

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: P270318

Luminaire Tested: **NAV-AF-01-D-UNV-T4W-7027-600**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270318
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-7027-600
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 2700K, 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: 3455.8 lumens
Efficiency: N/A
Efficacy: 101.6 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

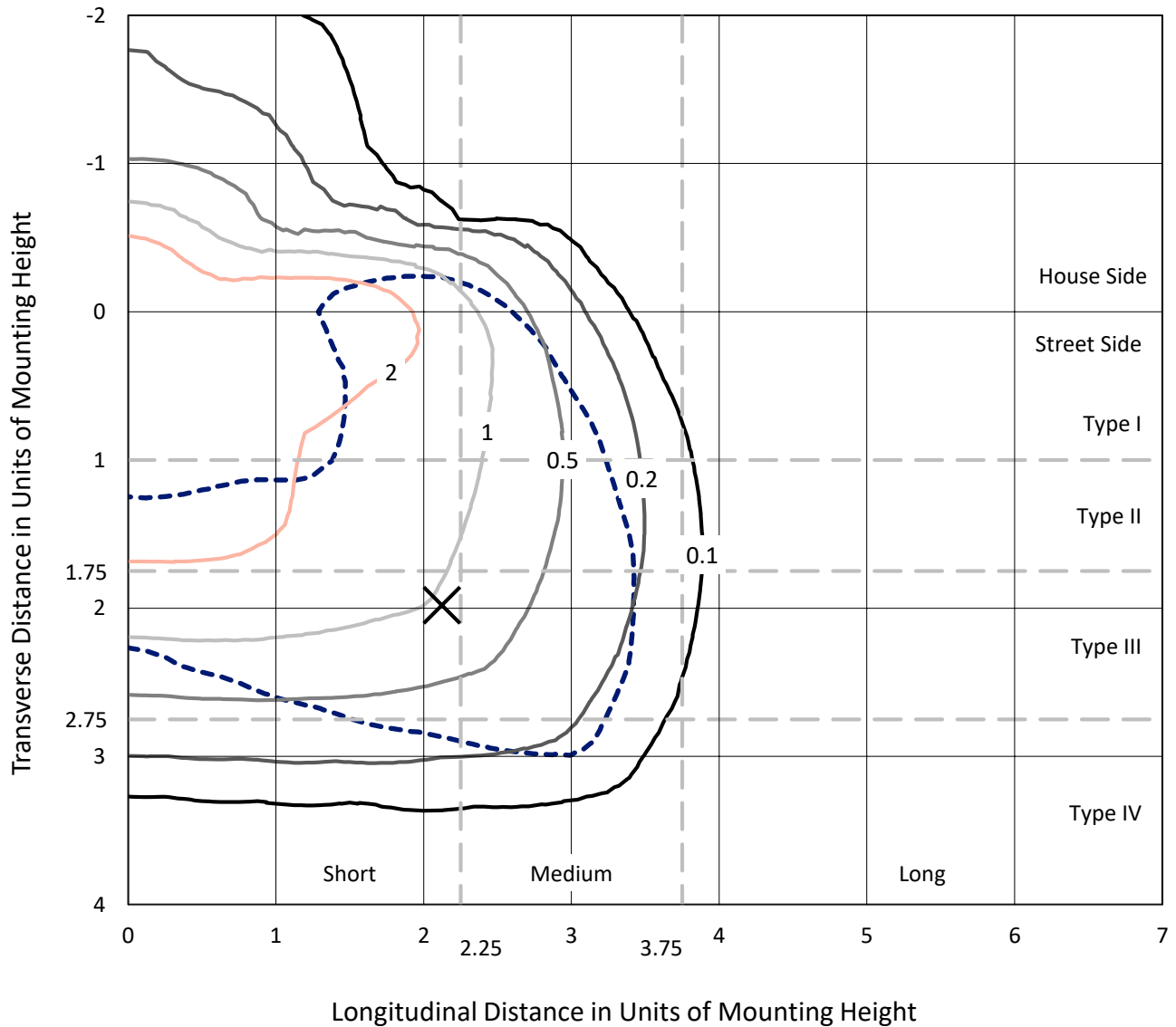
Input Watts (W): 34
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

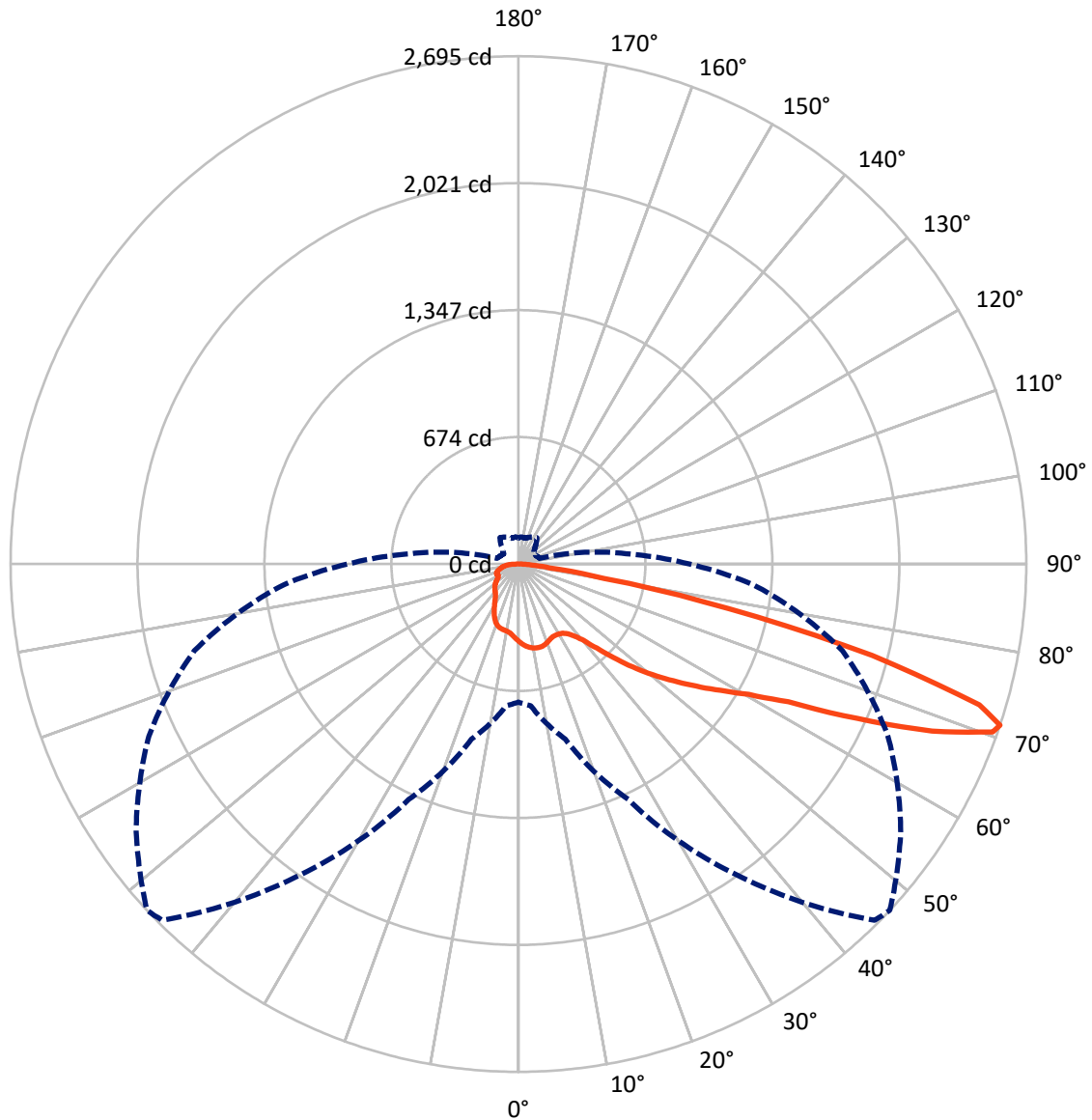
× Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4.7 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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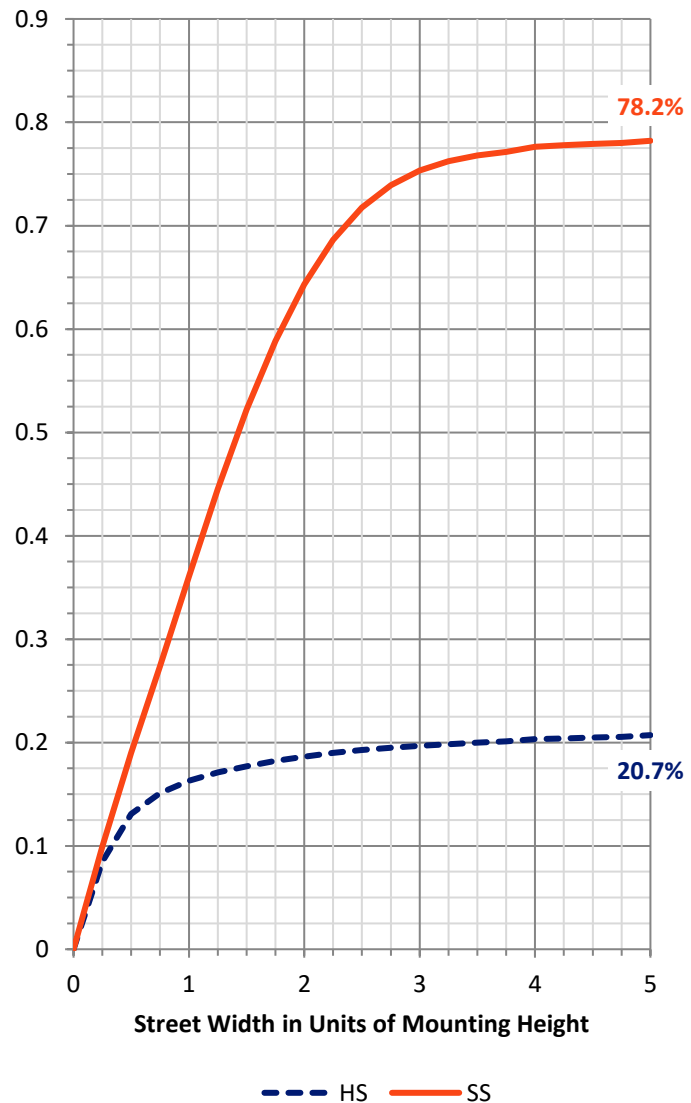
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	740.6	0.0	740.6
	% Fixture	21.4	0.0	21.4
Street Side	Lumens	2715.2	0.0	2715.2
	% Fixture	78.6	0.0	78.6
Total	Lumens	3455.8	0.0	3455.8
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	39.2	1.1
10°-20°	114.8	3.3
20°-30°	170.6	4.9
30°-40°	244.9	7.1
40°-50°	434.2	12.6
50°-60°	743.1	21.5
60°-70°	1054.9	30.5
70°-80°	577.8	16.7
