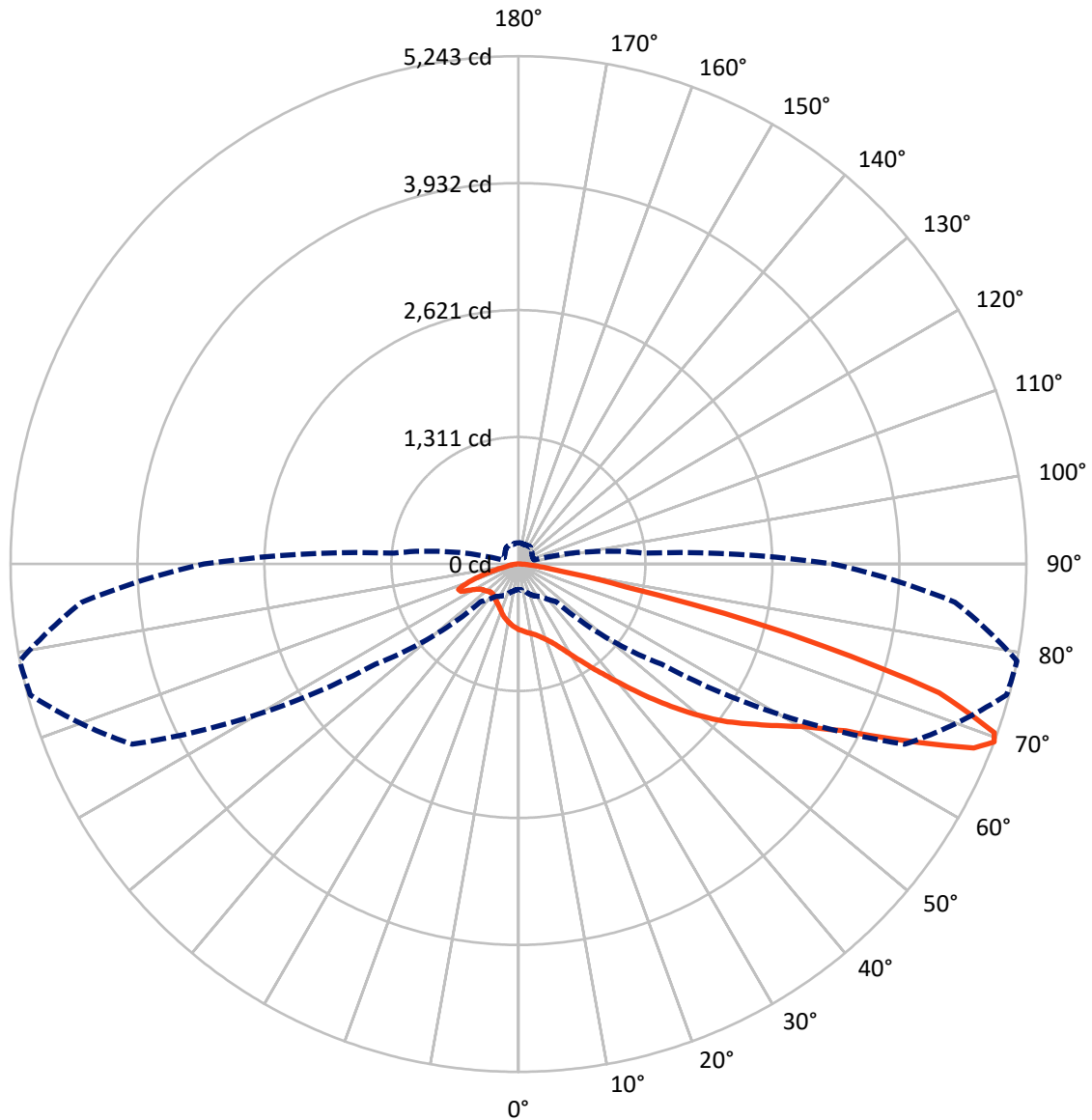
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 8.2 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	908.8	0.0	908.8
	% Fixture	18.8	0.0	18.8
Street Side	Lumens	3922.2	0.0	3922.2
	% Fixture	81.2	0.0	81.2
Total	Lumens	4831.0	0.0	4831.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.8	1.3
10°-20°	180.2	3.7
20°-30°	297.7	6.2
30°-40°	482.1	10.0
40°-50°	770.2	15.9
50°-60°	1103.0	22.8
60°-70°	1228.9	25.4
70°-80°	614.8	12.7
80°-90°	91.2	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°	4831.0	100.0
0°-180°	4831.0	100.0



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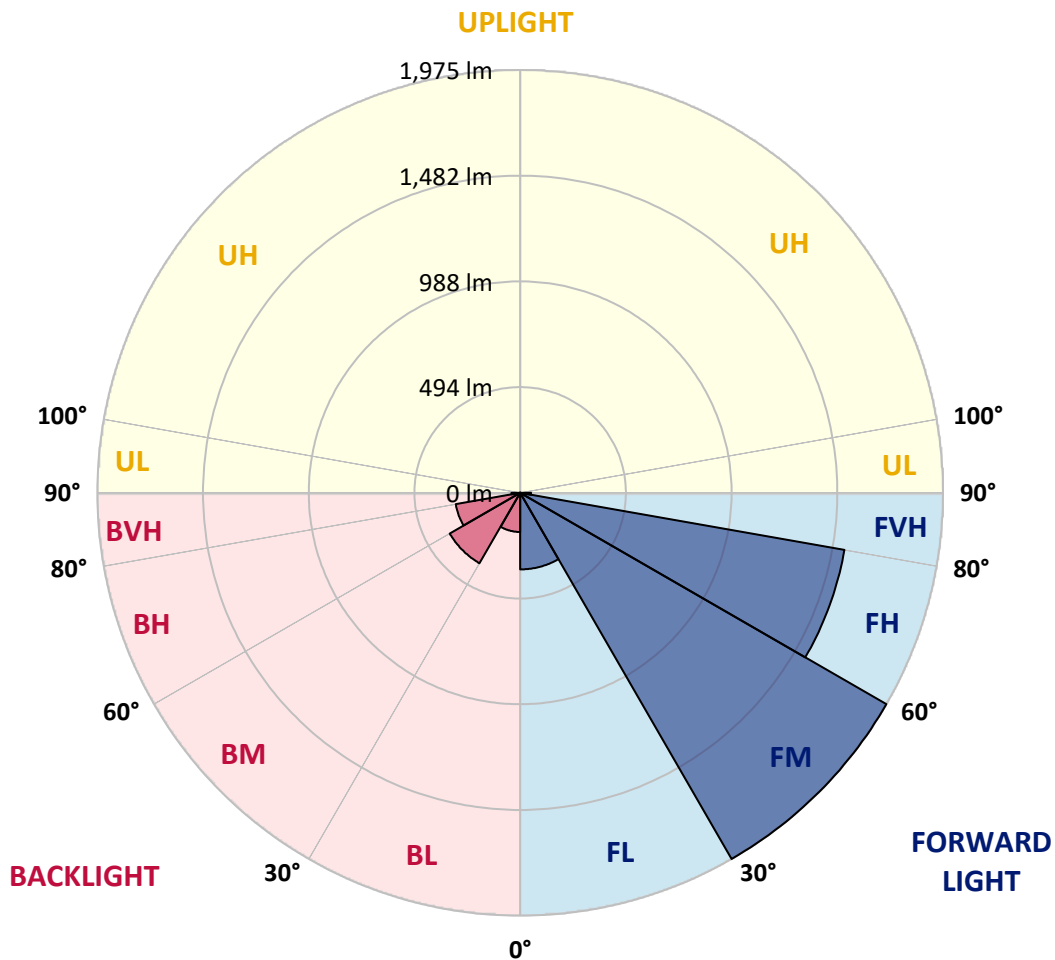
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	357.7	7.4			
FM (30°-60°)	1975.4	40.9			
FH (60°-80°)	1538.1	31.8			G1/1800
FVH (80°-90°)	51.0	1.1			G1/100
BL (0°-30°)	183.1	3.8	B1/500		
BM (30°-60°)	379.9	7.9	B1/1000		
BH (60°-80°)	305.6	6.3	B1/500		G1/500
BVH (80°-90°)	40.3	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°	677.9	677.9	677.9	677.9	677.9	677.9	677.9	677.9	677.9	677.9	677.9
2.5°	744.3	742.7	742.4	737.7	735.1	729.8	717.1	704.2	692.2	685.8	679.2
5°	806.6	803.4	801.8	793.9	787.0	775.0	755.1	734.5	713.0	702.0	688.7
7.5°	844.2	844.5	844.5	838.2	831.2	816.7	791.4	763.3	731.4	716.8	696.0
10°	847.3	847.7	852.4	854.0	855.6	848.0	824.6	789.2	748.1	729.1	702.0
12.5°	816.1	818.3	826.2	837.6	853.7	861.9	851.8	817.0	769.6	746.5	713.3
15°	774.0	776.2	786.3	803.7	829.6	857.1	871.4	848.9	797.7	770.5	730.1
17.5°	753.5	756.0	763.0	776.9	802.2	839.1	881.8	883.1	830.9	799.6	750.0
20°	743.7	745.6	754.4	765.8	785.1	820.5	882.7	919.1	870.4	834.1	774.3
