

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: P196873

Luminaire Tested: **NAV-AF-01-D-UNV-5MQ-8030-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196873
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24129)
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-5MQ-8030-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 615mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE V MEDIUM OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3498 lumens
Efficiency: N/A
Efficacy: 102.9 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type V - Short - Full Cutoff
BUG Rating: B2 - U0 - G1

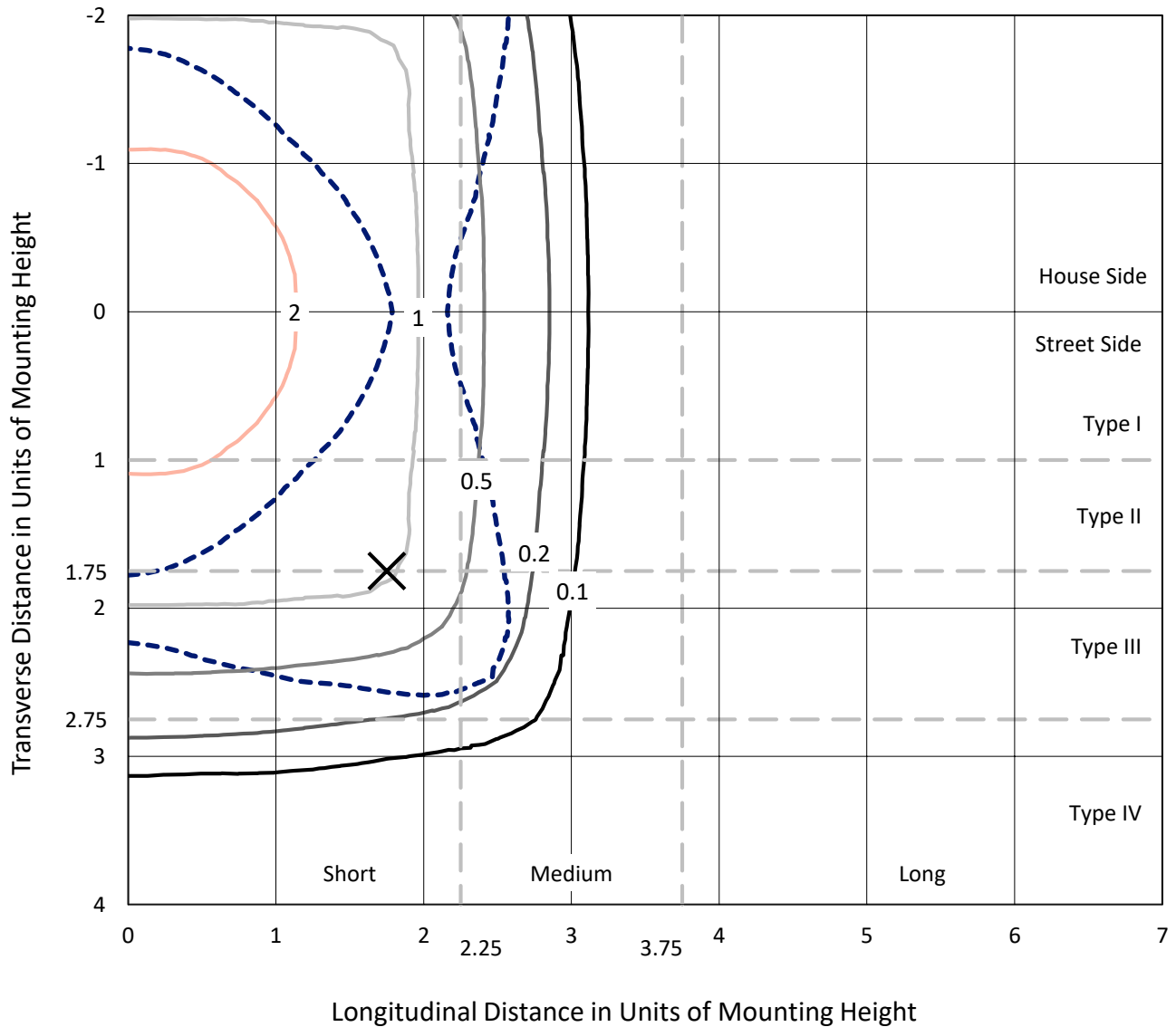
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

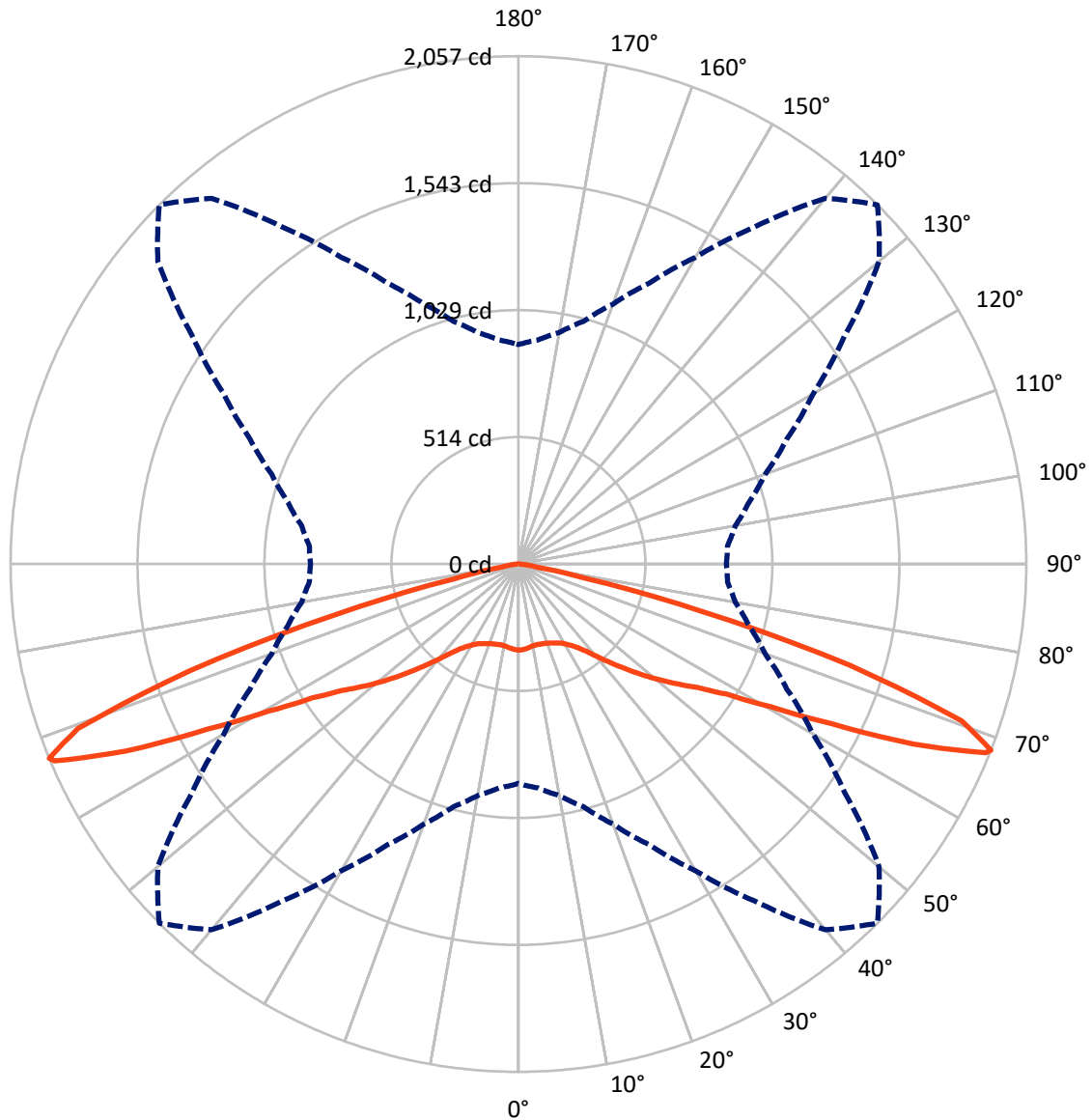
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 3.5 fc
 Type V - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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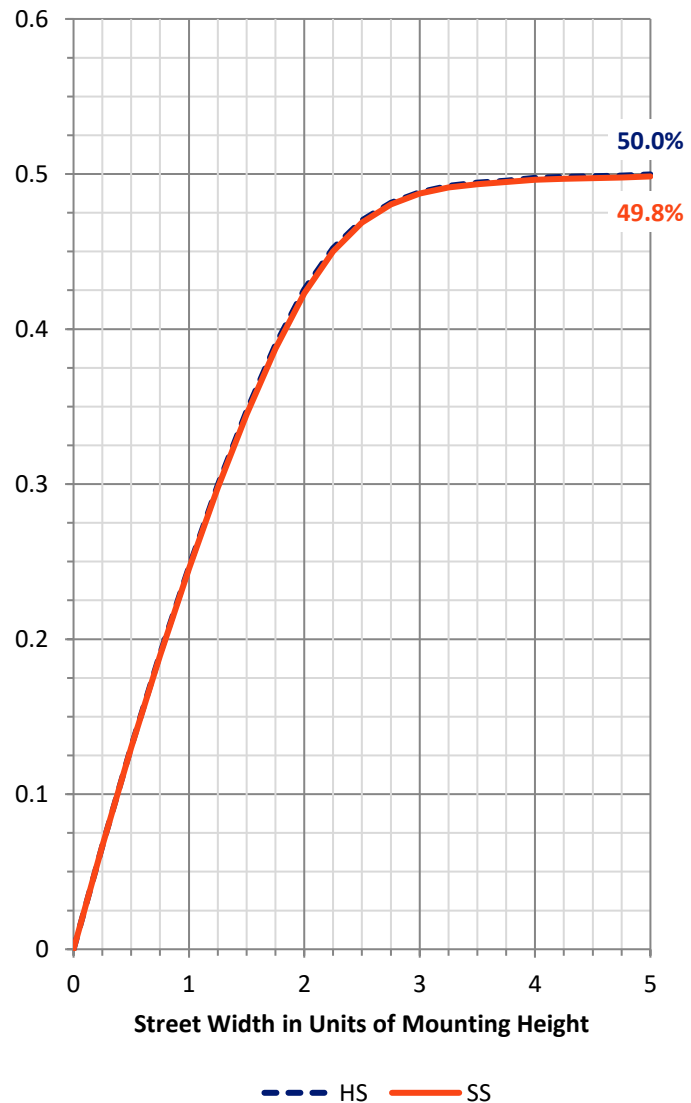
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1749.0	0.0	1749.0
	% Fixture	50.0	0.0	50.0
Street Side	Lumens	1749.0	0.0	1749.0
	% Fixture	50.0	0.0	50.0
Total	Lumens	3498.0	0.0	3498.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	32.7	0.9
10°-20°	94.7	2.7
20°-30°	161.0	4.6
30°-40°	263.5	7.5
40°-50°	470.8	13.5
50°-60°	795.2	22.7
