

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: P195841

Luminaire Tested: **NAV-AF-01-D-UNV-T3R-7050-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P195841
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24250)
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-T3R-7050-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 5000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE III
ROADWAY OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4094 lumens
Efficiency: N/A
Efficacy: 120.4 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type III - Medium - Full Cutoff
BUG Rating: B1 - U0 - G1

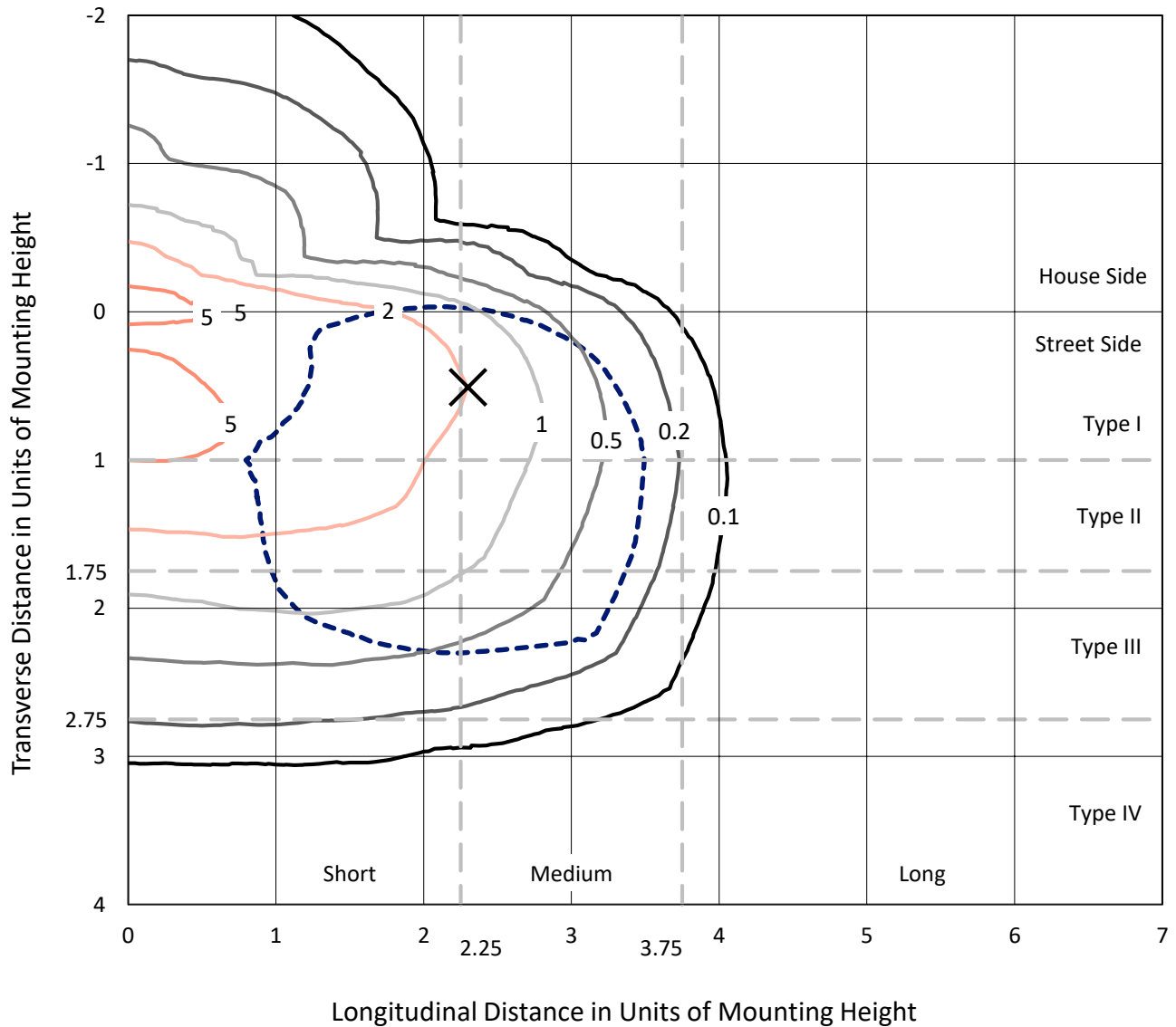
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

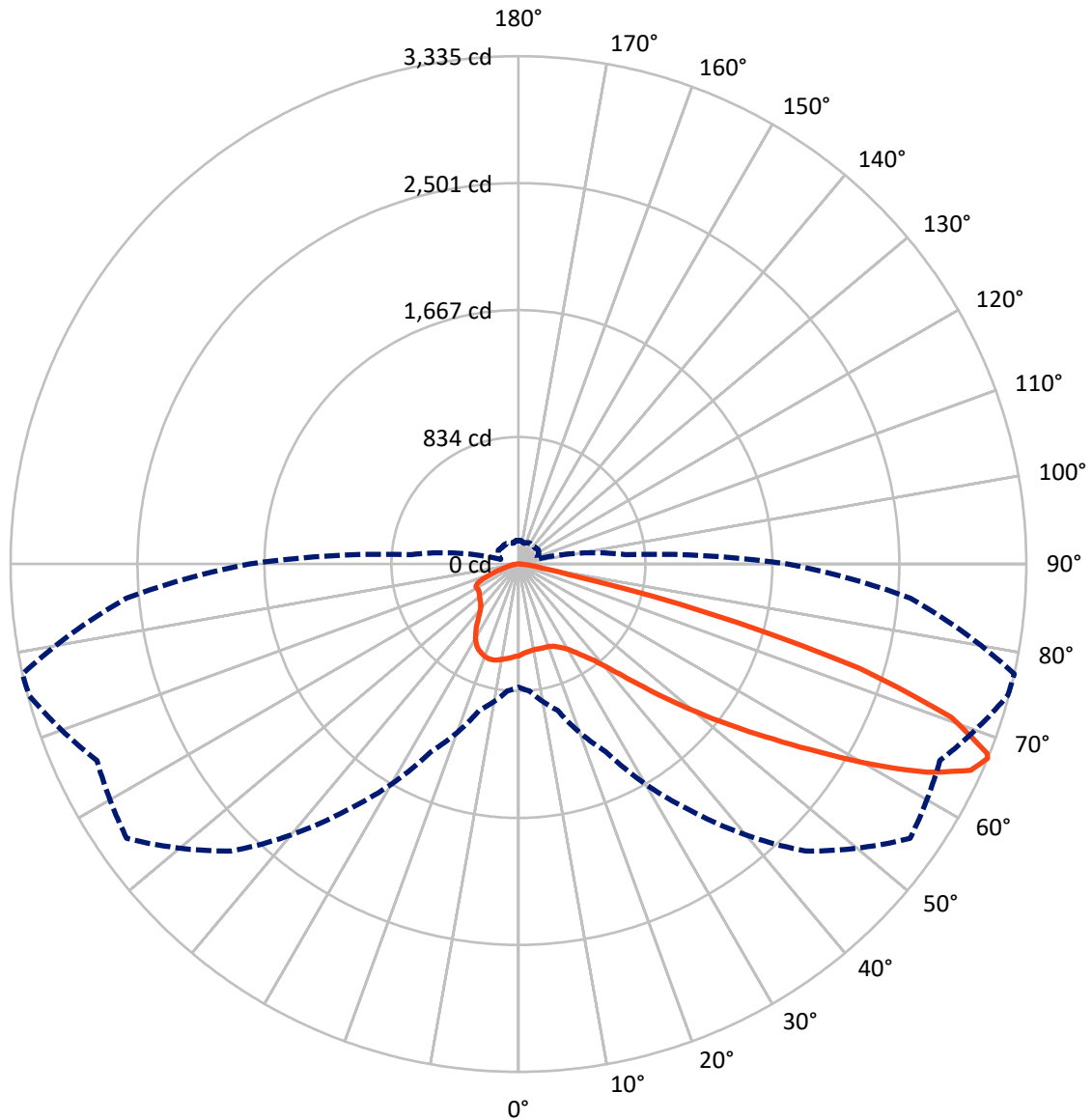
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.2 fc
 Type III - Medium - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 77.5-Deg Lateral - - - Horizontal Cone Through 67-Deg Vertical

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FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	703.6	0.0	703.6
	% Fixture	17.2	0.0	17.2
Street Side	Lumens	3390.4	0.0	3390.4
	% Fixture	82.8	0.0	82.8
Total	Lumens	4094.0	0.0	4094.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	53.7	1.3
10°-20°	148.6	3.6
20°-30°	252.5	6.2
30°-40°	404.0	9.9
40°-50°	621.9	15.2
50°-60°	862.8	21.1
60°-70°	1150.9	28.1
70°-80°	547.7	13.4
80°-90°	51.9	1.3
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°	4094.0	100.0
