

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: P196663

Luminaire Tested: **NAV-AF-01-D-UNV-SL4-7030-800**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196663
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24284)
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-SL4-7030-800
Description: NAVION ROADWAY AND AREA LUMINAIRE
(1) 70 CRI, 3000K, 800mA LIGHTSQUARE WITH 16 LEDS EACH AND TYPE IV SPILL
LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4553.9 lumens
Efficiency: N/A
Efficacy: 103.5 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 0.5' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B1 - U0 - G2

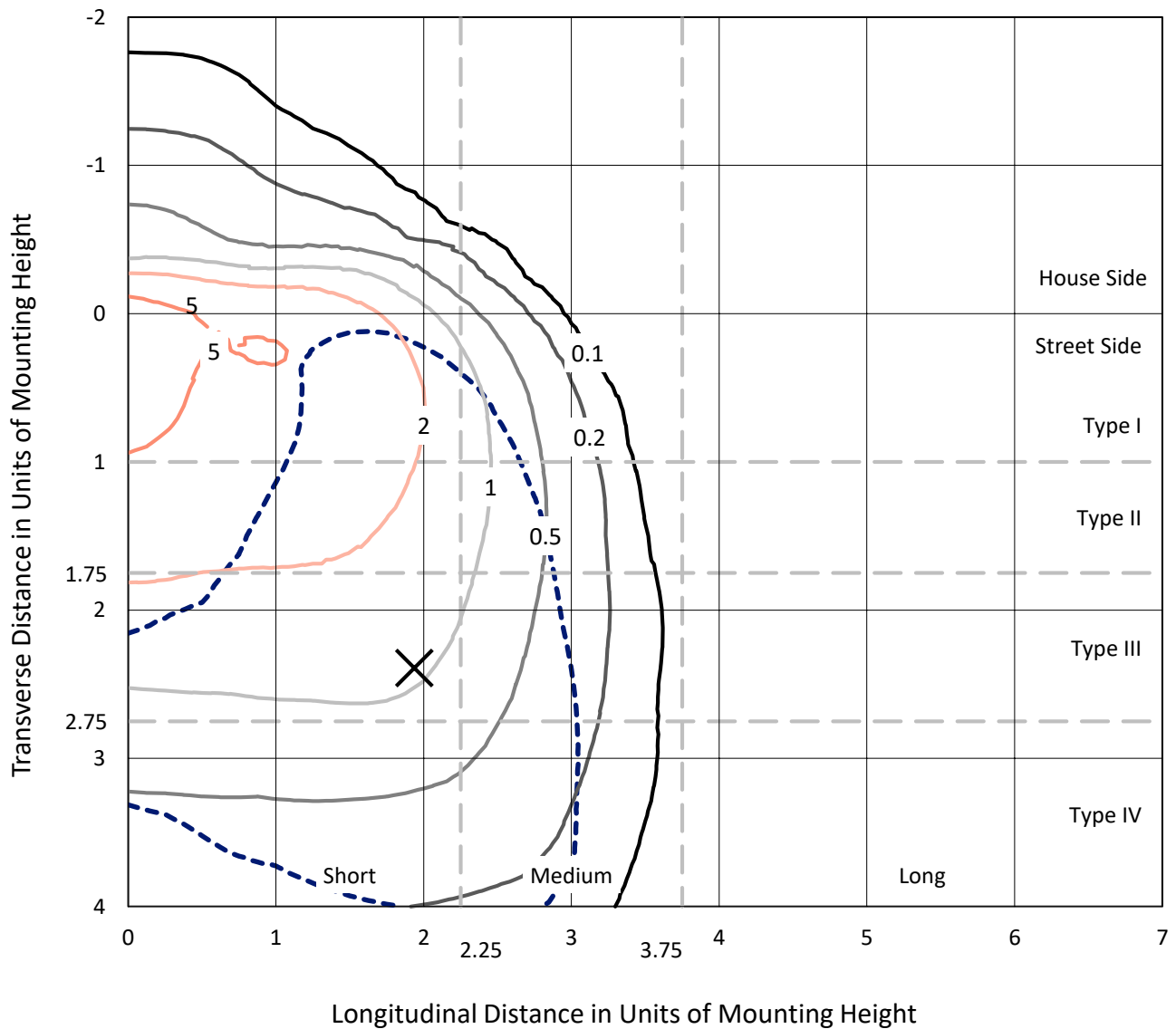
Input Watts (W): 44
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

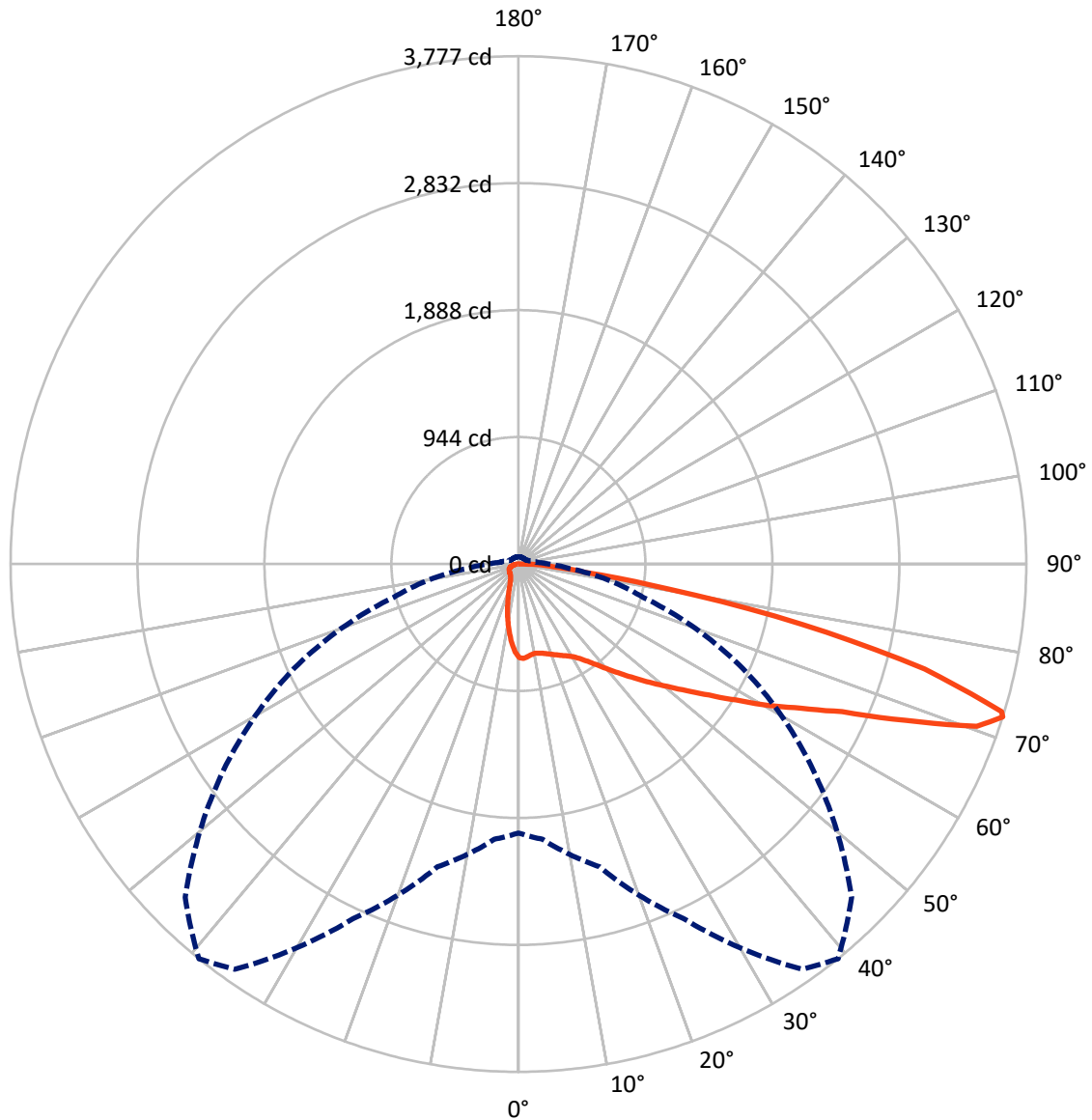


Based on 10 foot mounting height. Maximum calculated value = 7 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 39-Deg Lateral - - - Horizontal Cone Through 72-Deg Vertical

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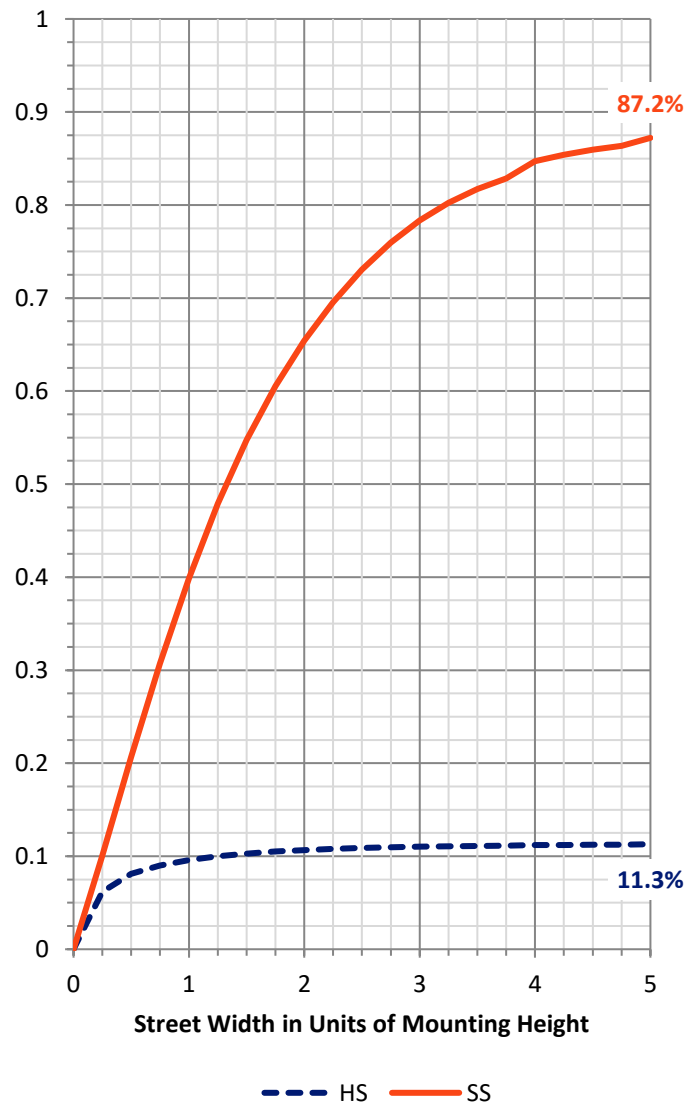
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	522.2	0.0	522.2
	% Fixture	11.5	0.0	11.5
Street Side	Lumens	4031.8	0.0	4031.8
	% Fixture	88.5	0.0	88.5