60°-70°	1233.0	35.2
70°-80°	423.9	12.1
80°-90°	23.3	0.7
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°	3498.0	100.0
0°-180°	3498.0	100.0



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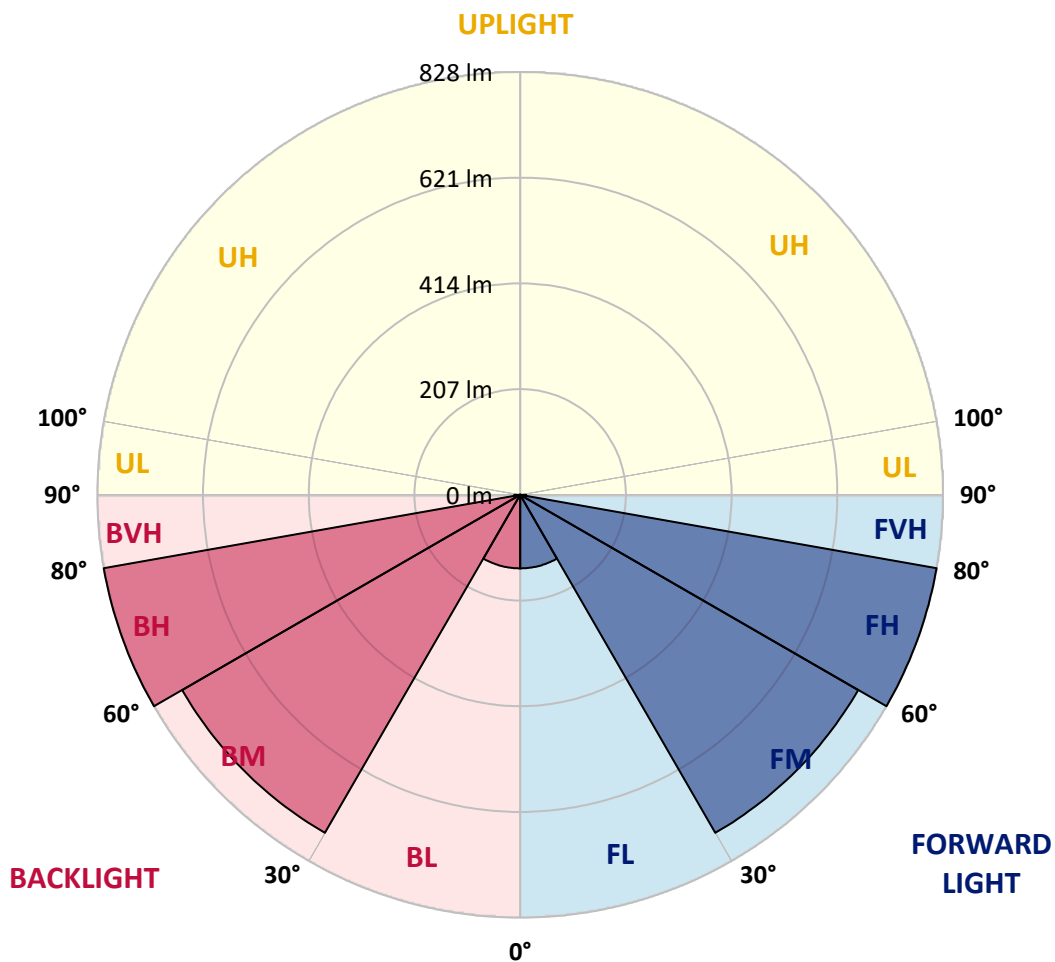
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	144.2	4.1			
FM	(30°-60°)	764.7	21.9			
FH	(60°-80°)	828.5	23.7			G1/1800
FVH	(80°-90°)	11.7	0.3			G1/100
BL	(0°-30°)	144.2	4.1	B1/500		
BM	(30°-60°)	764.7	21.9	B1/1000		
BH	(60°-80°)	828.5	23.7	B2/1000		G1/1800
BVH	(80°-90°)	11.7	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G1

Type V Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9
2.5°	350.4	350.4	350.9	350.6	350.0	349.4	348.7	348.1	347.7	347.2	346.8
5°	346.8	346.8	347.4	347.0	346.6	345.9	345.5	344.9	344.4	344.0	344.2
7.5°	342.1	342.5	342.9	342.7	341.9	341.7	341.0	340.8	340.4	339.7	339.9
10°	338.0	338.2	338.7	338.4	338.2	337.6	337.4	337.2	336.9	336.1	335.9
12.5°	333.9	334.4	334.8	335.0	334.8	335.0	335.2	335.4	335.2	334.8	334.8
15°	330.7	331.2	331.8	332.4	332.7	333.9	334.8	335.7	336.3	336.5	335.9
17.5°	329.0	329.7	330.5	331.8	332.9	334.4	335.9	337.2	338.2	338.4	337.8
20°	328.8	329.4	330.7	332.2	334.2	336.1	338.4	340.4	341.4	342.1	341.4
22.5°	330.3	331.2	332.9	334.8	337.2	339.7	342.7	344.9	347.0	347.9	347.2
