

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: P197329

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-8030-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197329  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24127)  
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-T4W-8030-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3246 lumens  
Efficiency: N/A  
Efficacy: 95.5 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type IV - Short - Semi-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

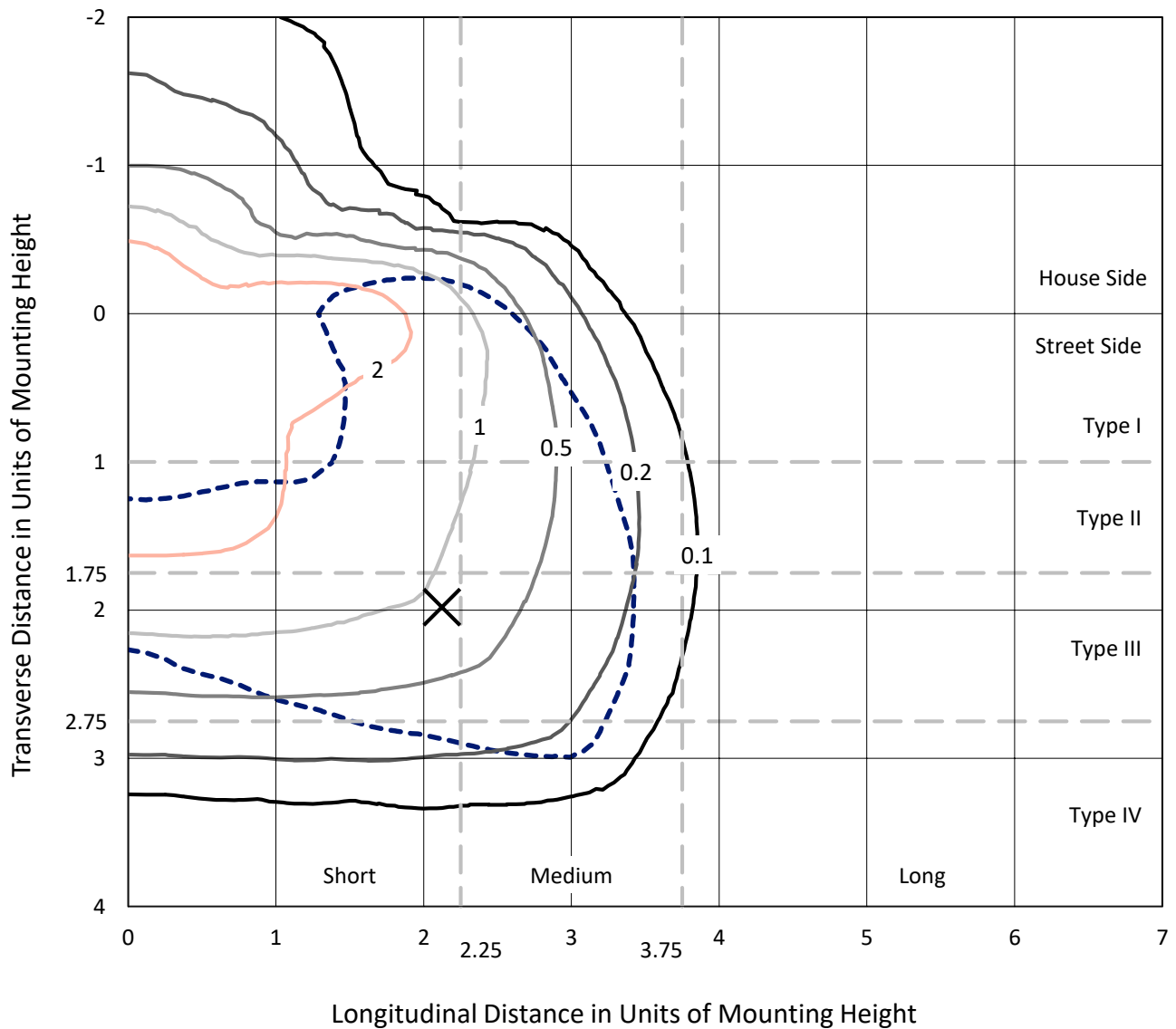


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### Iso-Footcandle Lines of Horizontal Illumination

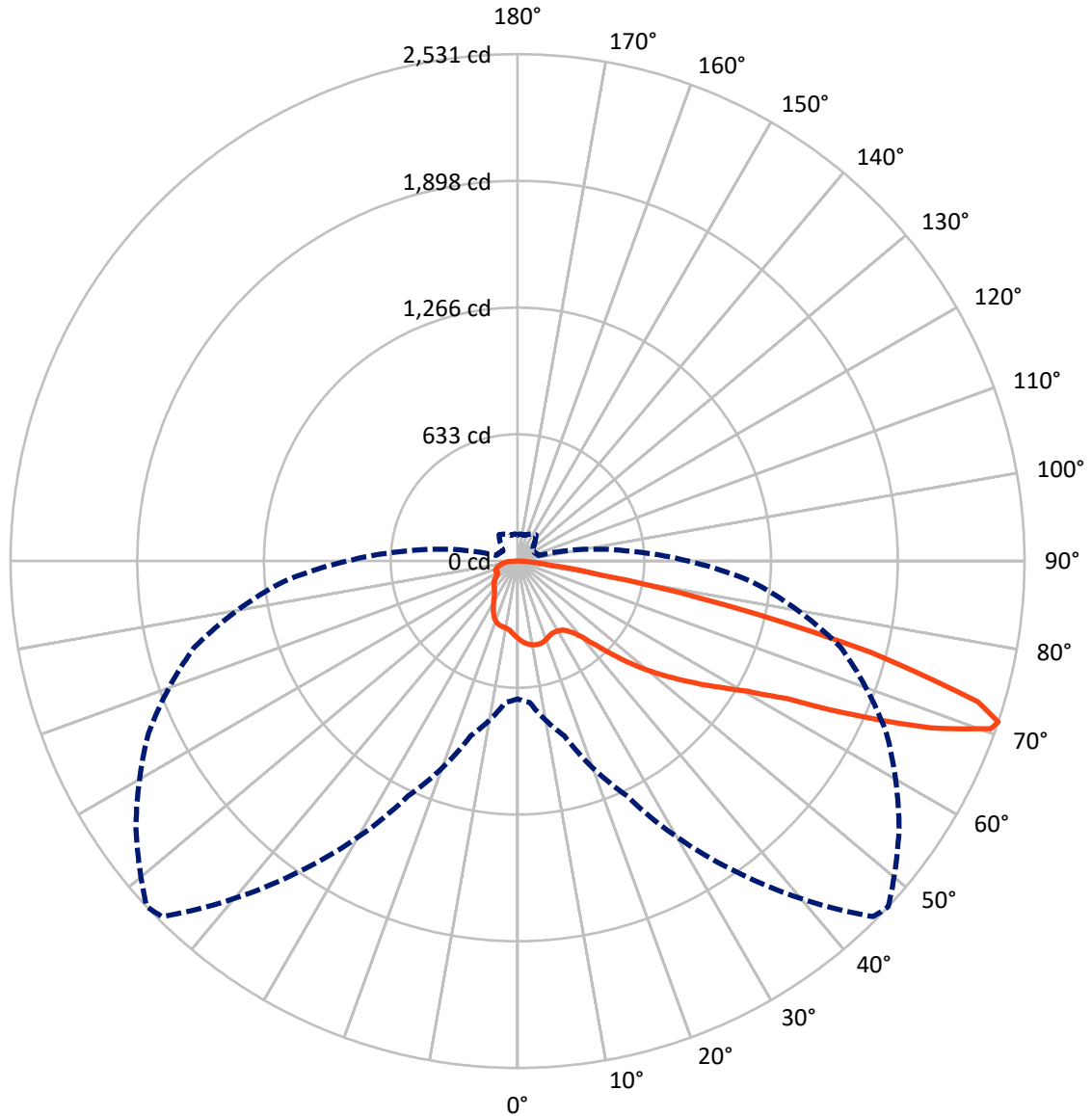
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.4 fc  
 Type IV - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 47-Deg Lateral    - - - Horizontal Cone Through 71-Deg Vertical

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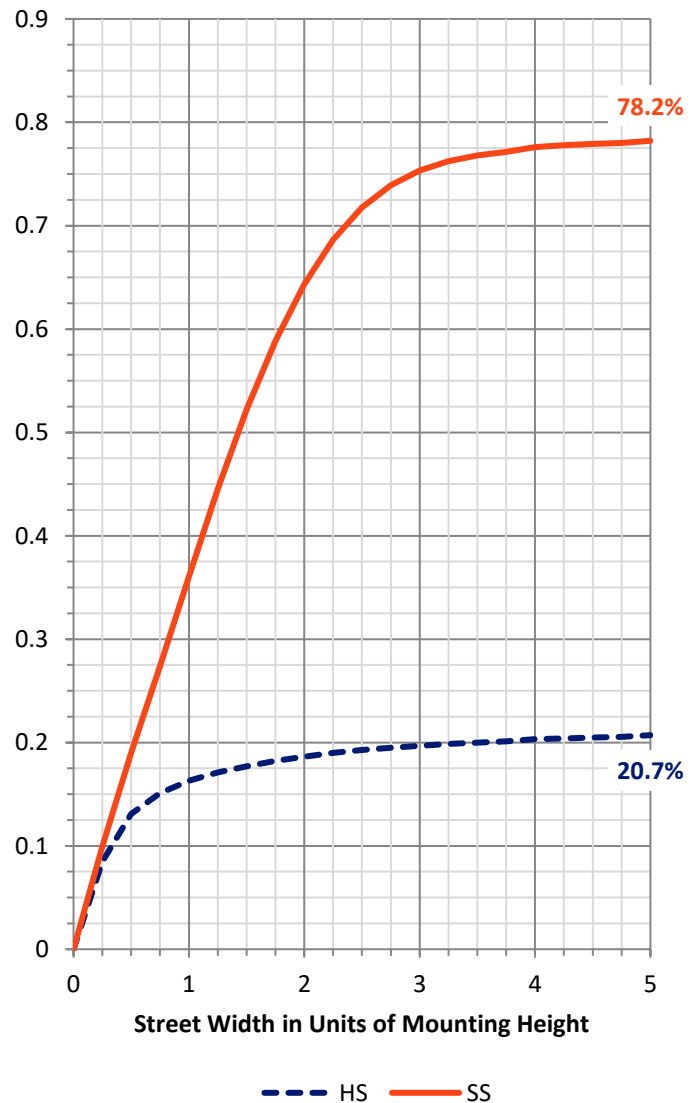
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	695.7	0.0	695.7
	% Fixture	21.4	0.0	21.4
<b>Street Side</b>	Lumens	2550.3	0.0	2550.3
	% Fixture	78.6	0.0	78.6
<b>Total</b>	Lumens	3246.0	0.0	3246.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	36.9	1.1