Total	Lumens	4553.9	0.0	4553.9
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.8	1.3
10°-20°	150.2	3.3
20°-30°	234.0	5.1
30°-40°	360.3	7.9
40°-50°	587.4	12.9
50°-60°	912.8	20.0
60°-70°	1221.8	26.8
70°-80°	878.6	19.3
80°-90°	148.9	3.3
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°	4553.9	100.0
0°-180°	4553.9	100.0



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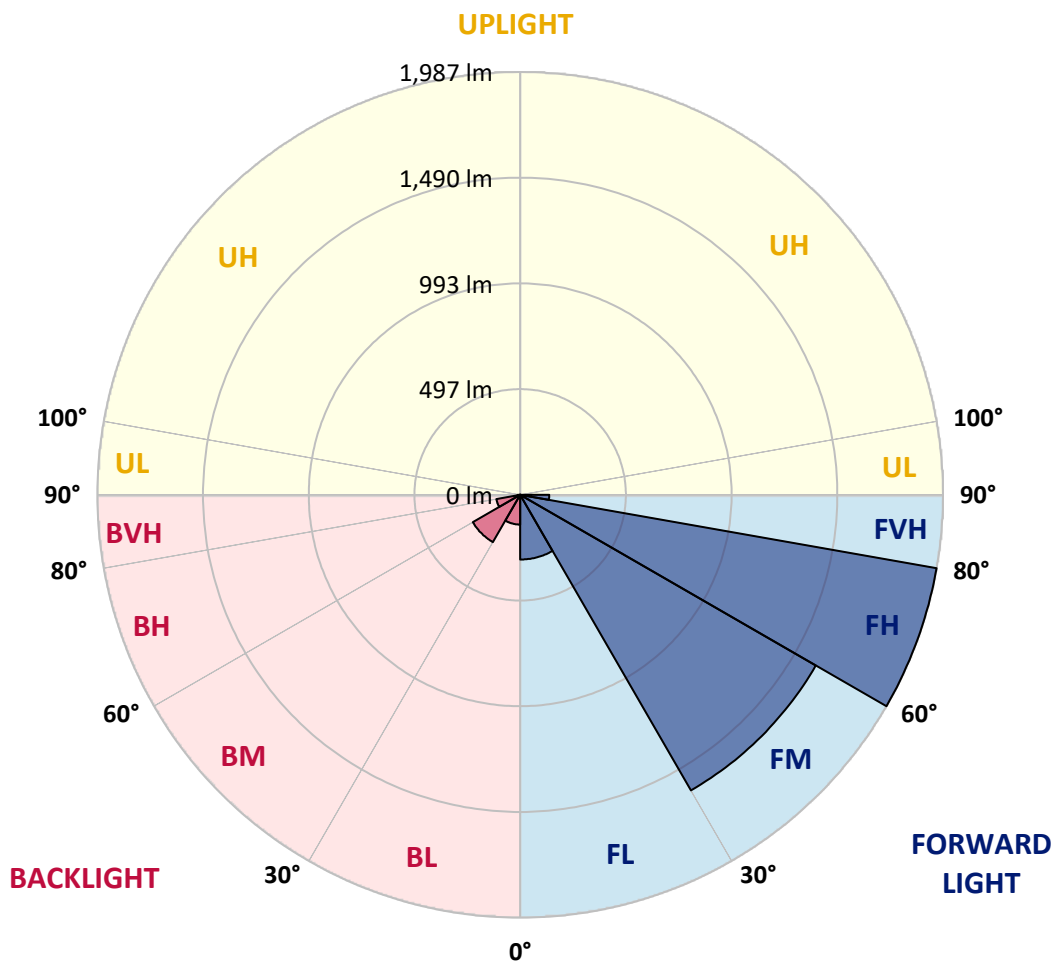
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	304.2	6.7			
FM	(30°-60°)	1604.0	35.2			
FH	(60°-80°)	1986.9	43.6			G2/5000
FVH	(80°-90°)	136.6	3.0			G2/225
BL	(0°-30°)	139.8	3.1	B1/500		
BM	(30°-60°)	256.6	5.6	B1/1000		
BH	(60°-80°)	113.4	2.5	B1/500		G1/500
BVH	(80°-90°)	12.3	0.3			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B1-U0-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	39°	45°	55°	65°	75°	85°
0°	695.4	695.4	695.4	695.4	695.4	695.4	695.4	695.4	695.4	695.4	695.4
2.5°	710.4	710.7	709.8	707.1	704.6	703.4	701.2	697.6	692.7	689.3	686.5
5°	703.7	704.6	704.0	699.5	695.1	692.7	689.3	684.2	677.7	675.0	668.5
7.5°	698.5	699.1	697.3	692.1	683.9	680.8	674.6	667.9	662.1	658.2	650.5
10°	694.9	695.4	693.9	688.8	679.6	675.9	668.5	661.2	653.6	648.7	640.1
12.5°	689.7	690.8	690.8	688.5	682.4	679.9	672.5	664.7	657.5	652.4	641.7
