

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: P196825

Luminaire Tested: **NAV-AF-01-D-UNV-T4FT-7030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196825  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24256)  
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-T4FT-7030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV FORWARD THROW OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3923.5 lumens  
Efficiency: N/A  
Efficacy: 115.4 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Non-Cutoff  
BUG Rating: B1 - U0 - G1

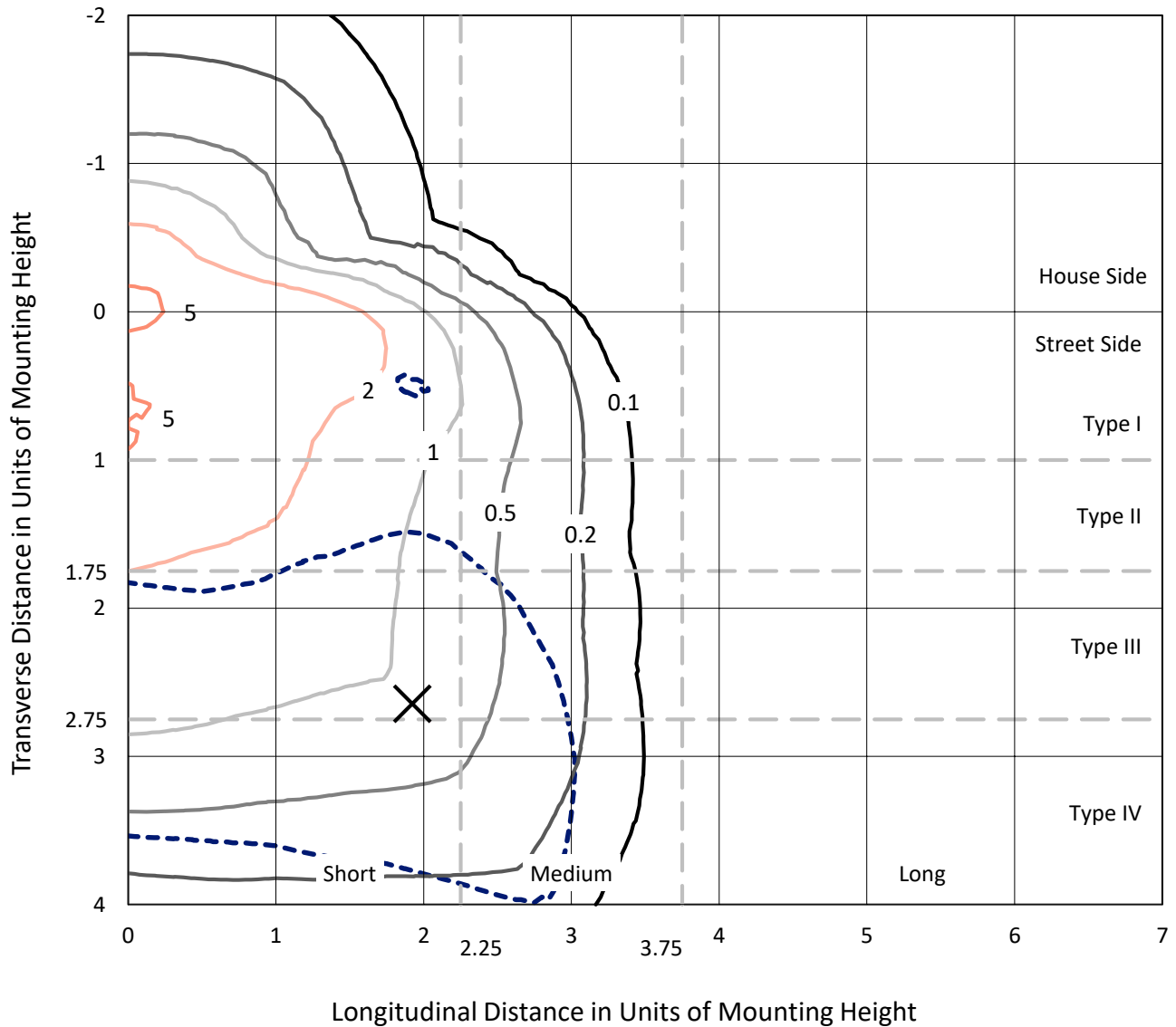
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



REPORT NUMBER: P196825  
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### Iso-Footcandle Lines of Horizontal Illumination