0°-180°	4094.0	100.0



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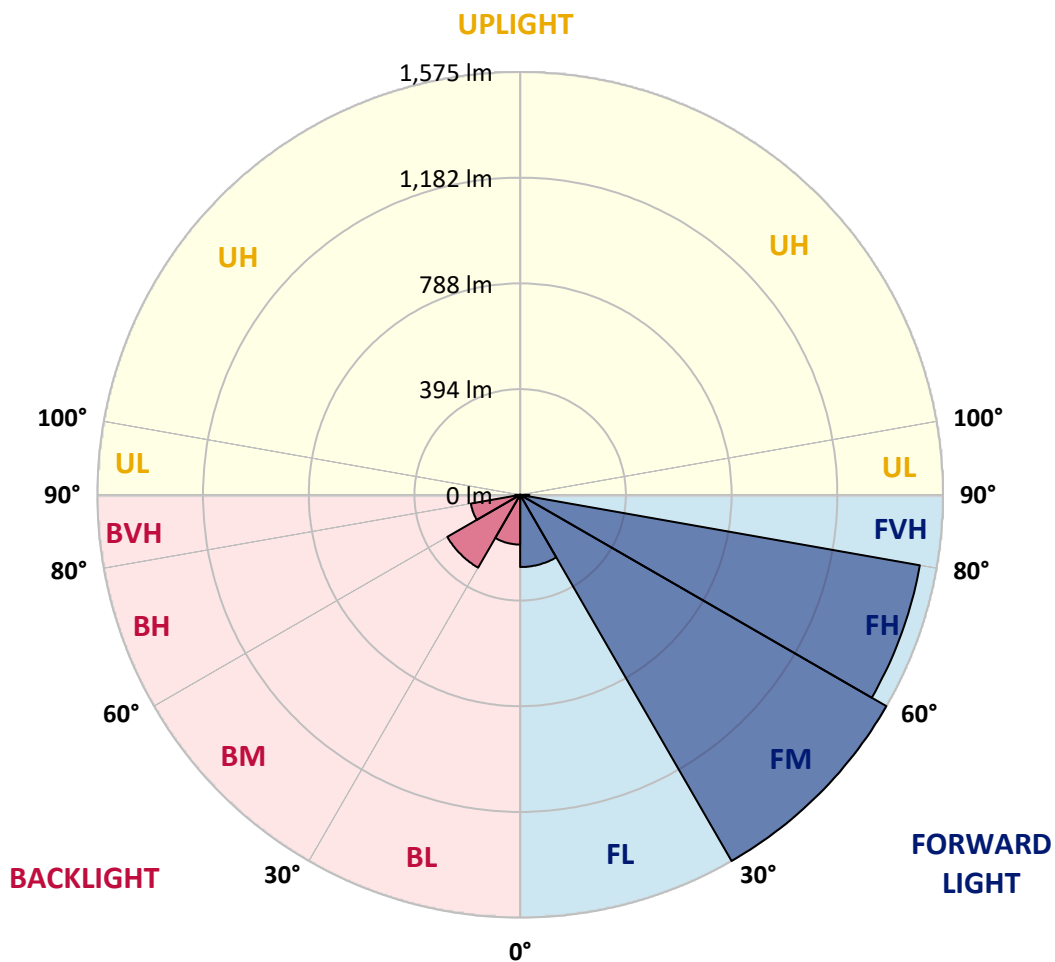
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	269.2	6.6			
FM	(30°-60°)	1575.4	38.5			
FH	(60°-80°)	1512.1	36.9			G1/1800
FVH	(80°-90°)	33.7	0.8			G1/100
BL	(0°-30°)	185.6	4.5	B1/500		
BM	(30°-60°)	313.3	7.7	B1/1000		
BH	(60°-80°)	186.6	4.6	B1/500		G1/500
BVH	(80°-90°)	18.2	0.4			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 III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	77.5°	85°
0°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5
2.5°	540.3	542.8	543.1	550.4	553.7	562.0	571.2	579.2	586.3	588.9	593.4
5°	486.1	486.1	486.9	491.7	501.1	514.5	533.4	554.2	576.0	581.3	594.7
7.5°	457.8	458.3	458.8	463.6	470.9	482.8	501.8	530.2	566.3	575.2	598.7
10°	460.3	459.6	457.0	456.0	459.0	466.6	483.1	512.2	558.2	571.9	606.1
12.5°	500.0	498.5	490.2	478.0	466.9	464.1	475.5	503.1	554.4	571.9	618.5
15°	568.1	569.1	552.7	527.4	498.3	478.5	477.0	499.8	553.2	573.4	632.9
17.5°	656.7	657.2	634.4	597.7	549.4	508.6	487.4	499.8	553.2	574.9	646.8
20°	750.8	747.3	721.5	675.4	612.7	550.4	506.4	502.8	554.7	577.2	660.0
22.5°	831.5	828.3	801.2	752.8	681.0	599.7	531.9	512.9	563.1	586.6	678.4
25°	902.1	904.2	877.9	823.4	749.0	655.4	570.1	536.2	580.5	603.5	701.2
27.5°	987.9	984.1	953.8	901.9	819.1	713.1	618.0	565.6	601.3	624.0	729.1
30°	1087.1	1085.4	1044.4	991.0	896.3	777.6	665.3	597.2	628.3	652.1	764.0
32.5°	1207.6	1207.3	1163.3	1097.8	983.1	850.5	721.2	640.5	667.8	691.9	810.3