15°	688.8	690.3	693.0	692.7	690.8	689.1	683.2	675.3	669.2	663.1	649.9
17.5°	696.4	699.7	705.3	707.1	705.9	701.9	695.1	687.8	681.1	675.3	659.1
20°	715.6	717.5	725.7	729.5	723.3	717.5	708.6	699.1	693.0	688.5	667.7
22.5°	744.7	747.2	753.9	754.1	741.4	734.3	723.0	711.4	705.6	703.7	679.3
25°	791.1	790.5	792.3	784.7	761.5	753.3	739.4	726.0	722.1	725.7	696.4
27.5°	846.8	845.2	839.4	819.6	784.4	773.8	757.1	745.2	745.2	753.9	719.6
30°	911.0	909.5	890.5	857.1	811.6	799.4	782.0	769.4	775.8	792.3	751.1
32.5°	978.9	973.4	946.7	902.2	850.5	837.0	820.2	807.3	819.6	847.8	796.4
35°	1042.8	1039.7	1007.0	954.1	900.7	889.3	877.7	861.7	881.2	925.1	860.2
37.5°	1108.8	1106.4	1066.3	1010.0	961.7	954.1	944.3	933.3	964.8	1022.2	946.7
40°	1182.4	1177.6	1127.1	1070.8	1032.9	1029.3	1024.1	1021.0	1071.9	1157.4	1056.2
42.5°	1265.9	1256.4	1191.4	1137.8	1110.6	1113.7	1110.9	1123.1	1200.8	1313.3	1186.4
45°	1361.3	1342.4	1255.2	1209.1	1196.5	1208.7	1214.5	1245.8	1353.2	1493.3	1332.0
47.5°	1450.5	1426.1	1325.2	1286.4	1293.4	1314.5	1331.0	1386.1	1520.6	1671.2	1480.5
50°	1532.8	1505.3	1400.1	1366.5	1400.7	1430.6	1464.9	1542.5	1698.4	1854.3	1616.8
52.5°	1593.6	1573.8	1475.0	1453.9	1523.9	1563.6	1618.3	1716.5	1878.1	2029.0	1738.6