10°-20°	107.8	3.3
20°-30°	160.2	4.9
30°-40°	230.1	7.1
40°-50°	407.9	12.6
50°-60°	698.0	21.5
60°-70°	990.9	30.5
70°-80°	542.7	16.7
80°-90°	71.6	2.2
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°	3246.0	100.0
0°-180°	3246.0	100.0



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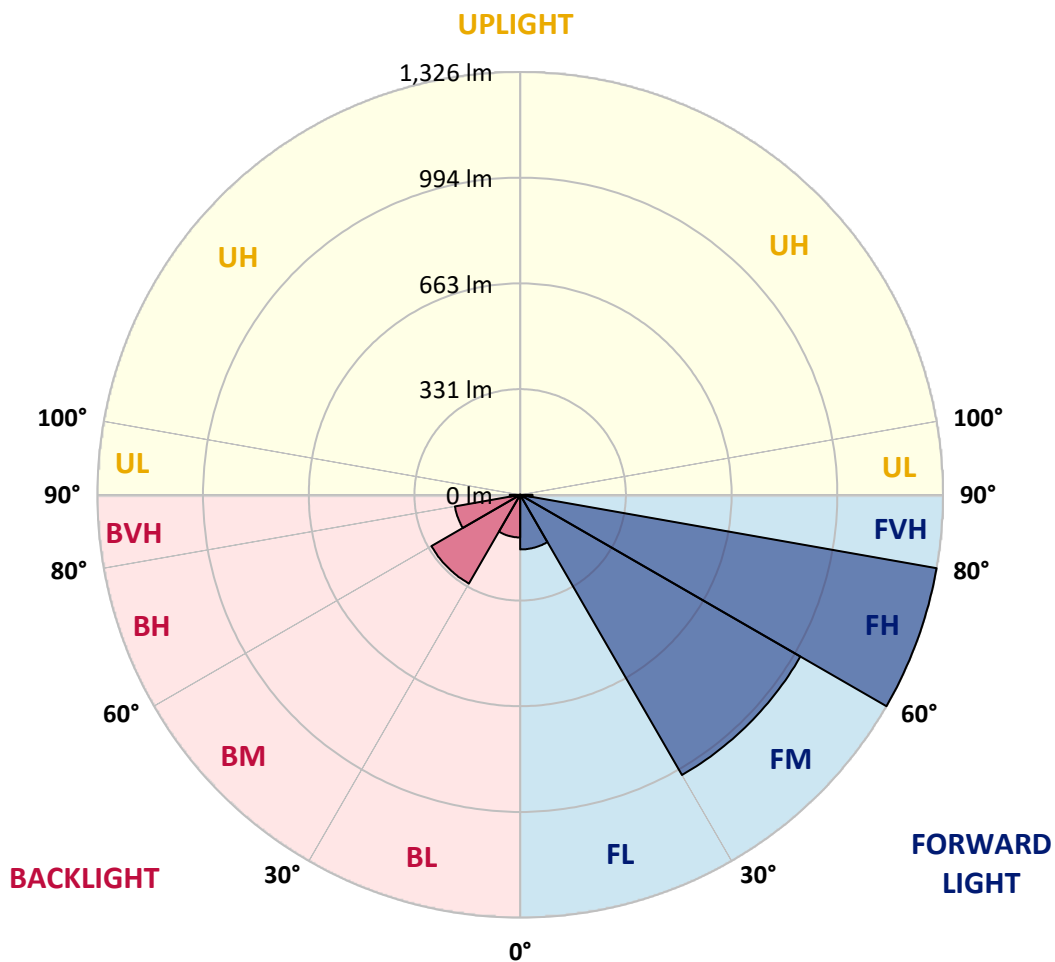
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	171.3	5.3			
FM	(30°-60°)	1014.5	31.3			
FH	(60°-80°)	1325.7	40.8			G1/1800
FVH	(80°-90°)	38.9	1.2			G1/100
BL	(0°-30°)	133.6	4.1	B1/500		
BM	(30°-60°)	321.4	9.9	B1/1000		
BH	(60°-80°)	207.9	6.4	B1/500		G1/500
BVH	(80°-90°)	32.8	1.0			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





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	47°	55°	65°	75°	85°
0°	386.0	386.0	386.0	386.0	386.0	386.0	386.0	386.0	386.0	386.0	386.0
2.5°	409.6	408.7	409.1	407.7	404.1	400.3	400.3	396.3	392.1	387.9	383.3
5°	435.0	433.8	432.7	428.1	421.1	413.4	412.1	404.1	395.5	386.8	378.4
7.5°	456.3	455.0	451.8	443.4	433.3	421.8	420.3	409.8	398.4	386.4	374.6
10°	471.4	470.6	464.5	453.7	442.0	428.3	425.8	415.0	401.6	386.6	371.7
12.5°	479.8	478.6	471.2	458.6	444.7	430.8	428.3	418.0	402.6	386.2	368.8