80°-90°	76.3	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°	3455.8	100.0
0°-180°	3455.8	100.0



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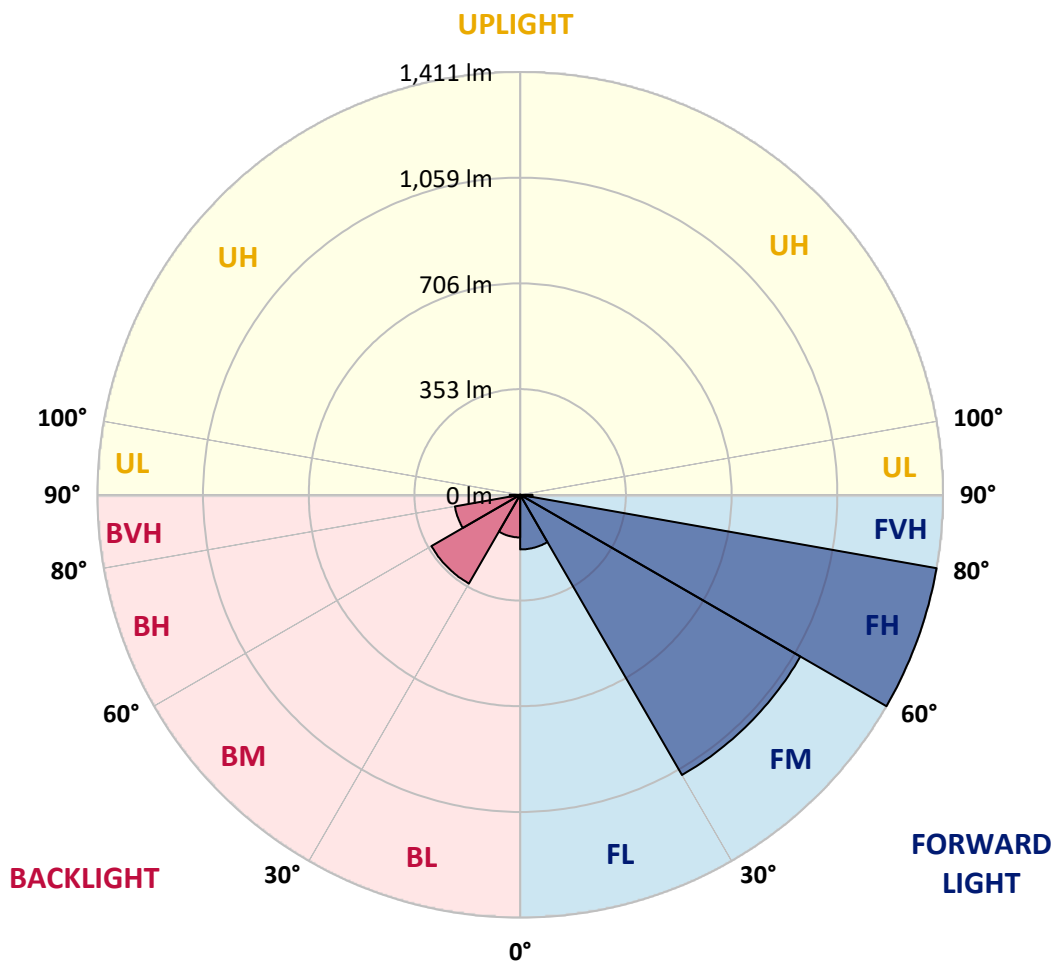
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	182.4	5.3			
FM	(30°-60°)	1080.0	31.3			
FH	(60°-80°)	1411.4	40.8			G1/1800
FVH	(80°-90°)	41.4	1.2			G1/100
BL	(0°-30°)	142.2	4.1	B1/500		
BM	(30°-60°)	342.2	9.9	B1/1000		
BH	(60°-80°)	221.3	6.4	B1/500		G1/500
BVH	(80°-90°)	34.9	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°	411.0	411.0	411.0	411.0	411.0	411.0	411.0	411.0	411.0	411.0	411.0
2.5°	436.0	435.0	435.6	434.1	430.2	426.2	426.2	421.9	417.4	413.0	408.0
5°	463.2	461.8	460.7	455.7	448.3	440.1	438.7	430.2	421.0	411.9	402.9
7.5°	485.8	484.4	481.0	472.1	461.3	449.1	447.4	436.2	424.2	411.5	398.8
10°	501.9	501.0	494.4	483.1	470.5	456.0	453.3	441.8	427.6	411.7	395.8
12.5°	510.9	509.5	501.7	488.1	473.4	458.7	456.0	445.0	428.6	411.2	392.6
15°	507.3	506.6	499.2	485.5	470.7	458.0	455.7	444.5	428.0	409.5	389.7
17.5°	492.0	493.6	487.8	474.3	462.3	453.3	450.8	440.3	424.5	405.9	385.3
20°	471.0	472.8	469.9	456.2	449.2	443.5	442.1	433.6	419.0	400.3	379.9