35°	1344.0	1343.7	1298.2	1211.6	1083.1	931.3	787.0	693.1	716.7	742.0	865.5
37.5°	1438.6	1437.1	1413.3	1329.3	1193.7	1025.1	869.3	764.0	772.1	800.4	932.0
40°	1456.9	1466.0	1486.5	1436.9	1314.4	1129.4	951.7	840.1	847.7	884.2	1015.8
42.5°	1437.1	1449.0	1517.1	1531.0	1435.1	1255.7	1055.0	945.7	955.3	1000.6	1114.2
45°	1419.9	1430.3	1515.6	1583.1	1554.3	1393.3	1183.8	1074.5	1092.7	1148.9	1226.6
47.5°	1390.5	1400.2	1485.7	1592.5	1622.3	1525.9	1338.9	1229.4	1260.7	1328.8	1354.6
50°	1389.0	1393.3	1445.0	1561.1	1645.9	1626.7	1510.8	1410.5	1458.6	1537.1	1496.3
52.5°	1350.6	1380.7	1427.5	1511.0	1646.4	1685.4	1680.0	1609.2	1683.3	1770.1	1651.7
55°	1115.2	1149.9	1369.3	1486.5	1643.4	1735.7	1834.7	1820.5	1936.4	2027.7	1825.8
57.5°	1041.3	1056.0	1201.3	1493.8	1668.7	1819.0	1989.3	2047.5	2225.9	2325.6	2034.6
60°	1021.1	1036.5	1167.6	1497.3	1737.2	1970.6	2199.1	2303.8	2566.3	2672.0	2271.7
62.5°	998.6	1018.6	1170.1	1500.6	1857.7	2194.8	2477.4	2581.9	2915.7	3010.1	2493.9
65°	932.8	959.3	1123.3	1479.9	1989.5	2476.2	2845.4	2871.9	3204.5	3264.4	2628.0
67°	808.0	837.1	994.8	1359.9	1977.4	2665.7	3139.7	3053.4	3327.2	3334.5	2584.5
67.5°	768.5	798.6	951.2	1310.1	1942.7	2690.5	3191.8	3078.4	3326.2	3318.1	2544.0
70°	517.5	551.4	673.6	961.9	1558.3	2504.0	3179.2	3001.3	3108.0	3015.2	2185.7
72.5°	256.9	257.9	336.1	526.9	944.2	1795.9	2652.0	2567.5	2519.4	2344.1	1603.9
75°	123.7	126.0	158.7	232.8	398.1	927.2	1808.6	1732.4	1475.1	1277.2	802.7