15°	476.5	475.8	468.9	456.1	442.2	430.2	428.1	417.6	402.0	384.7	366.0
17.5°	462.2	463.6	458.2	445.5	434.2	425.8	423.4	413.6	398.8	381.2	361.8
20°	442.4	444.1	441.3	428.5	422.0	416.5	415.2	407.2	393.6	375.9	356.8
22.5°	421.3	422.8	423.0	411.0	408.9	406.8	405.8	400.1	388.9	372.8	353.4
25°	406.8	408.5	408.9	398.4	399.7	400.3	400.1	396.1	388.1	372.8	353.8
27.5°	403.0	403.9	403.5	393.8	396.1	399.7	399.9	399.0	391.5	377.0	359.7
30°	416.1	416.5	411.2	396.7	399.0	403.7	403.9	403.5	398.6	387.9	373.0
32.5°	472.5	472.0	453.9	416.5	408.5	410.2	410.8	414.6	415.0	406.0	392.1
35°	558.3	558.1	537.0	473.1	435.4	426.6	427.4	433.3	438.6	432.5	424.5
37.5°	652.7	653.4	640.5	553.9	493.5	456.7	455.8	460.3	469.7	471.8	472.9
40°	757.5	760.6	760.0	646.6	574.9	508.0	499.6	494.5	512.8	524.4	539.4
42.5°	877.2	876.3	876.8	748.4	667.9	588.8	573.2	549.7	570.9	590.9	623.7
45°	980.0	983.4	985.9	856.8	772.0	681.1	665.4	622.4	641.6	671.5	721.5
47.5°	1083.5	1077.7	1082.3	977.3	887.9	786.5	766.1	708.3	726.1	768.2	844.4
50°	1204.1	1201.3	1180.3	1134.7	1028.0	893.4	866.7	797.9	824.0	880.1	996.0
52.5°	1312.2	1297.5	1281.1	1258.4	1165.8	1001.5	967.6	891.1	939.0	1008.7	1184.3
55°	1351.7	1341.9	1361.6	1391.1	1311.6	1111.7	1073.9	999.8	1068.8	1155.7	1405.8
