

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: P196963

Luminaire Tested: **NAV-AF-01-D-UNV-AFL-8030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196963
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24283)
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-AFL-8030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 80 CRI, 3000K, 1200mA LIGHTSQUARE WITH 16 LEDS EACH AND AUTOMOTIVE FRONTLINE OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4591 lumens
Efficiency: N/A
Efficacy: 68.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 67
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

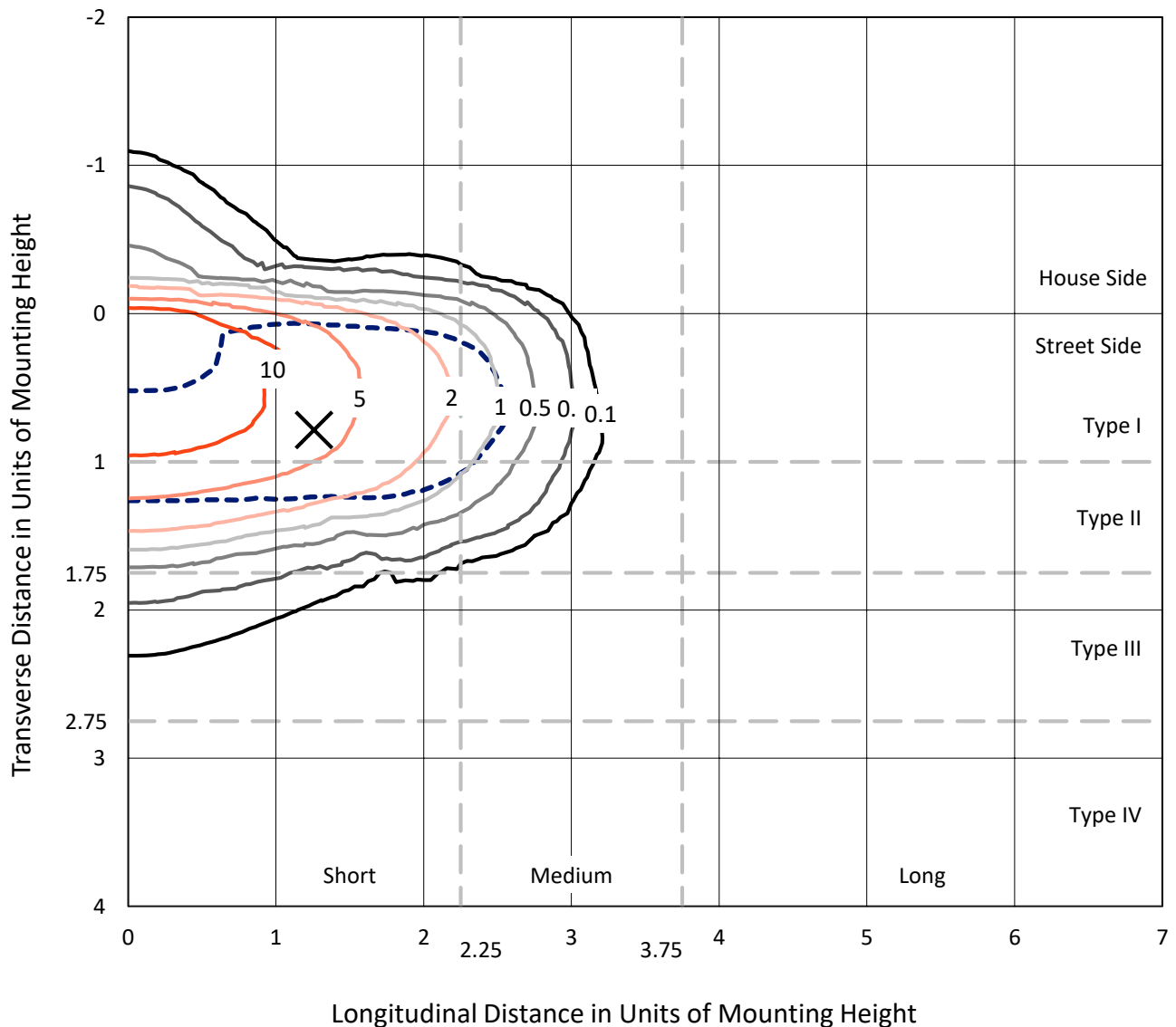


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Iso-Footcandle Lines of Horizontal Illumination

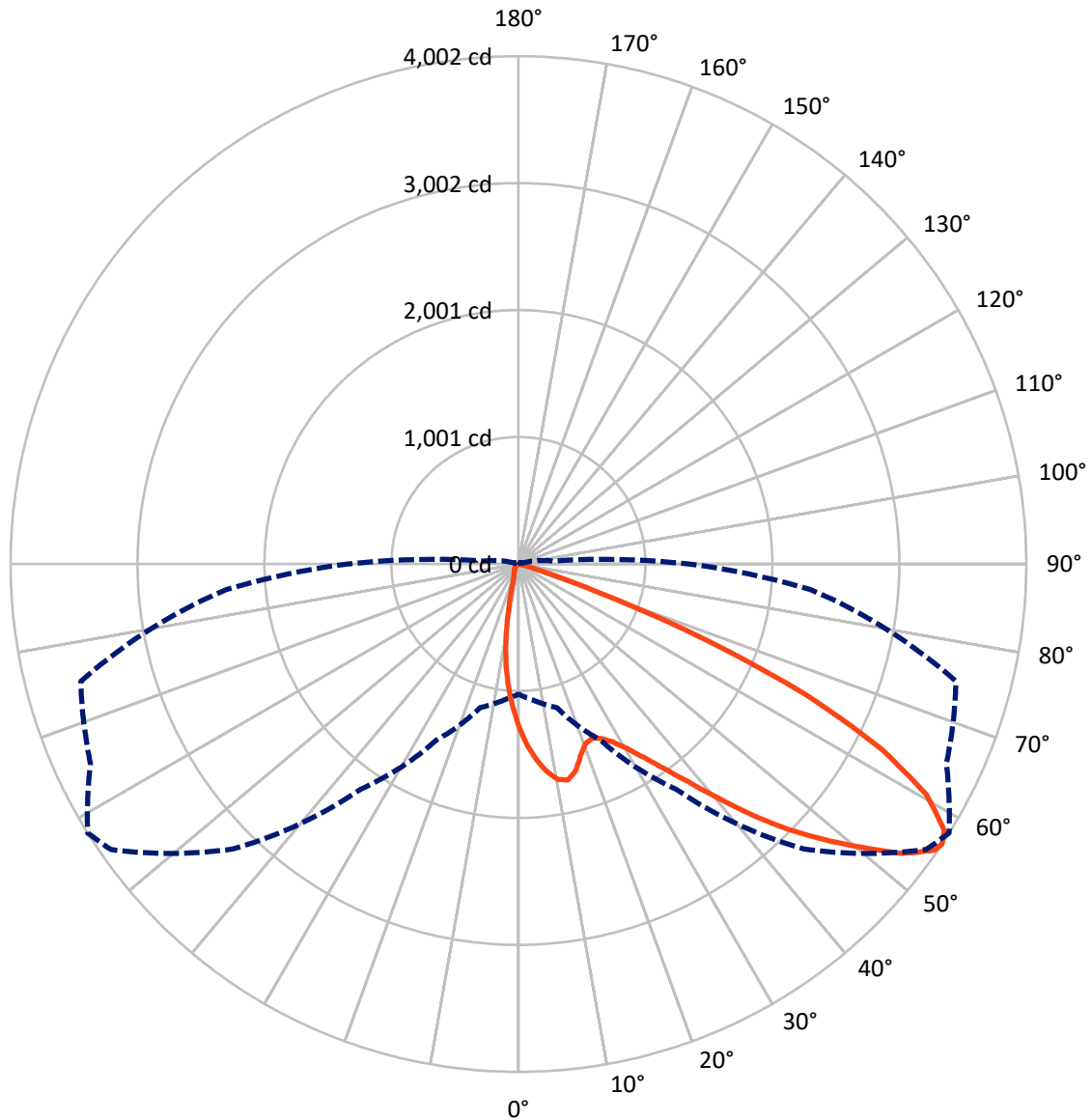
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 16.2 fc
 Type II - Short - Full Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 58-Deg Lateral - - - Horizontal Cone Through 56-Deg Vertical

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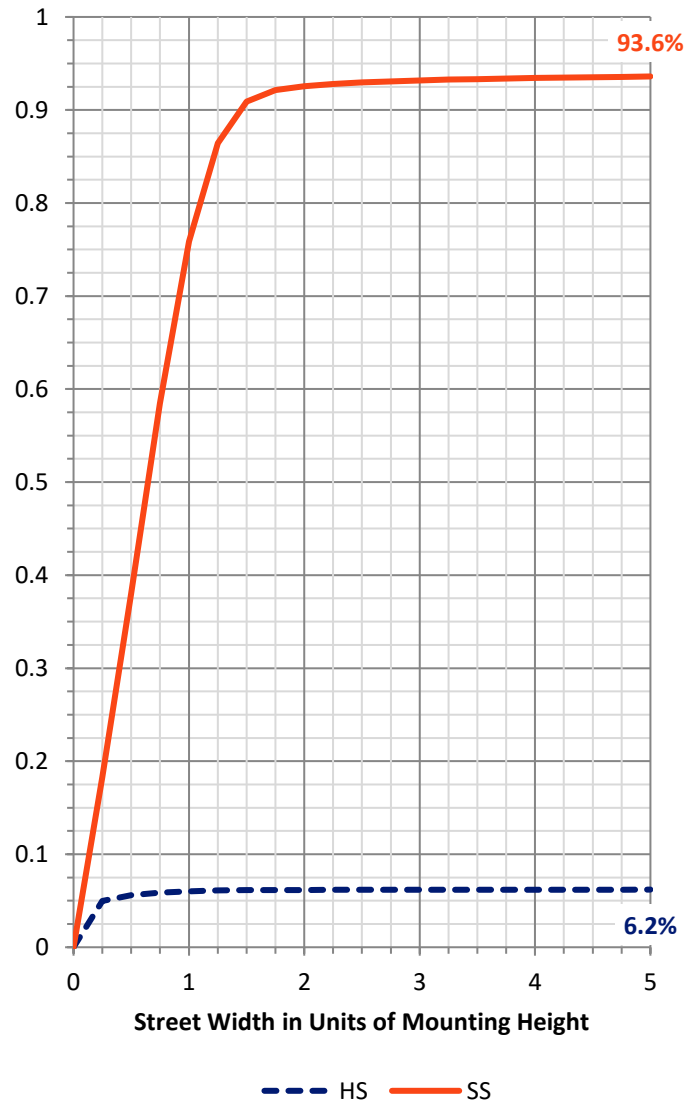
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	286.6	0.0	286.6
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	4304.4	0.0	4304.4
