

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: P195961

Luminaire Tested: **NAV-AF-01-D-UNV-5WQ-600**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195961  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)  
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-5WQ-600  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(1) 70 CRI, 4000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4284.1 lumens  
Efficiency: N/A  
Efficacy: 126.0 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B3 - U0 - G1

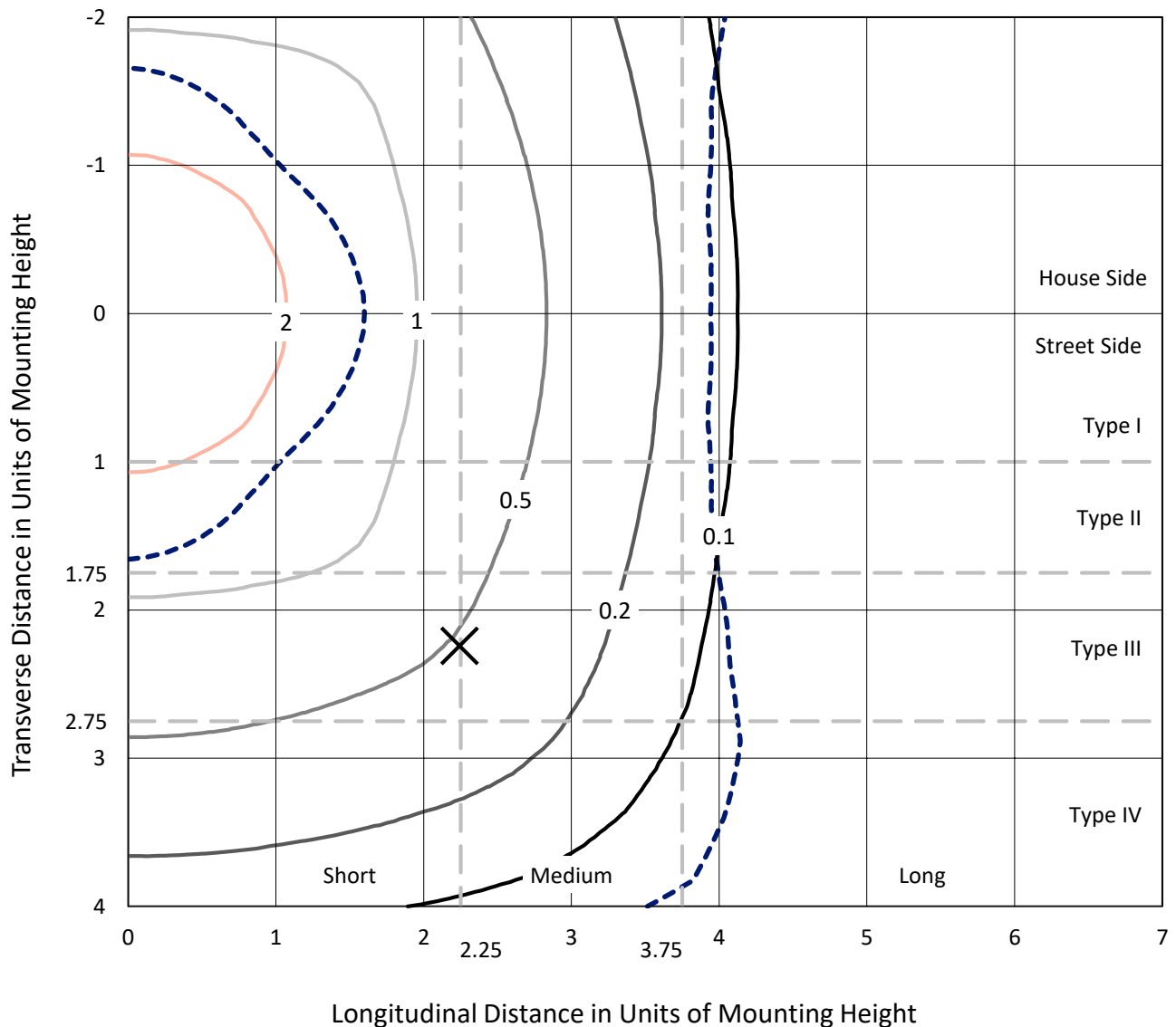
Input Watts (W): 34  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

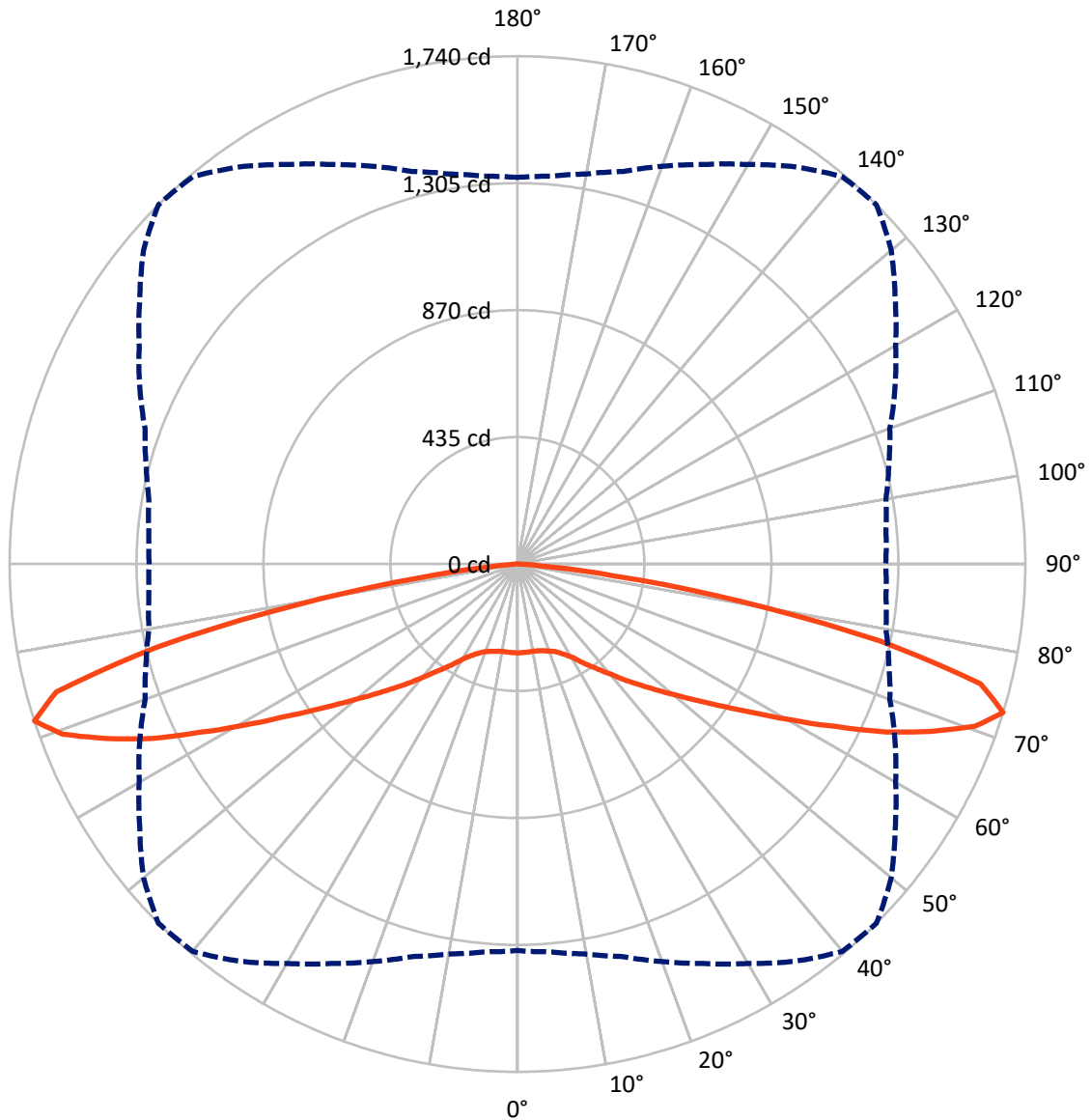
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3 fc  
 Type V - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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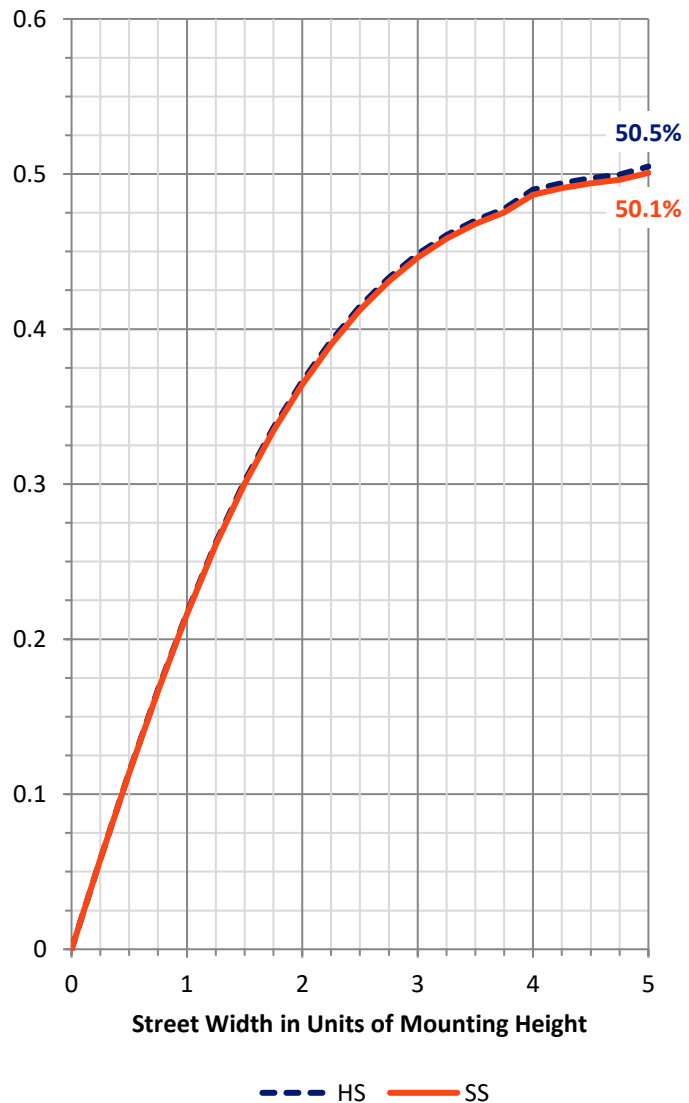
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	2142.1	0.0	2142.1
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	2142.1	0.0	2142.1
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	4284.1	0.0	4284.1
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	29.1	0.7
10°-20°	88.0	2.1
20°-30°	158.8	3.7
30°-40°	270.9	6.3
40°-50°	461.2	10.8
50°-60°	742.3	17.3
60°-70°	1234.5	28.8
70°-80°	1194.2	27.9
