

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: P196351

Luminaire Tested: **NAV-AF-01-D-UNV-T4FT-800**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P196351  
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-800  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 800mA 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: 5089.2 lumens  
Efficiency: N/A  
Efficacy: 115.7 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 - G2

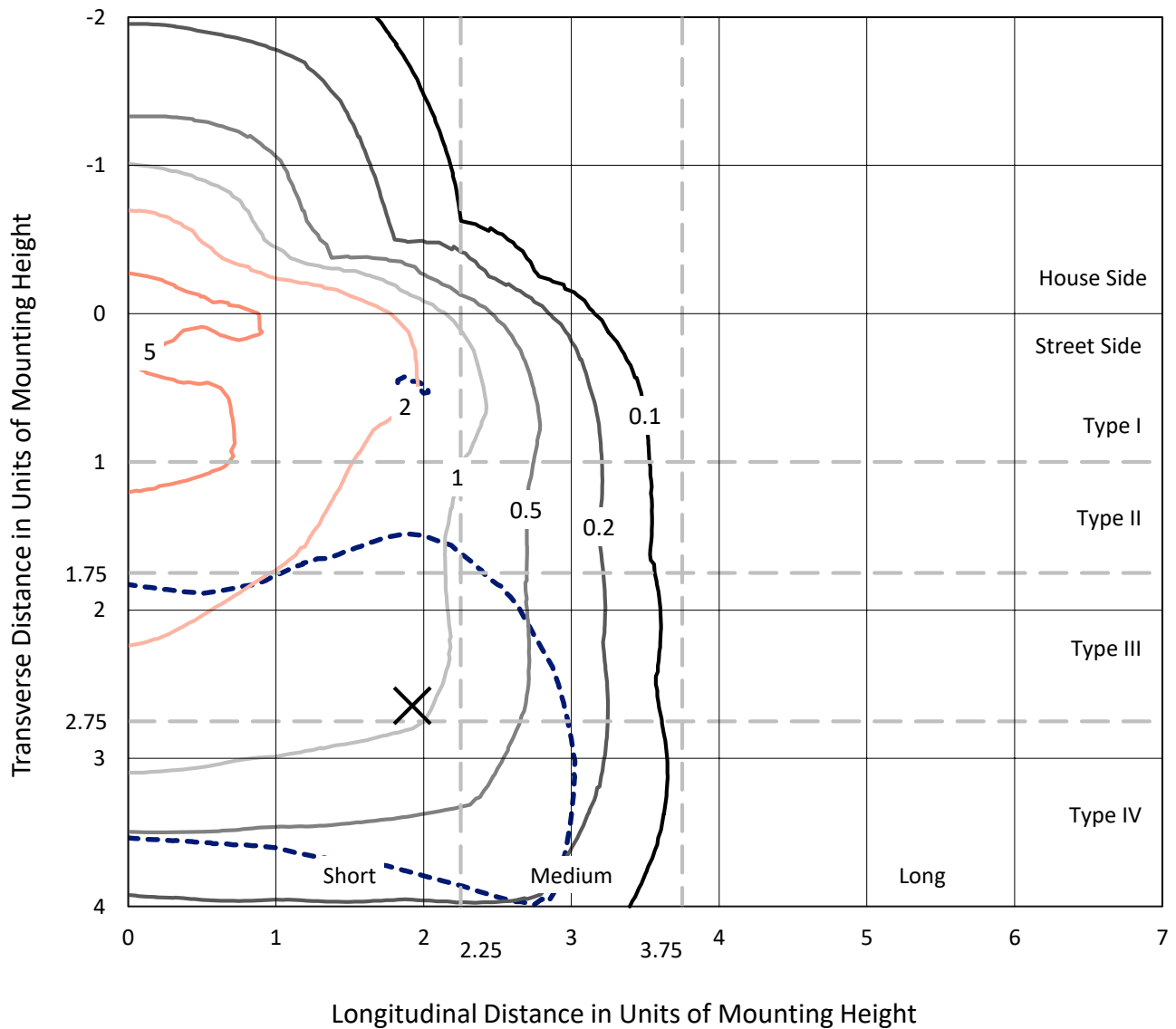
Input Watts (W): 44  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