22.5°	448.6	450.1	450.4	437.7	435.4	433.2	432.1	425.9	414.1	396.8	376.2
25°	433.2	434.9	435.4	424.2	425.4	426.2	425.9	421.8	413.2	396.8	376.7
27.5°	429.1	430.0	429.5	419.1	421.8	425.4	425.7	424.9	416.8	401.4	382.9
30°	443.0	443.5	437.8	422.4	424.9	429.7	430.0	429.5	424.4	413.0	397.1
32.5°	503.1	502.5	483.3	443.5	434.9	436.7	437.4	441.3	441.8	432.3	417.4
35°	594.4	594.1	571.7	503.7	463.5	454.2	455.1	461.3	466.9	460.4	451.9
37.5°	694.8	695.6	682.0	589.6	525.4	486.3	485.4	490.0	500.0	502.3	503.4
40°	806.5	809.8	809.2	688.5	612.0	540.8	531.8	526.4	546.0	558.2	574.1
42.5°	933.9	933.0	933.3	796.8	711.1	626.8	610.3	585.2	607.9	629.2	663.9
45°	1043.4	1047.0	1049.7	912.1	821.9	725.1	708.4	662.7	683.0	714.8	768.1
47.5°	1153.6	1147.3	1152.3	1040.4	945.2	837.4	815.7	754.0	773.1	817.8	898.9
50°	1281.9	1278.9	1256.5	1208.0	1094.5	951.1	922.6	849.4	877.3	937.0	1060.4
52.5°	1397.0	1381.4	1363.8	1339.7	1241.2	1066.3	1030.1	948.7	999.8	1073.8	1260.9
55°	1439.2	1428.6	1449.7	1480.9	1396.3	1183.5	1143.3	1064.4	1138.0	1230.4	1496.7
57.5°	1483.9	1487.6	1534.9	1598.4	1543.3	1308.8	1265.2	1201.6	1289.4	1405.5	1760.3
60°	1506.3	1520.7	1615.3	1734.3	1683.1	1446.0	1404.2	1359.0	1457.7	1599.1	2023.3