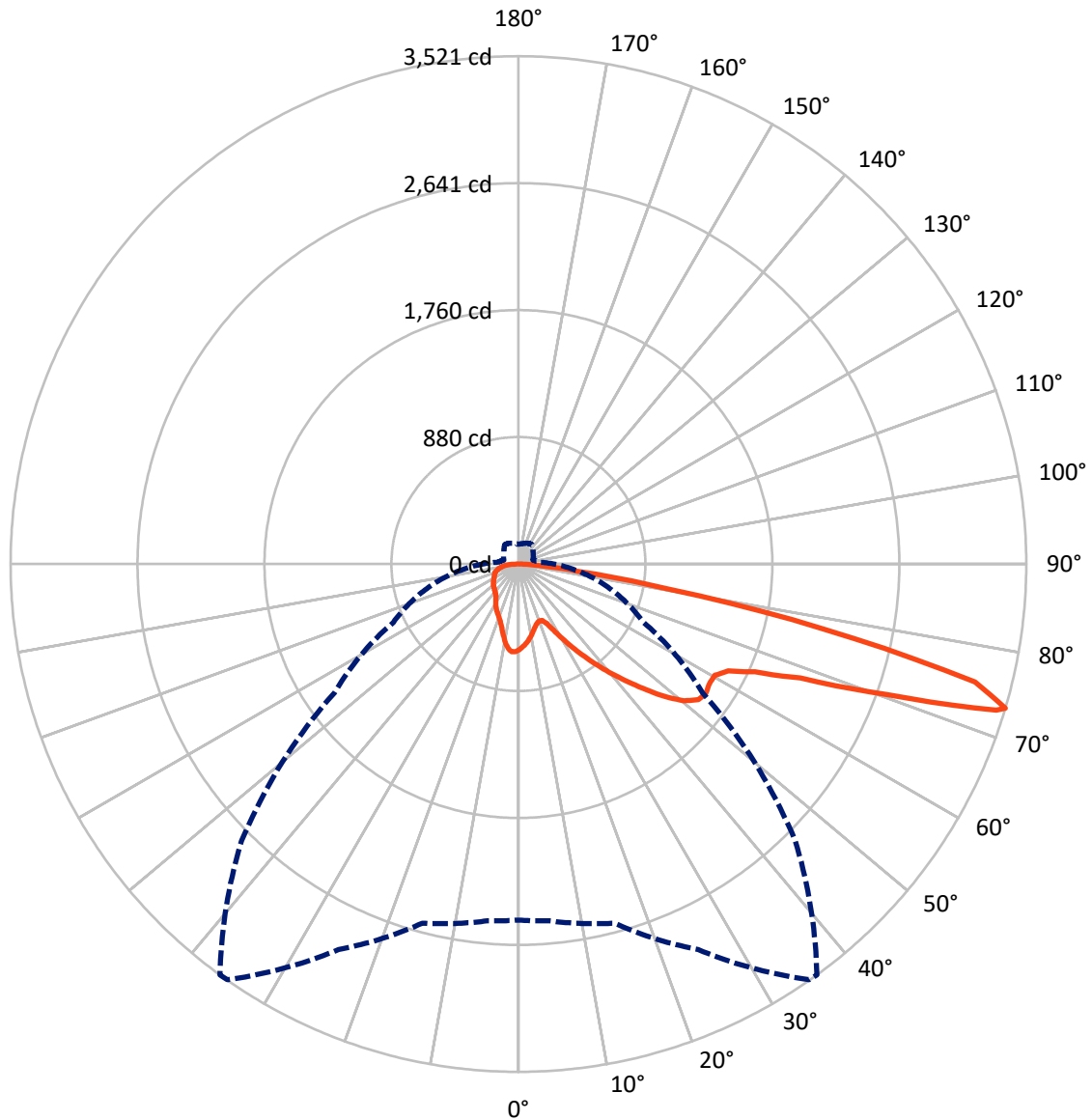
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 5.9 fc  
 Type IV - Short - Non-Cutoff

REPORT NUMBER: P196825  
CATALOG NUMBER: NAV-AF-01-D-UNV-T4FT-7030-600

### Luminous Intensity Polar Plot



— Vertical Plane Through 36-Deg Lateral    - - - Horizontal Cone Through 73-Deg Vertical

REPORT NUMBER: P196825

CATALOG NUMBER: NAV-AF-01-D-UNV-T4FT-7030-600

**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	756.6	0.0	756.6
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	3166.9	0.0	3166.9
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	3923.5	0.0	3923.5
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	54.0	1.4
10°-20°	135.6	3.5
20°-30°	217.4	5.5
30°-40°	359.5	9.2
40°-50°	556.3	14.2
50°-60°	744.7	19.0
60°-70°	972.9	24.8
70°-80°	794.7	20.3
80°-90°	88.5	2.3
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°	3923.5	100.0
0°-180°	3923.5	100.0