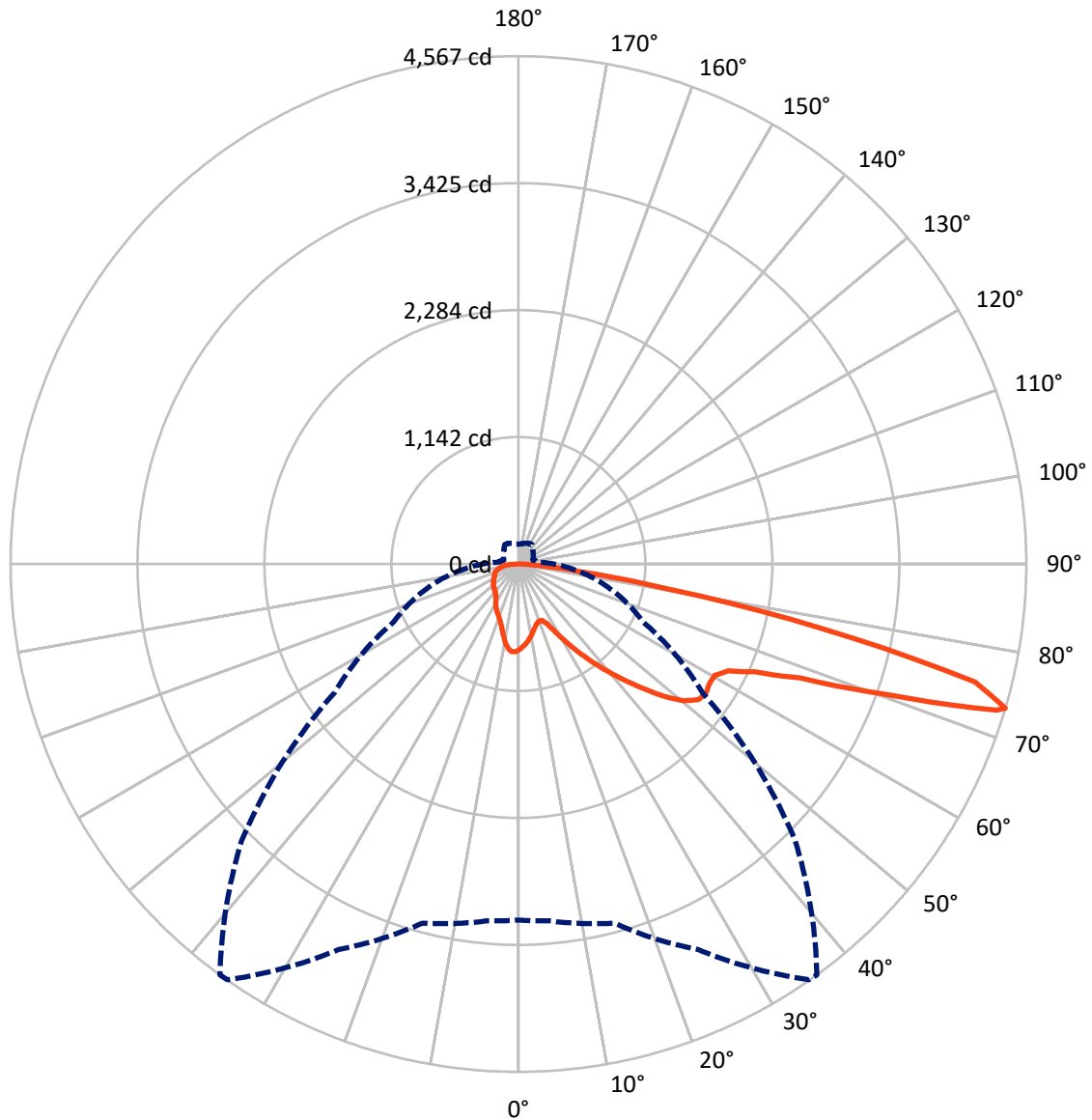
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 7.7 fc  
 Type IV - Short - Non-Cutoff

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### Luminous Intensity Polar Plot



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

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**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	981.3	0.0	981.3
	% Fixture	19.3	0.0	19.3
<b>Street Side</b>	Lumens	4107.8	0.0	4107.8
	% Fixture	80.7	0.0	80.7
<b>Total</b>	Lumens	5089.2	0.0	5089.2
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	70.0	1.4
10°-20°	175.8	3.5
20°-30°	281.9	5.5
30°-40°	466.3	9.2
40°-50°	721.6	14.2
50°-60°	966.0	19.0
60°-70°	1261.9	24.8
70°-80°	1030.8	20.3
80°-90°	114.7	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°	5089.2	100.0
0°-180°	5089.2	100.0