62.5°	1510.1	1529.4	1663.5	1782.0	1875.4	1656.4	1608.0	1558.9	1667.8	1812.9	2213.6
65°	1440.3	1469.7	1659.3	1840.6	2050.7	2007.7	1977.1	1891.6	1949.1	2001.2	2246.0
67.5°	1234.9	1267.1	1495.0	1816.5	2191.3	2372.3	2366.6	2240.3	2166.4	2074.0	2005.2
70°	906.3	932.4	1151.4	1552.9	2130.1	2658.5	2668.9	2466.1	2227.0	1919.5	1491.0
71°	732.9	755.4	961.8	1378.7	2010.4	2673.4	2694.8	2476.3	2163.8	1780.0	1248.4
72.5°	456.2	468.7	638.8	1040.4	1731.2	2521.1	2557.4	2347.2	1965.0	1504.5	882.3
75°	172.2	177.1	237.0	458.9	1033.3	1893.9	1937.9	1774.0	1380.4	858.9	369.4
77.5°	92.4	95.0	117.6	190.8	414.1	1085.7	1142.1	1011.9	662.2	300.6	150.9
80°	62.1	63.6	81.2	113.0	190.4	413.4	460.4	406.3	247.9	171.5	107.4
82.5°	40.1	41.1	55.3	74.4	123.0	145.3	165.9	173.4	154.8	123.0	64.9
85°	26.4	27.0	36.6	47.5	76.1	71.7	73.4	96.1	105.6	81.0	33.1
87.5°	15.2	15.7	22.0	24.4	34.2	26.9	29.1	45.6	62.7	52.8	19.0
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°	411.0	411.0	411.0	411.0	411.0	411.0	411.0	411.0	411.0	411.0	411.0
2.5°	405.9	404.0	399.9	397.5	396.4	396.0	395.6	396.4	396.4	396.0	395.1
5°	398.4	395.1	388.3	383.7	381.2	380.5	381.4	382.5	383.1	383.1	382.5
7.5°	393.1	388.1	379.2	372.6	368.8	367.8	370.2	374.2	376.8	378.2	378.5