REPORT NUMBER: P196825

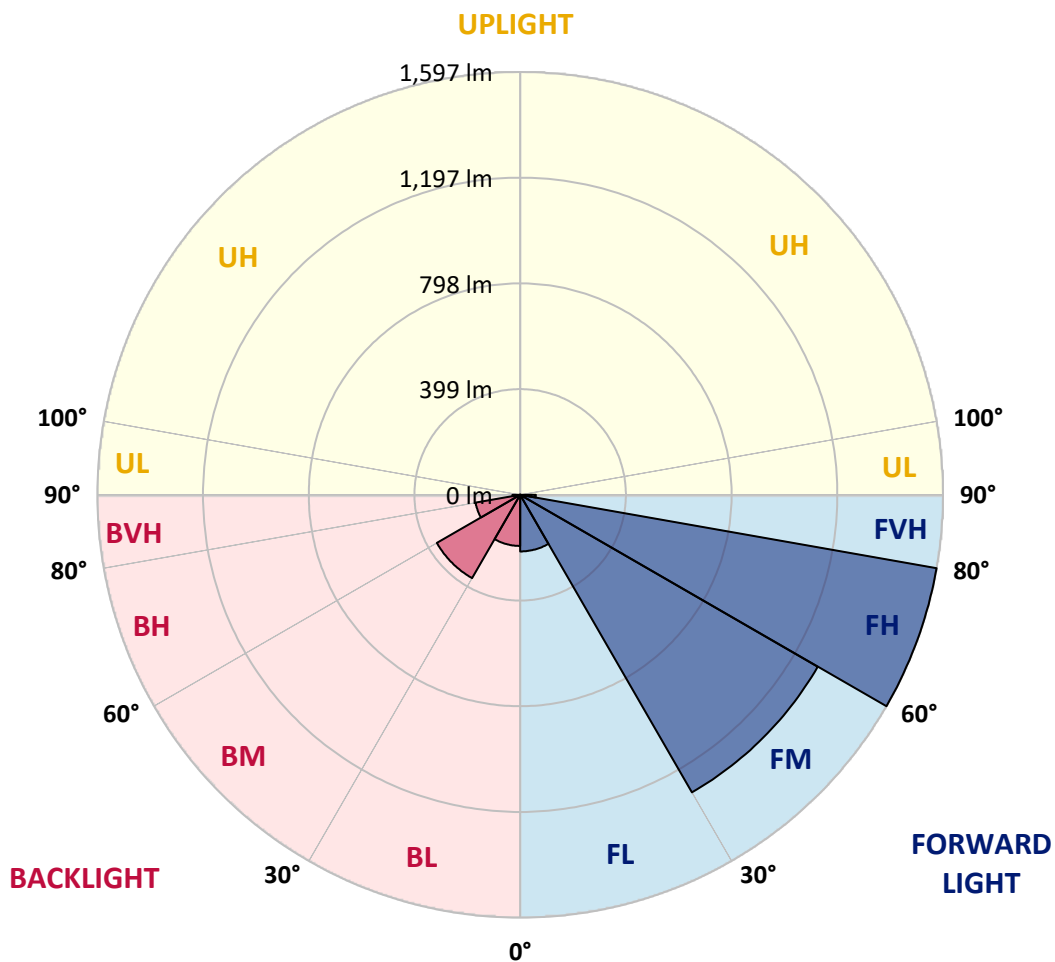
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	213.8	5.4			
FM (30°-60°)	1297.2	33.1			
FH (60°-80°)	1596.6	40.7			G1/1800
FVH (80°-90°)	59.3	1.5			G1/100
BL (0°-30°)	193.1	4.9	B1/500		
BM (30°-60°)	363.3	9.3	B1/1000		
BH (60°-80°)	171.0	4.4	B1/500		G1/500
BVH (80°-90°)	29.1	0.7			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 IV Short