77.5°	94.4	96.7	123.2	151.6	166.0	302.4	895.8	724.0	427.4	341.4	226.2
80°	72.9	77.2	104.0	116.4	109.8	121.2	281.7	221.7	166.3	152.6	112.1
82.5°	56.9	59.5	88.3	88.3	75.9	81.2	131.1	128.0	103.2	93.1	60.2
85°	40.2	45.3	71.1	65.8	49.9	50.4	78.4	75.2	53.1	42.8	23.5
87.5°	18.0	23.0	50.6	43.0	26.6	20.5	32.1	27.6	21.0	16.2	10.9
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°	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5	602.5
2.5°	598.5	602.5	608.9	612.7	617.7	619.7	621.8	625.3	628.1	627.3	626.1
5°	604.0	610.9	618.7	621.3	621.3	618.7	617.2	617.5	616.7	616.2	614.7
7.5°	612.1	621.5	627.1	624.5	616.7	606.8	597.5	591.9	586.6	583.3	584.3
10°	623.5	633.9	634.2	623.0	604.3	582.8	564.3	552.4	541.0	536.0	537.5
12.5°	640.0	650.4	641.5	617.5	584.6	550.9	517.0	492.4	470.4	465.1	463.6
15°	657.7	665.8	646.1	605.6	556.2	500.8	443.9	407.2	382.6	378.3	376.8
17.5°	673.1	677.7	643.8	584.3	511.4	424.1	357.8	333.0	328.0	330.5	330.5
20°	686.8	685.3	633.9	551.4	440.8	339.1	300.6	300.4	307.2	313.5	314.0
22.5°	704.0	692.1	618.2	502.6	356.6	282.9	276.3	282.9	290.5	297.6	298.4
25°	724.5	699.7	597.2	433.0	286.7	256.9	259.6	265.2	270.0	275.6	275.8
27.5°	745.0	705.5	567.6	351.2	248.8	240.2	243.2	245.5	246.7	250.3	250.3
30°	768.8	710.1	524.8	281.4	231.3	225.5	223.7	222.7	223.7	228.5	228.8
32.5°	798.6	718.2	466.4	241.4	223.2	215.1	206.0	200.9	204.5	213.1	214.6
35°	832.6	727.8	396.3	225.5	220.4	210.0	193.3	185.5	186.8	194.6	195.9
37.5°	875.1	740.2	327.2	221.7	223.2	209.5	187.5	176.4	170.8	171.1	170.8