10°	388.5	381.8	372.0	365.3	362.1	361.7	364.8	369.9	375.6	378.0	378.5
12.5°	384.6	376.8	366.1	360.0	357.6	358.8	363.1	367.8	374.2	377.7	378.0
15°	380.7	372.8	361.5	355.0	354.6	356.3	360.3	364.2	369.1	373.5	373.5
17.5°	376.2	367.8	355.9	349.8	349.8	351.3	354.0	356.1	359.2	363.5	363.3
20°	370.9	362.1	350.0	343.8	342.4	341.5	341.5	342.0	344.7	348.5	349.1
22.5°	366.9	357.9	345.0	337.6	331.5	325.6	323.2	322.2	324.7	328.3	329.1
25°	366.9	357.9	343.5	330.8	316.1	304.7	300.2	298.7	301.2	304.5	306.0
27.5°	372.8	364.0	347.1	324.7	297.6	279.7	274.2	272.9	275.2	277.9	279.3
30°	387.0	378.2	357.4	317.8	277.2	253.7	247.5	246.3	247.5	248.7	250.2
32.5°	410.4	403.1	374.2	311.5	256.6	230.2	222.6	220.9	221.3	221.5	222.8
35°	448.9	445.4	396.6	304.2	237.2	210.9	203.1	199.6	199.3	200.4	201.9
37.5°	507.5	509.5	425.4	293.3	221.1	197.3	189.5	185.9	184.2	186.3	188.1
40°	590.4	595.0	458.9	278.8	207.8	189.3	181.0	177.5	175.1	174.5	175.3
42.5°	698.1	696.7	492.9	260.1	193.4	183.9	175.1	171.5	167.5	162.4	161.2
45°	825.7	806.5	521.3	237.4	177.1	178.8	169.8	164.7	158.6	150.9	150.0
47.5°	976.5	923.4	538.9	213.0	162.0	171.9	163.8	156.0	147.0	142.0	141.4
50°	1158.0	1060.2	551.1	188.1	148.3	163.5	155.1	145.2	136.2	134.8	134.6