22.5°	766.1	766.8	771.2	777.5	790.5	817.6	882.1	956.4	919.7	877.4	805.6
25°	831.9	827.8	824.6	816.7	819.9	839.1	892.2	996.2	982.9	934.3	847.3
27.5°	909.6	909.0	900.8	882.4	870.7	883.1	921.0	1040.8	1060.4	1006.6	902.0
30°	996.2	996.5	988.0	965.6	941.8	943.1	966.8	1092.3	1153.0	1093.9	969.3
32.5°	1086.9	1092.6	1076.8	1054.4	1025.6	1016.4	1032.6	1154.6	1260.1	1196.9	1047.4
35°	1195.3	1196.3	1178.9	1146.0	1117.3	1102.7	1117.6	1232.3	1383.7	1318.0	1142.5
37.5°	1307.8	1308.5	1290.5	1248.4	1212.1	1202.6	1219.0	1326.8	1514.5	1455.8	1254.4
40°	1399.8	1406.5	1392.2	1352.7	1316.1	1310.4	1334.1	1440.0	1681.7	1618.8	1387.5
42.5°	1504.1	1511.7	1494.6	1453.5	1424.5	1422.6	1459.6	1568.9	1848.0	1807.5	1538.2
45°	1621.7	1632.4	1608.7	1562.6	1537.9	1579.7	1581.9	1711.8	2039.5	2018.7	1708.0
47.5°	1750.0	1758.9	1739.6	1690.0	1663.1	1723.5	1701.7	1866.3	2246.5	2245.0	1891.6
50°	1848.9	1858.7	1860.6	1838.8	1810.7	1818.3	1833.1	2028.8	2452.9	2477.6	2081.6
52.5°	1830.9	1840.4	1883.1	1940.3	1985.5	1965.9	1983.9	2201.3	2652.3	2704.5	2262.0
55°	1685.5	1690.6	1770.6	1906.5	2098.9	2192.5	2193.8	2389.1	2842.0	2915.0	2433.3
57.5°	1423.5	1424.2	1528.1	1728.5	2032.9	2339.5	2525.0	2624.9	3039.8	3147.6	2645.7
60°	1007.3	1009.8	1130.9	1392.9	1796.2	2321.8	2881.2	3046.8	3269.0	3409.0	2919.4
62.5°	598.0	603.7	695.0	905.2	1334.1	2094.2	3091.7	3797.4	3606.5	3792.4	3357.5
65°	389.1	393.8	448.5	554.0	788.2	1523.7	3022.5	4524.4	4245.3	4395.4	3987.1
67.5°	299.6	303.4	346.4	410.2	483.6	823.6	2416.6	4676.7	5022.8	5069.6	4518.3
69°	263.3	266.4	298.0	359.4	407.1	545.2	1800.9	4400.1	5217.2	5242.8	4525.0