55°	1640.6	1630.0	1548.1	1554.2	1663.4	1720.2	1786.5	1899.4	2068.4	2185.4	1836.3
57.5°	1695.1	1687.2	1631.6	1675.3	1836.3	1907.8	1986.2	2111.4	2249.3	2323.3	1913.0
60°	1752.6	1752.6	1724.4	1821.1	2052.8	2134.7	2212.6	2310.2	2429.7	2447.4	1944.3
62.5°	1796.0	1807.2	1817.4	1976.4	2258.2	2360.0	2445.5	2539.1	2616.4	2508.6	1870.8
65°	1858.9	1883.1	1940.0	2155.8	2512.5	2645.8	2761.4	2839.9	2767.7	2460.0	1631.6
67.5°	1967.2	2002.9	2124.0	2423.0	2902.0	3101.7	3213.9	3078.1	2738.1	2153.9	1249.7
70°	2064.7	2115.2	2322.1	2762.0	3408.3	3615.5	3563.8	3022.7	2384.8	1578.9	768.8
72°	1999.9	2054.9	2331.3	2909.7	3678.8	3776.6	3504.3	2678.8	1842.7	963.5	379.0
72.5°	1957.4	2014.5	2301.6	2906.0	3686.1	3756.2	3421.4	2542.3	1672.8	843.2	306.6
75°	1635.2	1684.1	1979.1	2575.6	3248.4	3120.0	2670.0	1645.2	768.8	272.4	157.8
77.5°	1067.8	1105.1	1364.6	1784.4	2275.4	2151.9	1625.1	770.4	288.2	165.4	118.6
80°	536.5	563.1	730.3	938.2	1228.0	1129.8	750.2	372.7	192.9	119.5	93.2
82.5°	373.2	397.7	502.9	479.0	513.3	496.8	352.8	310.9	144.3	75.5	48.9
85°	313.0	338.3	416.1	341.4	279.3	254.7	252.8	293.8	95.4	37.2	41.3
87.5°	273.0	311.5	343.3	249.4	191.6	169.1	186.2	269.4	30.3	20.4	12.6
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°	695.4	695.4	695.4	695.4	695.4	695.4	695.4	695.4	695.4	695.4	695.4