80°-90°	105.1	2.5
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°	4284.1	100.0
0°-180°	4284.1	100.0



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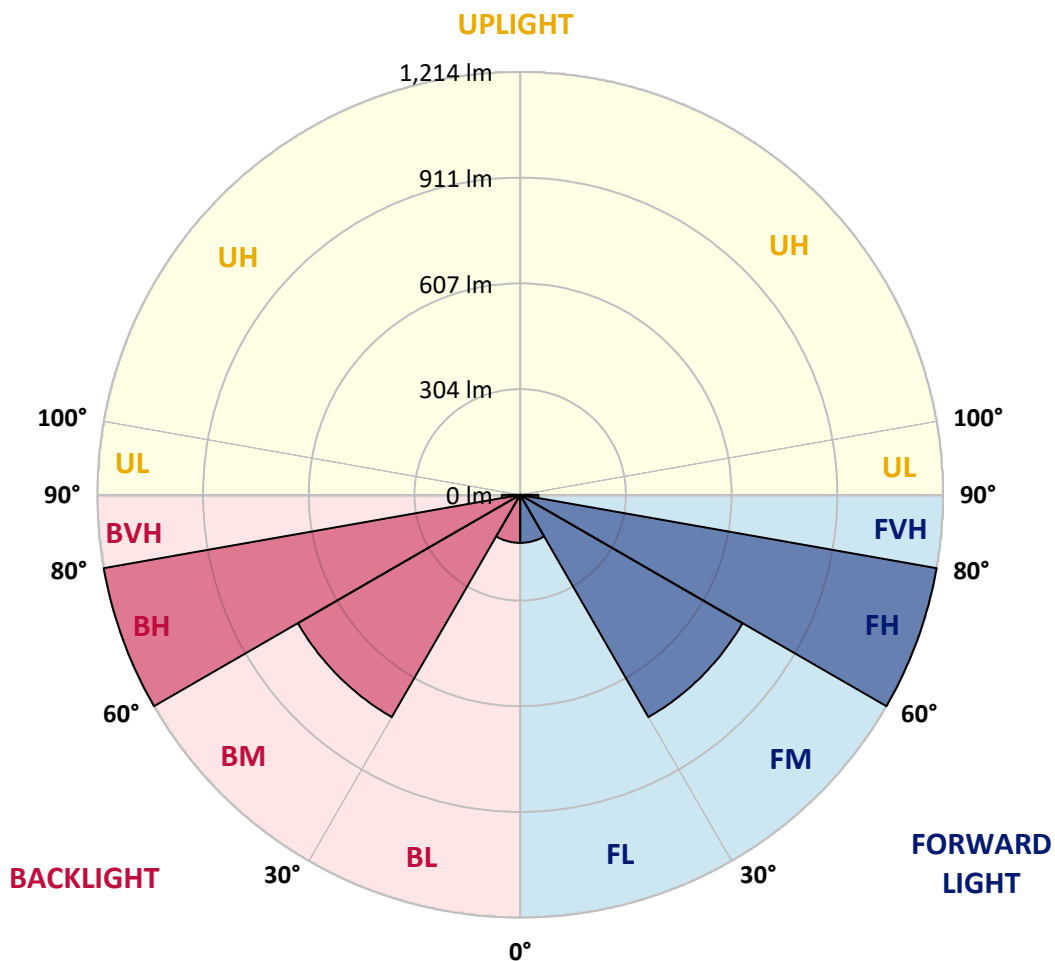
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	137.9	3.2			
FM	(30°-60°)	737.2	17.2			
FH	(60°-80°)	1214.3	28.3			G1/1800
FVH	(80°-90°)	52.6	1.2			G1/100
BL	(0°-30°)	137.9	3.2	B1/500		
BM	(30°-60°)	737.2	17.2	B1/1000		
BH	(60°-80°)	1214.3	28.3	B3/2500		G1/1800
BVH	(80°-90°)	52.6	1.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G1**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	304.5	304.5	304.5	304.5	304.5	304.5	304.5	304.5	304.5	304.5	304.5
2.5°	307.0	307.0	307.2	307.0	306.4	306.2	305.4	304.8	304.3	304.0	303.5
5°	307.2	307.2	307.5	307.2	306.7	306.2	305.7	304.8	304.3	303.8	303.5
7.5°	308.2	308.5	308.8	308.5	307.5	307.0	306.2	305.4	304.3	303.8	303.2
10°	310.4	310.4	310.4	310.1	309.3	308.2	307.2	306.4	305.1	303.8	303.0
12.5°	312.0	312.2	312.2	311.7	310.7	309.3	308.2	307.5	306.4	305.4	304.5
15°	314.4	314.4	314.0	313.0	311.4	310.4	309.9	309.5	309.3	308.8	308.0
17.5°	319.1	318.9	318.0	316.4	314.6	313.8	313.2	313.2	313.2	313.0	312.5
20°	325.9	325.9	324.9	322.2	320.7	319.9	319.1	319.1	319.1	318.2	317.5
22.5°	337.0	337.3	335.7	332.6	330.4	328.9	327.8	326.9	326.2	325.7	324.4