40°	929.5	752.6	272.5	222.7	229.3	210.8	184.7	167.3	155.6	156.1	157.1
42.5°	986.4	760.7	237.9	225.7	236.6	212.6	183.7	158.4	148.3	156.9	164.7
45°	1053.0	758.4	219.9	228.5	242.2	213.3	179.9	157.4	149.1	174.9	189.5
47.5°	1129.4	748.5	209.8	229.8	243.7	213.1	177.1	160.7	155.4	200.2	216.9
50°	1212.4	733.1	201.7	227.8	242.9	212.1	180.2	164.7	157.9	205.7	218.6
52.5°	1303.2	718.9	193.3	223.2	239.1	209.0	184.0	163.0	150.8	189.5	199.4
55°	1410.8	715.6	184.0	215.4	232.8	205.7	181.9	157.4	143.0	168.0	174.1
57.5°	1533.8	736.1	171.8	205.7	224.2	199.2	177.1	154.4	140.2	152.8	156.1
60°	1689.9	781.4	158.9	195.6	213.6	189.3	172.8	155.1	141.0	150.6	151.3
62.5°	1811.9	822.2	147.3	183.2	199.4	177.4	168.3	155.9	143.2	153.6	152.3
65°	1856.2	802.2	132.9	164.7	179.4	164.2	162.0	156.4	143.2	155.4	152.6
67°	1765.3	706.8	119.2	146.3	160.4	152.6	155.9	154.4	140.7	155.1	150.3
67.5°	1722.1	673.1	115.6	143.2	155.4	149.1	154.4	153.4	139.9	154.6	149.1
70°	1420.2	482.8	97.7	120.2	130.1	131.3	145.0	146.8	133.9	145.3	135.1
72.5°	1010.5	302.2	84.3	93.1	105.0	112.4	132.3	137.9	125.8	126.3	117.9
75°	500.0	162.2	75.2	71.9	81.7	93.6	115.4	125.8	113.9	105.3	102.5
77.5°	168.8	91.9	63.5	58.0	63.5	75.2	95.7	109.8	100.5	89.1	87.3
80°	87.3	66.8	49.6	46.6	50.1	58.2	74.9	91.4	85.8	86.3	71.1
82.5°	54.4	40.7	35.7	35.4	38.0	44.5	55.2	74.1	73.6	63.0	45.8
85°	25.3	23.5	22.8	23.5	24.3	25.3	35.9	52.9	55.9	33.9	30.1
87.5°	10.6	10.4	9.1	9.9	10.9	10.6	14.4	22.5	31.4	21.3	19.5
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)