70°	244.0	246.5	276.2	329.3	373.9	435.2	1378.3	4079.0	5146.0	5211.5	4394.5
72.5°	201.0	203.2	224.4	265.2	305.6	310.1	610.6	2978.5	4333.1	4542.4	3718.7
75°	167.8	169.1	183.0	212.7	247.5	246.8	311.9	1687.1	2644.1	2893.5	2296.2
77.5°	140.0	141.0	150.1	168.5	195.3	194.4	219.7	728.2	1167.5	1126.4	790.5
80°	123.6	124.2	129.0	133.7	150.8	149.8	162.8	334.4	475.0	439.0	299.0
82.5°	93.9	95.1	119.2	121.4	116.9	112.8	113.5	194.7	243.4	221.6	160.6
85°	53.1	53.4	76.5	89.4	101.8	76.5	73.6	100.5	120.1	105.2	70.2
87.5°	23.7	24.7	36.7	42.4	55.0	44.9	42.0	42.7	51.8	43.0	27.8
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°	677.9	677.9	677.9	677.9	677.9	677.9	677.9	677.9	677.9	677.9	677.9
2.5°	672.9	667.5	654.9	641.9	629.0	620.7	612.2	604.3	601.1	600.8	594.8
5°	675.7	663.1	634.3	602.7	572.7	549.3	529.7	517.1	504.7	502.5	497.2
7.5°	676.7	656.1	609.4	558.8	513.0	480.7	461.1	452.6	446.6	445.0	443.1
10°	676.4	647.3	581.5	512.3	460.2	435.8	428.6	430.5	433.0	434.3	434.3
12.5°	681.4	643.2	553.7	468.7	426.0	414.4	420.0	429.8	437.4	440.6	441.2
15°	690.6	640.6	523.1	430.8	402.0	404.9	418.8	433.0	443.7	448.5	449.7
17.5°	702.0	637.2	487.7	399.5	388.1	397.9	415.9	433.9	446.9	452.9	453.9
20°	714.6	632.1	451.0	376.1	375.8	388.1	406.1	426.4	440.3	446.9	446.6
22.5°	731.7	627.4	416.9	359.0	362.2	373.6	388.4	406.8	419.7	425.7	424.5
25°	754.4	622.9	386.2	343.9	346.7	354.3	364.7	378.6	387.8	391.0	388.7
27.5°	785.1	619.5	362.2	330.0	329.6	333.1	339.4	347.0	351.5	350.5	347.0
30°	822.7	616.0	344.5	317.6	313.2	312.9	315.7	320.2	323.0	317.3	314.5
32.5°	864.7	610.0	328.7	306.9	299.0	296.1	297.4	303.4	315.1	309.4	307.2
35°	914.4	603.0	312.9	295.2	289.2	283.8	284.8	297.7	333.1	329.0	326.8