	% Fixture	93.8	0.0	93.8
Total	Lumens	4591.0	0.0	4591.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.9	2.4
10°-20°	258.0	5.6
20°-30°	434.1	9.5
30°-40°	743.4	16.2
40°-50°	1121.9	24.4
50°-60°	1166.1	25.4
60°-70°	654.7	14.3
70°-80°	89.7	2.0
80°-90°	12.2	0.3
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°	4591.0	100.0
0°-180°	4591.0	100.0



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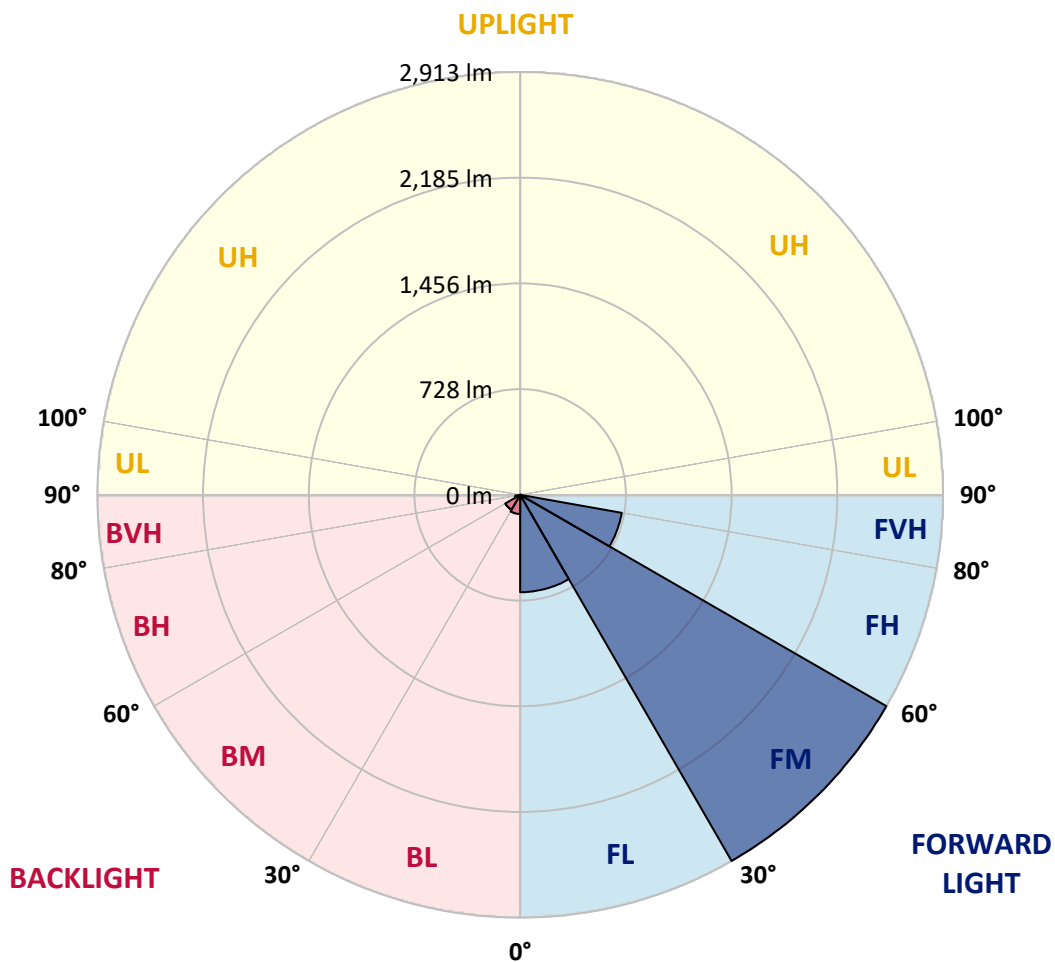
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	670.8	14.6			
FM	(30°-60°)	2912.7	63.4			
FH	(60°-80°)	710.4	15.5			G1/1800
FVH	(80°-90°)	10.5	0.2			G1/100
BL	(0°-30°)	132.2	2.9	B1/500		
BM	(30°-60°)	118.7	2.6	B0/220		
BH	(60°-80°)	34.0	0.7	B0/110		G0/110
BVH	(80°-90°)	1.7	0.0			G0/10
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G1

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	58°	65°	75°	85°
0°	1299.9	1299.9	1299.9	1299.9	1299.9	1299.9	1299.9	1299.9	1299.9	1299.9	1299.9
2.5°	1564.0	1554.5	1544.7	1526.5	1509.7	1483.7	1448.0	1439.3	1411.2	1365.0	1321.9
5°	1698.8	1697.1	1690.4	1675.7	1657.5	1626.0	1585.7	1558.7	1515.3	1442.4	1359.4
7.5°	1618.9	1633.7	1657.8	1692.2	1715.3	1712.1	1681.3	1657.8	1614.7	1515.3	1396.2