REPORT NUMBER: P196825

CATALOG NUMBER: NAV-AF-01-D-UNV-T4FT-7030-600

**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	594.3	594.3	594.3	594.3	594.3	594.3	594.3	594.3	594.3	594.3	594.3
2.5°	571.7	573.1	573.4	575.1	575.1	574.8	575.6	578.6	580.0	583.6	586.6
5°	543.4	545.2	546.0	548.9	552.7	553.0	555.7	561.4	566.8	574.6	581.0
7.5°	511.8	513.7	515.8	522.0	527.5	527.9	533.1	542.5	549.7	559.2	570.9
10°	481.1	481.7	483.6	491.5	498.8	499.6	507.1	517.6	527.2	540.4	553.6
12.5°	455.9	457.5	456.9	462.9	469.2	469.7	479.6	492.9	507.1	522.0	537.7
15°	447.2	447.0	441.7	441.5	444.2	444.6	454.4	470.0	485.8	504.3	524.5
17.5°	453.2	451.2	437.5	429.1	427.3	427.7	435.0	452.0	468.9	490.1	514.3
20°	486.1	478.3	446.3	425.8	420.0	420.0	424.3	438.0	456.7	481.4	511.8
22.5°	564.1	552.2	483.6	447.2	426.9	425.0	421.7	432.2	453.0	482.6	522.0
25°	662.3	656.6	552.2	504.3	462.7	456.1	434.8	438.4	460.6	496.0	549.9
27.5°	753.4	743.4	642.1	587.3	528.5	518.6	473.1	457.9	479.1	521.0	590.3
30°	806.5	799.7	734.7	682.4	612.3	599.5	534.5	496.4	512.0	562.1	647.7
32.5°	864.2	860.3	827.4	779.8	703.0	688.3	613.7	558.9	562.3	616.8	716.7
35°	920.4	925.7	906.9	872.0	800.7	787.0	720.2	640.7	624.4	678.1	790.5
37.5°	987.7	988.9	977.3	954.5	903.3	892.2	837.2	727.8	692.0	743.4	861.7
40°	1122.0	1102.3	1056.4	1038.5	1008.1	1001.2	938.3	808.0	754.9	810.3	929.1
42.5°	1267.4	1236.7	1164.9	1135.5	1123.3	1116.8	1022.5	861.3	813.7	877.5	995.2
45°	1384.6	1359.6	1289.3	1252.8	1254.4	1243.9	1096.1	908.9	877.5	944.8	1068.9
47.5°	1499.9	1458.3	1379.5	1374.3	1391.8	1376.3	1166.5	956.4	944.0	1018.1	1142.8
50°	1507.4	1469.5	1437.7	1479.5	1509.4	1490.2	1230.3	1018.9	1013.1	1106.8	1237.9
52.5°	1416.4	1411.0	1459.6	1530.0	1579.7	1562.5	1282.3	1082.9	1083.7	1217.8	1353.8
55°	1383.3	1376.3	1434.7	1521.4	1588.4	1578.2	1321.2	1155.2	1162.0	1352.4	1478.3
57.5°	1439.2	1421.7	1433.2	1504.9	1568.0	1562.0	1361.6	1235.5	1247.6	1507.4	1593.2
60°	1612.3	1576.7	1515.9	1529.4	1568.8	1565.2	1419.4	1325.0	1345.4	1668.9	1665.9
62.5°	1871.8	1831.5	1707.6	1647.7	1639.0	1632.4	1514.9	1434.9	1445.1	1785.7	1623.6
65°	2156.6	2113.2	1965.9	1867.9	1816.6	1802.1	1668.9	1567.6	1503.4	1785.4	1458.6
67.5°	2476.2	2430.3	2283.4	2190.0	2134.4	2109.7	1919.0	1674.7	1484.5	1634.3	1167.1
70°	2803.5	2759.9	2692.4	2725.2	2749.6	2712.0	2312.9	1710.4	1348.4	1281.3	783.7
72.5°	2629.8	2626.3	2677.3	2986.9	3457.8	3465.2	2706.3	1609.6	1041.8	761.5	417.8
73°	2468.3	2483.1	2577.9	2948.3	3518.3	3520.9	2714.0	1557.5	956.4	656.1	367.0
75°	1278.9	1378.6	1730.0	2390.6	3257.9	3269.6	2392.3	1179.1	570.2	364.5	247.3
77.5°	342.5	338.0	557.4	1164.7	2172.1	2156.6	1511.7	570.9	273.2	228.6	173.5
80°	117.5	118.9	189.7	426.0	1013.8	1050.0	656.1	249.0	179.7	159.3	122.9
82.5°	59.9	61.8	99.2	181.3	424.0	415.0	211.2	146.6	120.4	96.7	68.9
85°	31.9	32.9	54.6	94.0	155.5	157.4	74.3	78.2	76.5	54.8	33.9
87.5°	15.8	16.2	26.2	41.4	57.6	55.6	25.9	33.9	37.7	30.9	18.7
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