57.5°	1393.8	1397.2	1441.8	1501.3	1449.6	1229.3	1188.3	1128.6	1211.2	1320.2	1653.4
60°	1414.9	1428.3	1517.3	1629.0	1580.8	1358.3	1318.9	1276.4	1369.2	1501.9	1900.4
62.5°	1418.4	1436.5	1562.5	1673.8	1761.5	1555.8	1510.4	1464.3	1566.5	1702.8	2079.2
65°	1352.8	1380.6	1558.5	1728.9	1926.2	1885.8	1857.0	1776.7	1830.7	1879.7	2109.7
67.5°	1159.9	1190.2	1404.3	1706.2	2058.3	2228.3	2222.8	2104.2	2034.8	1948.1	1883.5
70°	851.3	875.7	1081.4	1458.6	2000.7	2497.1	2506.8	2316.4	2091.8	1803.0	1400.6
71°	688.5	709.5	903.5	1295.0	1888.4	2511.0	2531.2	2325.9	2032.5	1671.9	1172.5
72.5°	428.5	440.3	599.9	977.3	1626.1	2368.0	2402.1	2204.7	1845.7	1413.2	828.8
75°	161.8	166.4	222.6	431.0	970.6	1779.0	1820.2	1666.2	1296.6	806.7	346.9
77.5°	86.9	89.2	110.4	179.2	388.9	1019.8	1072.8	950.4	622.0	282.3	141.8
80°	58.3	59.7	76.4	106.2	178.8	388.3	432.5	381.6	232.9	161.1	101.0
82.5°	37.7	38.5	52.0	69.8	115.5	136.5	155.9	162.8	145.4	115.5	61.0
85°	24.8	25.5	34.3	44.6	71.5	67.3	69.0	90.2	99.1	76.1	31.1
87.5°	14.3	14.7	20.6	22.9	32.2	25.2	27.3	42.9	58.9	49.6	17.9
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°	386.0	386.0	386.0	386.0	386.0	386.0	386.0	386.0	386.0	386.0	386.0
2.5°	381.2	379.5	375.7	373.4	372.3	371.9	371.5	372.3	372.3	371.9	371.1