37.5°	974.1	596.7	298.4	282.6	282.2	275.6	275.0	290.5	337.9	329.0	327.1
40°	1045.8	595.5	285.4	268.6	273.7	271.2	269.0	278.4	311.6	293.6	290.1
42.5°	1132.4	601.1	275.9	255.4	263.9	269.9	265.8	268.0	281.6	265.5	262.6
45°	1233.6	616.6	269.0	243.7	253.5	269.0	264.2	262.3	264.5	255.7	253.8
47.5°	1351.5	644.1	264.2	233.9	243.7	266.4	263.6	259.8	258.9	253.8	252.5
50°	1477.6	681.1	261.1	225.0	234.8	262.0	263.3	257.9	256.3	254.1	253.5
52.5°	1602.7	721.2	257.3	217.4	227.6	256.6	263.6	256.0	253.8	252.5	251.9
55°	1727.3	763.0	250.3	210.8	222.2	250.3	263.3	253.5	250.9	250.9	250.9
57.5°	1888.8	826.5	241.2	205.4	215.2	242.1	259.2	250.6	247.2	247.5	247.8
60°	2122.0	933.0	231.0	199.4	206.1	232.6	252.8	245.6	241.5	242.7	243.0
62.5°	2511.7	1119.2	217.1	190.9	196.6	222.5	244.6	238.6	234.8	237.0	237.4
65°	3031.3	1344.5	198.8	180.2	186.8	211.1	234.2	230.4	226.3	231.7	231.4
67.5°	3348.3	1410.6	179.5	168.8	177.3	199.1	221.2	219.7	216.8	226.3	225.7
69°	3244.3	1291.1	168.5	161.5	170.7	190.9	213.0	212.4	210.2	219.3	218.7
70°	3082.8	1179.5	161.5	156.8	167.2	185.8	207.6	207.6	205.4	213.3	211.8
72.5°	2476.3	874.8	145.4	144.8	155.2	171.9	193.1	194.7	193.4	196.3	194.7
75°	1453.9	527.2	129.6	131.5	140.6	157.1	177.0	178.3	177.0	176.7	177.0
77.5°	504.1	236.4	114.4	117.3	125.2	141.9	159.3	161.8	159.9	157.7	158.3
80°	197.2	137.5	98.0	102.1	108.7	124.8	141.6	143.2	140.3	140.0	137.5
82.5°	118.5	83.8	76.2	82.8	91.0	108.4	122.3	121.7	119.5	132.4	116.0
85°	51.5	46.5	55.6	62.3	66.4	81.2	103.4	100.5	95.1	83.8	81.9
87.5°	20.9	24.0	30.7	37.0	39.8	52.5	70.8	68.3	69.2	56.9	56.6
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)