25°	334.6	335.4	337.4	339.7	342.3	345.5	348.5	351.3	353.4	354.5	353.6
27.5°	343.6	343.8	345.9	348.5	351.5	354.3	358.1	359.4	361.1	362.2	361.1
30°	356.2	356.6	358.6	362.6	365.4	369.1	371.2	372.5	374.4	375.5	374.2
32.5°	375.5	375.9	377.6	381.5	384.1	386.8	389.4	390.3	392.2	393.5	392.0
35°	402.7	403.6	405.1	407.6	409.8	411.9	413.8	413.2	414.5	416.2	414.7
37.5°	440.0	439.8	440.2	442.1	444.3	445.5	448.5	447.0	448.3	449.8	449.0
40°	483.5	483.5	483.2	486.7	487.5	488.8	492.0	490.1	491.8	493.5	492.0
42.5°	532.9	533.8	534.9	537.6	540.0	540.4	541.9	541.1	543.2	544.7	543.2
45°	589.9	591.2	592.5	598.9	600.0	600.8	601.9	599.1	601.5	602.8	602.3
47.5°	649.0	651.4	654.2	660.8	665.1	667.0	667.9	664.7	664.9	666.8	667.0
50°	715.9	718.4	721.2	728.7	732.8	736.2	737.3	733.6	734.1	735.6	736.0
52.5°	777.6	780.6	786.6	796.6	802.4	808.4	808.8	804.3	806.3	807.3	806.5
55°	835.6	839.5	847.4	860.9	871.4	883.2	888.5	883.6	883.6	882.7	882.3
57.5°	903.3	907.6	915.7	931.4	945.9	962.8	977.4	982.3	991.3	994.3	989.6
60°	1005.3	1009.8	1018.1	1038.7	1057.1	1081.7	1105.7	1125.2	1156.9	1174.0	1158.6
62.5°	1098.4	1105.3	1125.0	1161.0	1200.8	1246.4	1299.4	1337.1	1394.7	1423.4	1384.6
65°	1077.2	1091.1	1129.7	1186.3	1268.5	1367.5	1475.2	1578.7	1697.8	1758.8	1680.0
67.5°	941.0	952.8	994.3	1060.1	1162.7	1299.1	1466.6	1680.8	1926.5	2040.9	1901.5