25°	352.0	351.8	350.0	346.0	344.4	342.8	340.7	339.4	338.3	337.6	335.9
27.5°	367.9	367.5	365.5	362.0	361.0	358.6	357.0	355.2	353.8	352.6	351.0
30°	388.2	386.9	385.2	382.6	382.1	380.2	378.2	375.5	373.4	371.3	369.4
32.5°	406.3	406.3	404.0	402.6	403.8	402.9	403.1	401.6	400.3	399.5	397.6
35°	431.7	431.7	430.7	429.0	429.3	427.5	427.2	427.5	428.5	428.5	426.4
37.5°	465.4	466.0	462.5	462.0	460.6	458.1	456.7	457.3	459.6	460.9	458.1
40°	507.4	508.4	507.4	503.9	502.4	497.9	495.2	495.2	497.1	498.4	497.4
42.5°	548.7	550.6	548.7	546.2	544.8	541.3	540.0	541.1	543.5	545.0	543.5
45°	594.9	596.2	593.8	590.7	589.1	587.3	586.5	587.3	589.9	591.5	591.0
47.5°	640.3	642.1	639.2	637.9	637.9	636.1	638.1	640.3	642.6	646.3	644.8
50°	684.6	686.9	685.1	685.4	687.4	690.9	694.8	699.1	703.3	707.3	707.8
52.5°	724.1	727.8	728.0	732.8	739.4	744.7	755.8	765.0	775.0	778.5	776.8
55°	765.8	770.8	777.3	784.8	795.3	806.1	824.8	841.5	854.7	862.9	861.5
57.5°	825.3	830.3	837.3	849.4	865.2	879.9	905.5	931.4	951.4	963.8	957.8
60°	902.7	907.9	916.9	929.8	950.3	970.4	1005.5	1042.7	1073.8	1088.0	1077.0
62.5°	1004.9	1010.0	1015.8	1032.9	1055.8	1081.7	1125.8	1173.4	1213.0	1226.7	1211.2
65°	1150.7	1156.9	1158.7	1172.6	1195.1	1219.1	1266.5	1320.3	1365.4	1387.8	1356.7
67.5°	1315.0	1317.5	1324.8	1341.2	1364.1	1385.7	1423.1	1474.1	1517.3	1529.7	1496.5