**Coefficient of Utilization**



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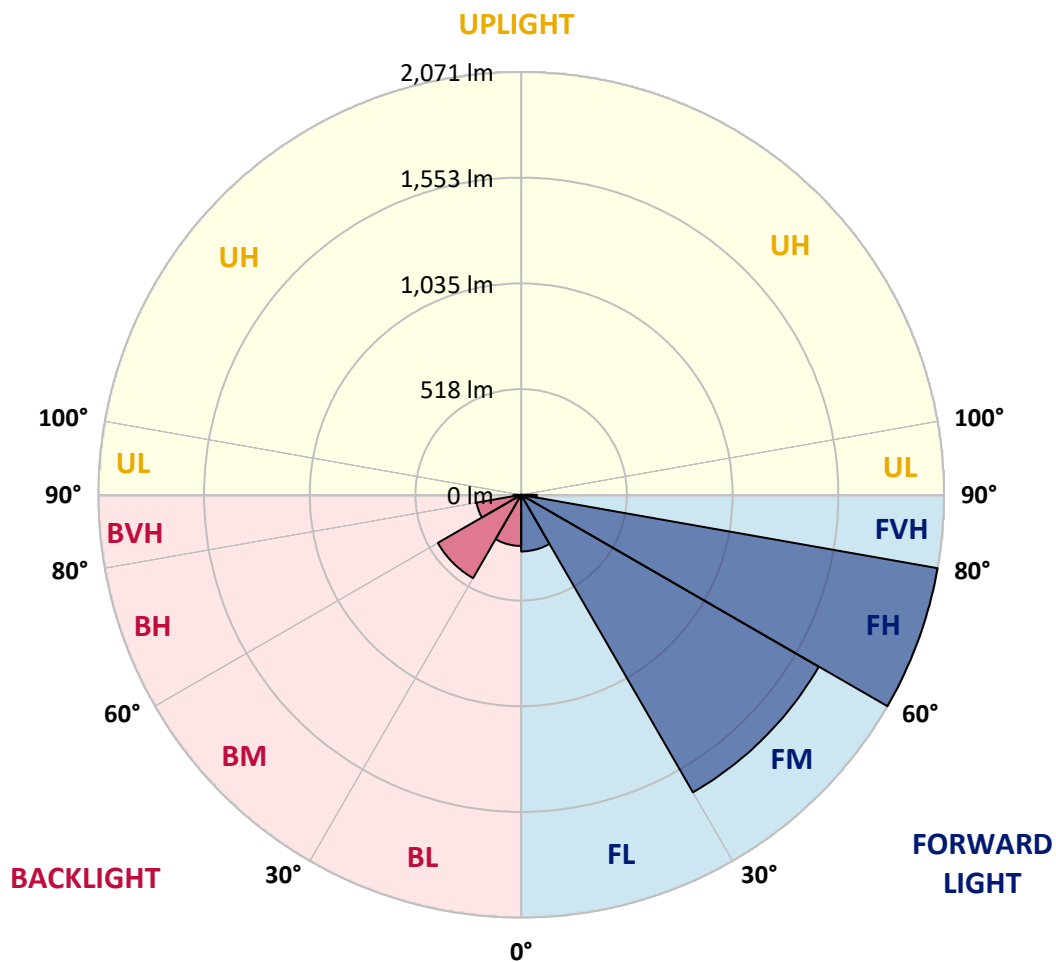
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	277.3	5.4			
FM (30°-60°)	1682.7	33.1			
FH (60°-80°)	2070.9	40.7			G2/5000
FVH (80°-90°)	76.9	1.5			G1/100
BL (0°-30°)	250.5	4.9	B1/500		
BM (30°-60°)	471.3	9.3	B1/1000		
BH (60°-80°)	221.8	4.4	B1/500		G1/500
BVH (80°-90°)	37.8	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-G2**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	36°	45°	55°	65°	75°	85°
0°	770.9	770.9	770.9	770.9	770.9	770.9	770.9	770.9	770.9	770.9	770.9
2.5°	741.4	743.4	743.7	745.9	745.9	745.6	746.7	750.5	752.5	757.0	760.9
5°	704.9	707.2	708.1	712.0	716.9	717.2	720.8	728.1	735.3	745.3	753.7
7.5°	663.8	666.5	669.0	677.1	684.3	684.9	691.6	703.6	713.0	725.3	740.5
10°	624.1	624.7	627.3	637.6	647.0	648.0	657.7	671.3	683.8	701.0	718.1
12.5°	591.4	593.3	592.7	600.5	608.6	609.2	622.2	639.2	657.7	677.1	697.4
15°	580.1	579.8	573.0	572.6	576.2	576.8	589.4	609.5	630.2	654.2	680.4
17.5°	587.9	585.2	567.4	556.5	554.2	554.8	564.3	586.3	608.2	635.7	667.1
20°	630.5	620.5	578.8	552.3	544.8	544.8	550.3	568.1	592.4	624.4	663.8
22.5°	731.7	716.2	627.3	580.1	553.9	551.3	547.1	560.7	587.5	626.0	677.1
25°	859.2	851.7	716.2	654.2	600.2	591.8	564.0	568.8	597.5	643.4	713.3
27.5°	977.1	964.2	833.0	761.8	685.5	672.6	613.7	594.0	621.4	675.8	765.7
30°	1046.1	1037.3	952.9	885.0	794.1	777.6	693.3	643.7	664.2	729.2	840.0
32.5°	1121.1	1115.8	1073.2	1011.4	911.9	892.7	796.1	725.0	729.5	799.9	929.7
35°	1193.8	1200.6	1176.3	1131.1	1038.6	1020.8	934.2	831.0	810.0	879.5	1025.3
37.5°	1281.1	1282.7	1267.5	1238.1	1171.8	1157.3	1085.8	944.2	897.6	964.2	1117.8
40°	1455.4	1429.9	1370.3	1347.0	1307.6	1298.5	1217.1	1048.0	979.1	1051.2	1205.1
42.5°	1643.9	1604.1	1511.0	1472.8	1457.0	1448.6	1326.4	1117.2	1055.4	1138.2	1290.8
45°	1795.9	1763.6	1672.3	1625.2	1627.1	1613.5	1421.8	1179.0	1138.2	1225.5	1386.5
47.5°	1945.6	1891.5	1789.4	1782.6	1805.3	1785.3	1512.9	1240.7	1224.5	1320.5	1482.3