10°	1364.7	1367.5	1400.7	1472.9	1587.1	1693.6	1733.8	1727.5	1687.9	1579.0	1428.4
12.5°	1275.0	1276.7	1284.4	1307.6	1381.8	1530.3	1712.8	1745.7	1742.6	1640.0	1462.7
15°	1282.0	1283.0	1285.1	1292.5	1313.5	1388.1	1606.3	1690.1	1777.6	1697.8	1496.4
17.5°	1337.3	1336.6	1330.0	1323.0	1329.6	1354.1	1497.8	1586.0	1770.3	1746.4	1524.0
20°	1445.2	1448.7	1426.3	1395.1	1379.0	1380.1	1444.2	1510.4	1728.9	1784.3	1544.7
22.5°	1596.9	1599.3	1562.6	1508.6	1461.3	1437.5	1455.4	1490.4	1681.3	1819.3	1561.5
25°	1778.0	1778.0	1726.5	1649.8	1576.6	1524.4	1509.0	1522.3	1663.1	1858.9	1578.3
27.5°	1973.4	1980.4	1913.2	1812.6	1716.0	1639.6	1591.3	1588.8	1677.1	1908.6	1597.2
30°	2186.0	2192.3	2112.5	1989.5	1875.0	1777.3	1703.0	1686.9	1730.7	1975.5	1624.9
32.5°	2397.6	2402.9	2314.6	2189.2	2055.7	1940.8	1843.1	1817.5	1827.0	2073.2	1665.5
35°	2666.6	2667.7	2555.9	2406.7	2264.1	2129.3	2005.6	1980.4	1969.9	2196.5	1724.0
37.5°	2880.6	2872.2	2801.5	2660.3	2496.7	2355.9	2210.6	2177.6	2152.4	2369.9	1814.7
40°	2931.1	2931.1	2920.5	2878.2	2748.2	2612.7	2471.9	2422.8	2367.1	2574.1	1936.6
42.5°	2799.7	2808.1	2877.5	2969.6	2970.6	2883.8	2746.1	2704.8	2606.7	2806.7	2069.7
45°	2505.8	2508.3	2674.7	2923.4	3092.2	3141.9	3040.3	2983.2	2847.3	3048.4	2191.6