70°	1411.3	1416.1	1429.0	1451.7	1479.1	1513.0	1554.0	1608.8	1657.9	1663.6	1621.5
72.5°	1324.3	1334.0	1356.9	1392.3	1449.8	1510.2	1580.6	1661.6	1732.0	1740.1	1672.3
75°	1062.1	1073.3	1100.7	1139.5	1207.5	1297.1	1398.9	1520.5	1626.0	1639.4	1549.8
77.5°	566.2	579.9	619.7	671.9	769.0	887.6	1010.3	1148.9	1238.6	1268.9	1204.3
80°	142.7	150.1	169.3	199.9	265.6	361.3	467.0	616.2	727.5	774.8	727.5
82.5°	55.3	60.9	66.2	69.9	76.2	89.4	123.4	201.2	271.1	333.8	289.0
85°	21.4	22.7	32.7	37.1	37.1	40.9	47.0	55.3	68.5	74.9	62.8
87.5°	8.4	9.2	11.4	17.4	17.9	15.9	16.9	19.0	14.5	12.2	13.7
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	304.5	304.5	304.5	304.5	304.5	304.5	304.5	304.5
2.5°	303.2	303.0	302.5	302.7	302.5	302.5	302.5	302.5
5°	303.0	303.0	302.5	302.5	302.5	302.7	302.5	302.5
7.5°	302.7	302.5	302.0	301.7	301.7	301.4	301.4	301.4
10°	302.2	301.7	301.2	300.8	300.8	300.3	300.3	300.3
12.5°	303.5	302.7	302.2	302.0	302.0	302.0	302.2	302.2
15°	307.2	305.7	304.8	304.5	304.8	305.4	305.7	305.9
17.5°	311.2	309.5	308.2	307.7	308.0	308.8	309.5	310.1
20°	316.2	314.9	313.2	312.7	312.7	313.8	314.4	315.1
22.5°	323.3	322.2	320.9	320.1	319.6	320.9	321.7	322.2
25°	334.6	333.6	332.6	331.7	331.4	332.8	333.3	333.6
27.5°	349.6	348.6	348.1	347.8	347.0	347.6	348.3	348.1
30°	369.2	370.0	369.2	369.2	367.9	368.4	367.9	367.3