50°	1955.3	1906.2	1864.7	1919.1	1957.8	1933.0	1595.7	1321.6	1314.1	1435.7	1605.7
52.5°	1837.2	1830.2	1893.2	1984.7	2049.1	2026.8	1663.3	1404.6	1405.6	1579.5	1756.1
55°	1794.3	1785.3	1860.8	1973.4	2060.4	2047.1	1713.7	1498.4	1507.1	1754.2	1917.4
57.5°	1866.7	1844.1	1858.9	1952.1	2033.8	2026.1	1766.1	1602.6	1618.3	1955.3	2066.6
60°	2091.4	2045.2	1966.3	1983.7	2034.9	2030.4	1841.1	1718.6	1745.2	2164.8	2161.0
62.5°	2428.0	2375.6	2214.9	2137.4	2126.0	2117.3	1965.0	1861.2	1874.5	2316.2	2105.9
65°	2797.3	2741.0	2549.9	2422.9	2356.3	2337.4	2164.8	2033.2	1950.2	2315.9	1891.9
67.5°	3211.9	3152.3	2961.9	2840.6	2768.5	2736.5	2489.1	2172.2	1925.5	2119.9	1514.0
70°	3636.4	3579.8	3492.5	3534.8	3566.5	3517.7	3000.0	2218.5	1749.0	1662.0	1016.6
72.5°	3411.0	3406.4	3472.7	3874.3	4485.1	4494.8	3510.3	2087.8	1351.3	987.9	542.0
73°	3201.8	3220.9	3343.7	3824.2	4563.7	4567.0	3520.3	2020.3	1240.7	851.1	476.0
75°	1658.8	1788.1	2244.0	3100.9	4225.8	4241.1	3103.2	1529.4	739.5	472.7	320.8
77.5°	444.3	438.4	723.0	1510.7	2817.3	2797.3	1960.8	740.5	354.4	296.6	225.0
80°	152.3	154.3	246.0	552.6	1315.1	1362.0	851.1	323.0	233.1	206.6	159.4
82.5°	77.6	80.2	128.7	235.1	550.0	538.4	273.8	190.2	156.2	125.4	89.2
85°	41.4	42.7	70.8	121.9	201.7	204.1	96.4	101.6	99.2	71.1	44.0
87.5°	20.4	21.0	34.0	53.7	74.7	72.1	33.7	44.0	48.8	40.1	24.2
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°	770.9	770.9	770.9	770.9	770.9	770.9	770.9	770.9	770.9	770.9	770.9
2.5°	765.7	765.7	769.9	777.0	782.1	787.1	790.2	795.4	798.3	798.0	797.7
5°	760.6	763.7	772.1	780.9	786.8	790.5	790.5	792.9	792.9	791.9	790.5
7.5°	748.6	754.0	766.3	774.1	775.7	771.5	763.1	756.7	748.6	744.3	742.8
10°	729.5	736.6	752.1	755.7	747.3	732.4	712.0	694.6	679.0	671.9	669.6
12.5°	710.7	720.1	734.7	729.2	709.1	680.0	648.7	624.7	607.2	600.5	598.2
15°	695.2	706.6	717.8	700.7	665.7	625.3	590.8	568.5	555.2	550.0	548.7
17.5°	684.9	698.1	701.9	669.9	621.4	576.2	545.5	530.9	525.1	522.8	522.2
20°	685.5	700.4	691.0	640.3	578.8	533.2	512.8	508.6	508.6	508.6	508.3