2.5°	682.0	681.1	676.6	669.4	664.3	660.9	654.5	654.3	654.8	649.3	651.4
5°	662.7	659.1	647.2	631.0	617.9	605.3	591.5	586.9	583.0	574.7	575.6
7.5°	642.6	636.1	615.3	588.8	563.4	540.2	517.3	506.0	497.3	486.6	486.6
10°	630.7	620.6	588.8	549.9	509.5	475.8	441.4	420.9	406.0	392.2	391.2
12.5°	630.1	614.8	570.5	516.9	461.6	413.9	367.1	335.7	313.3	297.1	295.6
15°	634.9	613.5	555.1	486.1	416.4	354.3	296.5	256.4	228.1	210.0	208.1
17.5°	639.1	612.0	538.6	453.7	372.3	296.8	232.6	191.1	164.1	149.4	147.9
20°	643.2	608.7	517.6	419.4	323.7	243.0	181.9	148.3	130.6	122.3	121.4
22.5°	649.0	605.7	495.5	380.9	276.1	197.8	150.1	125.9	116.5	112.5	111.9
25°	658.5	605.9	474.1	341.4	232.2	164.8	129.9	114.9	109.7	107.0	107.0
27.5°	672.3	609.5	453.1	301.4	195.3	142.1	118.0	109.2	105.8	103.6	103.0
30°	692.3	616.3	430.7	263.6	166.0	126.5	111.0	105.4	102.7	100.8	100.6
32.5°	721.7	628.2	407.2	229.0	143.6	115.6	105.8	102.3	100.3	98.8	98.5
35°	765.5	649.3	384.3	199.6	127.9	107.6	101.5	98.8	97.6	96.9	96.5
37.5°	829.8	683.2	362.5	176.7	117.4	102.3	97.2	95.7	95.0	95.0	95.0
40°	910.3	727.8	343.0	160.5	111.6	98.5	94.2	93.0	93.0	93.2	93.2
42.5°	1008.5	783.8	326.1	149.4	108.1	95.7	92.0	91.4	91.1	91.1	91.4