32.5°	395.3	394.4	392.1	390.6	388.7	388.7	387.9	387.1
35°	421.4	418.8	417.5	418.2	417.5	418.0	416.6	415.3
37.5°	452.2	450.6	450.4	452.8	452.2	452.8	452.8	450.9
40°	493.1	492.0	493.9	497.9	499.4	499.2	499.7	497.4
42.5°	540.0	538.2	539.0	542.5	544.3	544.8	544.5	542.5
45°	587.0	587.5	587.5	591.2	593.0	594.1	592.3	591.5
47.5°	640.0	640.8	638.9	641.3	641.8	643.6	642.1	640.8
50°	701.1	698.3	694.1	694.8	694.8	694.3	692.4	690.9
52.5°	769.5	762.9	754.9	752.3	749.4	746.5	742.9	739.9
55°	847.2	836.0	821.6	815.1	809.6	802.9	794.5	791.7
57.5°	937.4	917.9	899.0	887.1	872.9	864.1	853.3	852.8
60°	1044.5	1018.1	984.6	967.0	952.8	942.4	934.3	931.1
62.5°	1168.2	1122.8	1086.7	1067.7	1051.1	1044.7	1034.5	1035.8
65°	1295.1	1248.8	1213.8	1198.5	1182.9	1178.7	1169.2	1172.6
67.5°	1432.4	1394.4	1355.9	1341.7	1327.5	1323.2	1313.5	1316.3
70°	1555.5	1507.3	1463.5	1435.6	1411.3	1391.8	1379.3	1374.3
72.5°	1580.0	1496.5	1427.6	1357.8	1317.5	1282.1	1267.5	1262.0
75°	1419.8	1290.0	1191.9	1109.9	1064.6	1013.1	1007.6	999.9
77.5°	1104.4	956.7	838.0	732.5	671.7	608.9	587.3	570.9
80°	658.7	506.3	392.4	275.1	224.4	180.7	169.8	158.5
82.5°	235.8	151.1	101.8	79.4	70.9	65.4	61.2	55.6
85°	57.0	48.0	45.3	41.1	40.6	34.6	24.6	21.9
87.5°	18.2	16.6	16.9	16.1	16.9	12.7	10.3	9.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)