22.5°	703.3	716.2	686.5	612.4	537.8	496.9	488.3	491.8	494.4	494.4	494.1
25°	740.1	747.3	689.7	585.5	499.2	465.6	466.0	472.7	475.0	475.0	474.3
27.5°	796.4	790.5	695.5	555.9	461.5	437.2	441.7	447.8	449.5	448.5	448.2
30°	866.8	843.6	700.4	520.9	425.9	410.6	414.5	418.1	416.8	414.5	414.2
32.5°	945.8	897.6	697.4	481.8	394.4	383.2	385.4	387.4	385.4	379.9	379.9
35°	1024.1	946.4	681.6	439.2	369.6	356.7	356.3	362.4	362.1	355.7	356.0
37.5°	1092.6	984.9	650.9	400.0	348.2	337.3	338.6	342.4	344.3	335.6	334.7
40°	1152.5	1011.4	607.5	366.7	331.1	331.7	328.2	322.0	319.8	315.9	315.3
42.5°	1208.7	1029.9	561.7	338.9	322.3	329.8	317.8	303.3	297.2	300.7	303.0
45°	1264.0	1050.6	517.4	315.9	311.4	324.0	307.5	291.3	284.2	285.8	288.1
47.5°	1331.6	1079.3	464.0	291.3	294.6	313.3	301.1	283.6	272.9	266.5	264.5
50°	1420.5	1121.1	394.9	264.8	276.8	301.7	295.5	272.3	260.6	247.7	244.5
52.5°	1531.7	1160.5	325.0	243.5	262.3	291.6	286.5	262.6	248.4	232.8	230.3
55°	1642.7	1166.0	264.8	225.0	245.7	278.0	275.5	254.8	234.8	222.2	219.5
57.5°	1720.2	1113.9	224.4	209.5	229.9	261.3	265.5	245.4	223.4	213.7	212.2
60°	1721.5	989.4	199.8	199.2	217.9	246.7	255.1	234.5	216.4	209.8	208.6
62.5°	1584.8	797.4	184.0	191.4	209.2	234.8	247.3	228.3	214.7	212.2	210.8
65°	1328.3	589.1	171.3	184.3	201.1	224.7	240.9	226.4	214.1	213.1	212.2
67.5°	980.7	403.9	160.7	175.2	192.1	214.4	234.8	223.4	210.2	214.1	212.8
70°	616.9	269.6	150.7	164.9	180.1	202.4	226.7	218.3	205.3	203.1	198.9
72.5°	348.2	195.0	138.7	151.6	164.6	186.6	215.6	209.5	194.4	185.3	181.1
73°	314.7	184.6	135.8	148.4	161.0	183.3	213.1	206.9	191.1	181.1	177.2
75°	230.3	151.0	122.5	135.1	146.2	168.5	200.8	194.1	176.9	164.9	162.3
77.5°	166.8	116.4	105.4	116.7	126.4	147.8	182.4	174.6	157.8	151.3	148.7
80°	120.3	88.3	87.3	98.3	106.7	128.4	162.6	154.6	138.4	157.4	153.2
82.5°	71.8	56.6	64.0	76.3	85.0	107.7	141.3	132.0	116.4	117.7	100.2
85°	34.3	32.0	39.8	50.1	56.3	73.8	117.7	110.3	93.1	76.3	74.7
87.5°	15.2	14.5	19.0	22.3	30.1	44.3	80.5	71.5	67.6	40.4	31.7
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)