45°	1122.5	849.8	315.8	141.0	105.8	94.2	90.4	90.1	88.9	88.4	88.4
47.5°	1237.2	920.5	315.2	136.0	102.7	92.4	88.9	88.9	86.6	85.3	85.5
50°	1344.1	983.8	321.9	134.8	100.8	89.6	87.4	87.7	84.3	82.8	82.5
52.5°	1430.4	1032.1	330.2	136.3	100.8	87.1	84.6	86.2	82.5	80.8	80.5
55°	1497.0	1065.8	333.2	139.8	102.1	85.0	82.3	84.6	82.0	79.4	79.4
57.5°	1544.7	1076.4	320.0	141.3	103.9	84.6	79.8	84.3	82.8	79.8	79.8
60°	1527.2	1014.4	271.2	135.4	103.6	84.0	77.9	85.0	85.9	82.5	82.5
62.5°	1391.2	848.6	217.7	122.3	98.5	82.0	75.8	84.3	88.1	86.9	86.2
65°	1132.6	622.4	168.7	106.6	89.6	77.3	71.2	78.8	83.1	84.3	84.6
67.5°	798.1	394.1	131.1	90.8	78.5	70.6	66.0	69.7	71.2	71.9	73.1
70°	436.5	213.4	104.3	76.4	67.3	63.9	60.5	60.8	60.2	59.6	60.2
72°	219.2	139.5	88.1	66.3	59.6	57.5	55.9	55.0	55.0	54.1	54.4
72.5°	188.6	129.6	85.0	63.9	57.8	55.9	54.7	53.7	53.5	52.9	53.2
75°	125.6	102.7	70.9	53.5	49.1	48.0	48.6	47.6	48.0	47.4	47.6
77.5°	101.5	88.4	60.2	45.3	42.2	40.3	41.6	41.8	42.5	41.8	41.6
80°	85.0	75.2	50.5	37.2	35.2	33.7	34.2	36.4	36.7	34.9	34.5
82.5°	55.0	60.5	39.8	29.1	26.9	26.3	27.9	29.9	30.6	28.1	27.6
85°	46.1	48.6	28.7	19.8	17.7	17.2	20.2	22.3	23.8	21.5	20.8
87.5°	12.9	23.8	14.1	9.5	7.9	7.9	9.9	11.6	13.7	14.1	14.1
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)