5°	374.2	371.1	364.8	360.3	358.0	357.4	358.2	359.3	359.9	359.9	359.3
7.5°	369.2	364.5	356.1	350.0	346.5	345.4	347.7	351.5	354.0	355.3	355.5
10°	365.0	358.7	349.4	343.1	340.1	339.7	342.7	347.5	352.8	355.1	355.5
12.5°	361.2	354.0	343.9	338.0	335.9	337.0	341.0	345.4	351.5	354.9	355.1
15°	357.6	350.2	339.5	333.4	333.0	334.7	338.5	342.0	346.7	350.9	350.9
17.5°	353.4	345.4	334.3	328.6	328.6	330.0	332.6	334.5	337.4	341.4	341.2
20°	348.3	340.1	328.8	322.9	321.6	320.8	320.8	321.2	323.7	327.3	327.9
22.5°	344.6	336.1	324.2	317.0	311.3	305.9	303.5	302.7	305.0	308.4	309.2
25°	344.6	336.1	322.7	310.7	296.8	286.3	281.9	280.6	282.9	286.1	287.3
27.5°	350.2	341.8	326.1	305.0	279.6	262.7	257.5	256.4	258.5	261.1	262.3
30°	363.5	355.3	335.7	298.5	260.4	238.3	232.4	231.4	232.4	233.5	235.0
32.5°	385.6	378.6	351.5	292.6	241.1	216.2	209.1	207.4	207.8	208.0	209.3
35°	421.6	418.4	372.5	285.7	222.8	198.2	190.8	187.4	187.2	188.3	189.7
37.5°	476.7	478.6	399.7	275.6	207.6	185.3	178.0	174.6	172.9	175.0	176.7
40°	554.5	558.9	431.0	261.9	195.2	177.8	170.0	166.8	164.5	163.9	164.7
42.5°	655.7	654.4	463.0	244.4	181.7	172.7	164.5	161.1	157.3	152.5	151.5
45°	775.6	757.5	489.7	223.0	166.4	167.9	159.5	154.8	148.9	141.8	140.9
47.5°	917.2	867.3	506.1	200.0	152.1	161.6	153.8	146.6	138.0	133.4	132.7