47.5°	2400.0	2407.8	2478.5	2782.5	3101.3	3351.0	3322.7	3244.2	3070.1	3269.1	2305.5
50°	2237.5	2247.0	2333.5	2575.2	3019.3	3485.2	3592.7	3508.7	3272.9	3453.0	2361.9
52.5°	1848.7	1863.4	1985.7	2300.9	2814.4	3490.8	3840.0	3789.6	3480.6	3551.4	2355.2
55°	1272.2	1283.0	1425.6	1796.2	2401.1	3319.5	3946.5	3981.2	3665.9	3573.5	2323.0
56°	1026.3	1066.9	1171.3	1530.3	2165.7	3173.8	3922.0	4002.2	3720.9	3569.9	2309.0
57.5°	678.5	686.2	800.0	1109.0	1739.1	2857.5	3811.3	3957.3	3791.7	3552.1	2298.8
60°	319.1	322.6	363.6	511.7	941.2	2082.4	3451.6	3693.9	3817.6	3514.6	2298.5
62.5°	208.1	208.8	213.7	244.1	384.9	1134.2	2861.4	3210.2	3602.9	3510.4	2291.8
65°	171.3	173.0	167.1	170.9	201.4	427.7	2018.3	2502.7	3098.8	3411.6	2216.9
67.5°	151.0	151.3	143.3	138.7	147.5	187.7	1016.8	1578.7	2317.7	2898.8	1826.0
70°	137.7	137.3	128.2	117.7	118.0	124.7	331.4	655.7	1282.3	1721.2	1048.4
72.5°	122.2	122.9	117.7	103.0	98.1	88.3	124.7	176.9	436.4	552.7	276.4
75°	107.2	105.8	100.5	91.1	82.0	59.2	62.7	75.3	113.8	112.8	59.5
77.5°	81.3	79.9	82.3	77.8	64.1	41.3	34.3	39.2	51.5	48.0	24.2
80°	62.0	61.3	56.0	66.6	58.5	31.2	23.5	24.2	28.0	25.6	11.9
82.5°	44.8	44.5	42.4	41.0	37.1	22.8	17.9	18.9	21.0	17.9	8.8
85°	17.2	17.2	33.3	28.0	25.6	15.4	12.6	13.7	16.1	13.0	6.0