52.5°	1373.1	1221.7	566.4	165.7	137.5	152.5	146.8	136.5	129.3	129.8	129.8
55°	1601.7	1388.7	566.8	148.0	128.1	139.7	140.4	132.1	126.5	128.7	129.4
57.5°	1810.3	1534.8	522.3	135.5	119.1	129.6	138.3	133.7	129.4	137.4	138.0
60°	1992.0	1647.1	426.4	125.3	111.7	125.9	142.9	143.3	142.4	163.8	165.3
62.5°	2058.6	1648.3	302.8	116.5	107.7	128.1	152.4	152.9	152.9	172.7	175.6
65°	1965.4	1510.9	201.6	111.3	105.0	132.9	159.9	157.1	150.0	163.8	160.5
67.5°	1637.2	1176.2	147.3	107.9	101.1	133.3	166.6	159.2	147.3	159.0	153.6
70°	1125.1	748.5	123.3	104.8	96.7	127.4	170.1	158.6	143.3	148.3	141.2
71°	905.8	597.3	117.0	103.7	95.0	124.1	170.7	157.7	141.4	144.4	138.0
72.5°	596.7	367.9	109.6	101.1	92.3	118.2	169.5	155.6	138.6	138.9	134.6
75°	235.4	152.5	98.5	95.6	84.7	108.9	164.6	151.4	133.5	128.9	127.2
77.5°	118.9	99.6	86.6	87.8	75.6	99.3	157.7	144.4	126.3	120.3	118.9
80°	86.9	75.6	74.1	76.1	65.7	89.8	148.8	135.0	117.0	123.3	120.7
82.5°	52.8	46.2	58.0	62.9	54.8	80.2	138.6	124.1	105.6	97.1	94.1
85°	25.2	27.0	42.0	46.4	40.6	64.0	126.8	112.0	92.0	79.5	80.8
87.5°	12.2	15.0	24.0	27.8	26.7	47.0	95.6	86.9	72.6	59.7	58.5
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)