68°	888.9	911.0	952.3	1017.7	1121.1	1255.2	1434.1	1665.4	1933.6	2057.2	1906.6
70°	681.6	689.5	729.1	787.8	899.4	1031.0	1211.5	1475.2	1778.3	1905.5	1750.7
72.5°	323.9	328.6	354.3	412.1	483.0	590.1	749.5	998.2	1271.3	1403.7	1249.2
75°	118.7	119.7	125.7	139.4	166.0	206.3	282.7	437.4	647.5	772.2	650.1
77.5°	64.0	64.3	66.6	70.0	74.8	80.1	91.7	123.0	198.4	269.9	209.5
80°	40.3	40.1	42.4	45.2	48.4	51.0	52.1	55.7	62.8	73.5	67.5
82.5°	20.6	22.5	27.8	30.8	35.6	36.4	35.3	35.1	37.3	40.3	41.6
85°	11.4	10.1	14.8	19.7	21.4	22.1	22.3	21.0	20.6	20.1	21.2
87.5°	5.8	5.4	6.4	9.9	10.5	8.6	8.8	7.5	5.1	5.1	5.4
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°	348.9	348.9	348.9	348.9	348.9	348.9	348.9	348.9
2.5°	346.4	346.6	346.2	346.2	346.2	346.4	346.2	345.9
5°	343.6	344.0	344.0	344.2	344.4	344.4	344.4	344.4
7.5°	339.5	339.7	340.2	340.2	340.2	340.2	340.2	340.2
10°	335.7	335.2	335.0	334.6	334.6	333.9	334.2	334.4
12.5°	333.7	332.9	332.4	331.8	331.4	330.7	330.7	330.9
15°	334.6	333.3	332.0	331.6	331.2	330.7	330.3	330.5
17.5°	336.3	334.8	333.3	332.4	331.6	330.9	330.7	330.9
20°	339.9	337.8	335.4	333.9	332.2	331.8	331.2	331.8
22.5°	344.9	342.3	339.3	336.5	334.6	333.7	332.9	333.5
25°	350.9	348.1	345.1	341.9	339.7	339.1	338.0	338.0
27.5°	359.2	356.9	354.3	351.3	349.2	348.5	346.8	346.8
30°	372.5	370.1	367.8	365.2	363.1	362.4	360.3	360.3