87.5°	2.8	2.8	22.4	18.6	11.6	7.7	8.1	8.8	9.5	7.7	4.6
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°	1299.9	1299.9	1299.9	1299.9	1299.9	1299.9	1299.9	1299.9	1299.9	1299.9	1299.9
2.5°	1296.3	1272.9	1221.4	1171.7	1128.2	1080.6	1056.4	1028.4	1017.9	996.9	999.0
5°	1309.7	1260.6	1157.3	1048.4	948.5	847.0	774.8	706.8	669.0	631.5	631.5
7.5°	1323.3	1248.4	1088.6	914.6	746.4	572.3	449.0	350.3	295.3	258.5	257.4
10°	1332.8	1232.6	1010.5	759.4	511.4	294.9	177.9	140.1	126.4	120.5	120.1
12.5°	1345.0	1216.8	921.6	576.5	284.1	140.1	111.0	105.1	102.6	101.2	101.2
15°	1355.5	1194.4	813.7	387.7	149.2	105.1	95.6	93.5	93.2	92.8	93.2
17.5°	1358.0	1162.5	684.4	227.0	108.2	91.8	87.6	85.8	85.8	85.5	85.5
20°	1352.4	1120.5	541.5	140.1	93.5	84.4	79.9	77.8	77.4	77.4	77.4
22.5°	1340.8	1066.9	400.4	106.1	85.1	77.8	71.8	69.7	69.7	70.1	70.4
25°	1326.5	1003.5	275.0	91.4	78.8	70.8	64.8	62.7	63.4	64.1	64.4
27.5°	1308.3	927.9	180.0	79.2	70.4	63.7	58.5	57.1	58.5	59.9	60.6
30°	1290.0	844.9	121.9	68.7	60.9	56.0	52.9	52.5	54.6	57.8	58.1
32.5°	1278.1	759.7	92.1	61.6	53.6	49.4	48.0	48.7	51.8	55.3	56.0
35°	1277.1	676.7	78.5	56.0	48.7	44.8	44.1	46.2	49.7	52.5	53.2
37.5°	1293.5	599.0	71.1	51.8	44.8	41.0	39.9	43.8	46.9	49.7	50.4