REPORT NUMBER: P196825

CATALOG NUMBER: NAV-AF-01-D-UNV-T4FT-7030-600

**CANDELA DISTRIBUTION (continued):**

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	594.3	594.3	594.3	594.3	594.3	594.3	594.3	594.3	594.3	594.3	594.3
2.5°	590.3	590.3	593.5	599.1	603.0	606.7	609.2	613.3	615.4	615.2	615.0
5°	586.2	588.8	595.3	602.0	606.5	609.4	609.4	611.2	611.2	610.5	609.4
7.5°	577.1	581.4	590.8	596.8	598.0	594.8	588.4	583.3	577.1	573.8	572.6
10°	562.3	567.8	579.8	582.6	576.2	564.7	548.9	535.5	523.5	518.0	516.2
12.5°	547.9	555.1	566.4	562.1	546.8	524.2	500.1	481.7	468.1	462.9	461.2
15°	535.9	544.6	553.4	540.2	513.3	482.2	455.4	438.2	428.0	424.0	423.1
17.5°	527.9	538.2	541.2	516.5	479.1	444.2	420.5	409.2	404.8	403.0	402.6
20°	528.5	540.0	532.7	493.7	446.3	411.1	395.4	392.1	392.1	392.1	391.9
22.5°	542.2	552.2	529.3	472.1	414.5	383.2	376.4	379.1	381.2	381.2	380.9
25°	570.7	576.2	531.8	451.5	384.9	358.9	359.3	364.5	366.2	366.2	365.7
27.5°	614.0	609.4	536.3	428.6	355.7	337.1	340.6	345.3	346.5	345.8	345.5
30°	668.3	650.4	540.0	401.6	328.4	316.7	319.6	322.4	321.3	319.6	319.4
32.5°	729.2	692.0	537.7	371.5	304.2	295.4	297.1	298.6	297.1	293.0	293.0
35°	789.5	729.7	525.5	338.4	284.9	275.0	274.7	279.4	279.1	274.2	274.5
37.5°	842.4	759.4	501.8	308.3	268.4	260.0	261.0	264.0	265.5	258.7	258.0
40°	888.5	779.8	468.4	282.7	255.2	255.7	253.1	248.2	246.5	243.5	243.1
42.5°	931.9	794.0	433.0	261.2	248.6	254.2	245.1	233.9	229.1	231.8	233.6
45°	974.5	809.9	398.9	243.5	240.1	249.7	237.1	224.6	219.2	220.3	222.2
47.5°	1026.6	832.1	357.8	224.6	227.2	241.6	232.0	218.6	210.5	205.4	203.9
50°	1095.1	864.2	304.4	204.2	213.4	232.6	227.8	209.9	200.9	190.9	188.5
52.5°	1180.9	894.8	250.5	187.7	202.1	224.8	220.8	202.4	191.4	179.5	177.4
55°	1266.4	898.8	204.2	173.5	189.4	214.3	212.4	196.4	181.0	171.2	169.3
57.5°	1326.2	858.8	172.9	161.4	177.2	201.5	204.7	189.2	172.3	164.8	163.6
60°	1327.2	762.8	154.0	153.5	168.0	190.2	196.6	180.8	166.7	161.8	160.8
62.5°	1221.7	614.7	141.8	147.6	161.2	181.0	190.6	176.0	165.5	163.6	162.6
65°	1024.1	454.2	132.1	142.1	155.0	173.2	185.7	174.5	165.0	164.3	163.6
67.5°	756.1	311.4	123.9	135.2	148.0	165.3	181.0	172.3	162.0	165.0	164.0
70°	475.6	207.9	116.2	127.2	138.9	156.0	174.7	168.3	158.3	156.6	153.3
72.5°	268.4	150.3	107.0	116.9	126.8	143.7	166.3	161.4	149.8	142.8	139.7
73°	242.5	142.4	104.7	114.4	124.1	141.4	164.3	159.5	147.3	139.7	136.6
75°	177.4	116.5	94.5	104.3	112.6	129.9	154.8	149.5	136.3	127.2	125.1
77.5°	128.6	89.7	81.3	90.0	97.5	113.9	140.6	134.6	121.6	116.7	114.7
80°	92.8	68.1	67.3	75.8	82.3	99.0	125.4	119.2	106.7	121.4	118.1
82.5°	55.4	43.6	49.3	58.8	65.5	83.0	108.9	101.7	89.7	90.8	77.2
85°	26.4	24.7	30.7	38.7	43.3	56.9	90.8	85.0	71.8	58.8	57.6
87.5°	11.7	11.3	14.7	17.2	23.2	34.2	62.1	55.0	52.1	31.1	24.5
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)