50°	1087.8	995.8	517.7	176.7	139.3	153.6	145.8	136.3	127.9	126.6	126.4
52.5°	1289.7	1147.5	532.0	155.7	129.2	143.3	137.8	128.1	121.4	122.0	122.0
55°	1504.5	1304.4	532.4	139.0	120.3	131.3	131.9	124.1	118.9	121.0	121.6
57.5°	1700.3	1441.6	490.6	127.3	111.9	121.8	130.0	125.6	121.6	128.9	129.6
60°	1871.1	1547.2	400.5	117.6	105.0	118.2	134.2	134.6	133.8	153.8	155.2
62.5°	1933.6	1548.2	284.4	109.4	101.2	120.3	143.0	143.7	143.7	162.2	164.9
65°	1846.1	1419.3	189.3	104.5	98.7	125.0	150.2	147.5	140.9	153.8	150.8
67.5°	1537.7	1104.8	138.4	101.4	95.1	125.2	156.5	149.6	138.4	149.4	144.3
70°	1056.8	703.0	115.9	98.4	90.9	119.7	159.9	148.9	134.6	139.3	132.5
71°	850.7	561.0	110.0	97.4	89.2	116.5	160.3	148.1	132.7	135.7	129.6
72.5°	560.4	345.6	102.9	95.1	86.7	111.1	159.2	146.2	130.2	130.4	126.4
75°	221.1	143.3	92.6	89.8	79.5	102.2	154.6	142.2	125.4	121.2	119.5
77.5°	111.7	93.6	81.4	82.5	71.1	93.2	148.1	135.7	118.6	113.0	111.7
80°	81.6	71.1	69.6	71.5	61.6	84.4	139.9	126.8	110.0	115.9	113.4
82.5°	49.6	43.3	54.5	59.1	51.5	75.3	130.2	116.5	99.1	91.3	88.3
85°	23.6	25.5	39.3	43.5	38.1	60.2	119.1	105.2	86.5	74.7	75.9
87.5°	11.6	14.1	22.5	26.1	25.0	44.2	89.8	81.6	68.2	56.2	54.9
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)