32.5°	390.1	387.5	386.0	383.9	382.1	381.1	378.5	378.3
35°	413.6	411.3	411.1	409.6	407.8	408.1	405.5	405.1
37.5°	447.5	445.5	446.2	444.9	443.4	444.7	443.2	443.2
40°	490.7	490.1	490.7	489.9	490.1	490.3	489.0	489.5
42.5°	543.0	541.3	545.1	544.7	544.1	545.8	542.8	540.6
45°	603.2	602.6	606.4	607.0	605.8	606.8	601.5	601.3
47.5°	668.5	668.5	672.0	671.5	670.2	670.5	664.0	660.0
50°	736.6	736.2	739.6	738.8	737.1	736.9	730.2	726.1
52.5°	807.5	807.5	812.5	810.1	806.0	804.1	796.0	790.6
55°	885.9	884.9	886.4	878.7	870.7	864.9	854.9	850.8
57.5°	985.1	972.7	962.0	952.1	941.0	934.1	922.4	918.1
60°	1125.8	1092.6	1078.3	1058.6	1040.2	1031.0	1015.3	1007.0
62.5°	1320.8	1265.7	1226.7	1183.3	1141.3	1111.7	1087.9	1077.4
65°	1546.1	1426.2	1327.0	1233.8	1154.8	1092.0	1057.1	1046.2
67.5°	1631.8	1411.6	1240.4	1106.8	1010.8	936.1	894.3	885.5
68°	1613.6	1378.2	1200.4	1063.5	967.1	891.7	850.2	842.2
70°	1423.4	1162.7	975.0	838.8	748.9	677.1	647.7	635.1
72.5°	970.3	746.7	572.8	458.2	390.9	345.5	318.5	309.3
75°	446.6	301.8	201.6	150.6	127.9	117.0	108.6	106.5
77.5°	130.2	94.7	81.4	75.4	70.9	67.0	64.3	64.0
80°	61.9	58.0	56.3	52.5	48.4	44.8	42.2	42.6
82.5°	41.6	40.5	40.5	36.6	30.2	25.9	21.4	19.3
85°	22.1	22.9	24.2	22.9	19.9	14.8	9.6	10.5
87.5°	7.5	8.6	9.0	8.8	7.9	6.0	4.5	4.5
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)