40°	1326.8	529.3	66.2	48.0	41.7	37.1	36.4	39.6	42.7	45.9	46.9
42.5°	1368.5	464.1	60.6	44.1	38.2	32.9	32.2	34.7	37.8	42.4	43.1
45°	1404.6	403.5	54.6	39.9	34.3	28.4	28.0	30.8	33.3	37.5	38.2
47.5°	1435.1	353.1	49.0	35.4	29.4	25.2	24.9	26.3	27.7	31.5	32.2
50°	1418.9	310.3	43.4	29.1	23.8	21.7	21.4	21.4	23.1	27.0	27.7
52.5°	1379.4	283.7	38.2	24.2	19.6	18.6	17.5	17.9	19.6	21.4	21.7
55°	1347.5	271.1	33.6	21.4	16.5	15.4	14.4	14.0	14.4	13.7	13.0
56°	1339.8	269.7	32.6	20.7	15.8	14.4	13.0	12.3	11.9	10.5	10.2
57.5°	1336.3	269.7	30.8	19.3	14.7	13.0	11.2	9.8	8.4	7.4	7.4
60°	1333.5	271.5	28.7	16.8	12.6	10.5	8.1	6.0	4.9	4.9	4.9
62.5°	1327.5	270.8	26.3	14.0	10.9	8.1	4.9	3.9	3.5	3.9	4.2
65°	1260.6	251.5	23.1	11.2	8.4	5.6	2.8	2.8	3.2	3.9	4.2
67.5°	1015.8	190.5	18.9	8.8	6.0	4.2	2.5	2.5	3.2	3.9	4.2
70°	558.0	100.5	16.1	6.3	4.6	3.5	2.5	2.1	3.2	3.9	4.2
72.5°	136.3	42.0	14.7	4.9	4.2	3.2	2.1	2.1	3.2	3.9	4.2
75°	33.6	31.5	11.9	3.9	3.5	2.8	2.1	2.1	3.2	3.9	4.2
77.5°	15.8	41.7	8.1	3.5	3.2	2.5	2.1	2.1	3.2	3.9	3.9
80°	9.5	31.5	4.9	3.2	2.8	2.5	2.1	2.1	3.2	3.9	4.2
82.5°	5.6	9.1	3.5	3.2	2.8	2.1	2.1	2.1	3.2	3.9	4.2
85°	4.9	4.6	3.5	3.2	2.8	2.5	2.1	2.1	3.5	4.2	4.2
87.5°	3.9	3.5	3.2	2.8	2.8	2.5	2.1	2.1	3.2	3.9	4.2
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)