

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: P197073

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-8030-800-HSS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P197073  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24263)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-03-D-UNV-SL3-8030-800-HSS  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(3) 80 CRI, 3000K, 800mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III  
SPILL LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10138 lumens  
Efficiency: N/A  
Efficacy: 81.8 lumens/watt  
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')  
IES Classification: Type III - Medium - Non-Cutoff  
BUG Rating: B1 - U0 - G2

Input Watts (W): 124  
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

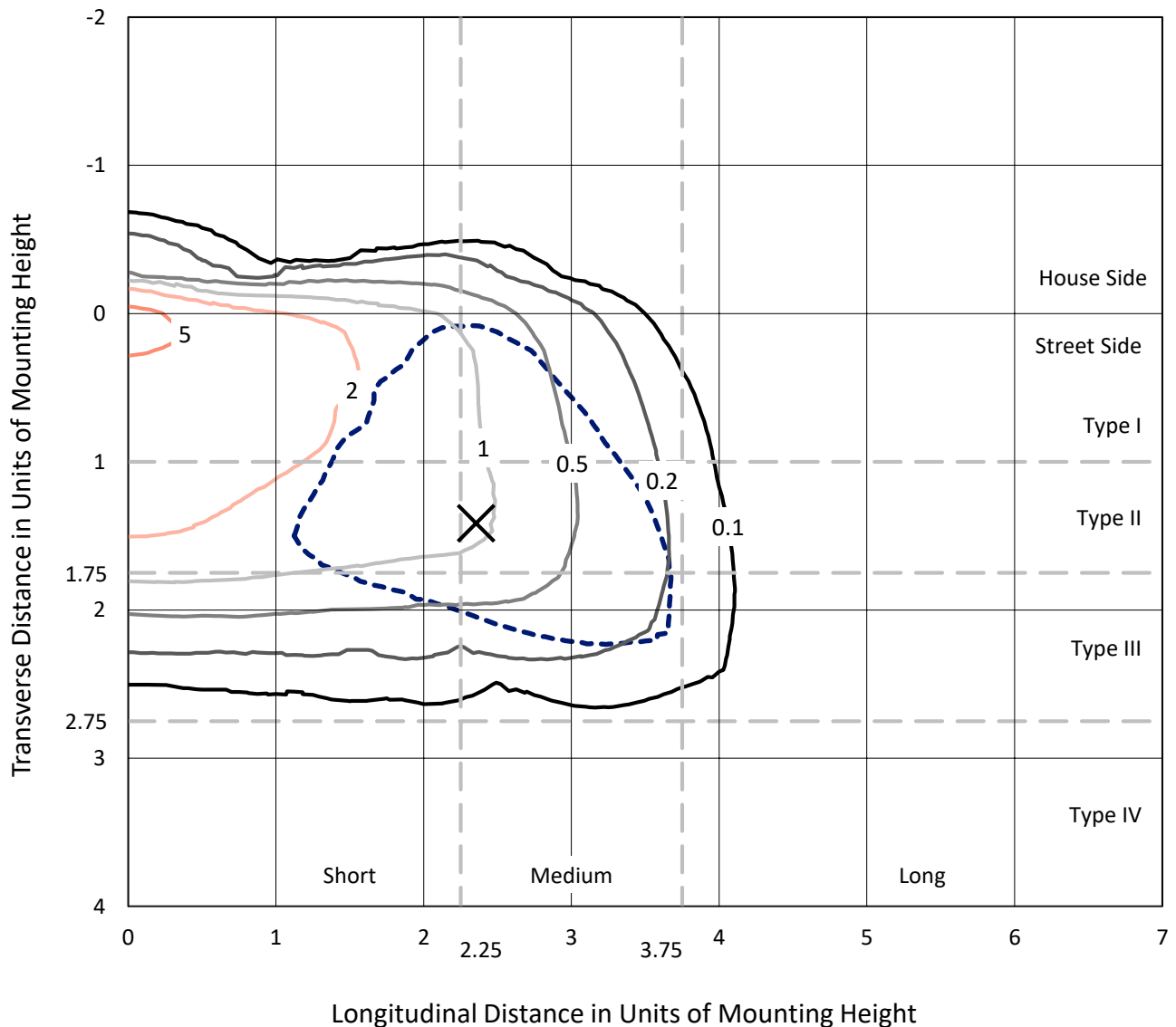


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### Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd  
 - - - 1/2 Max cd

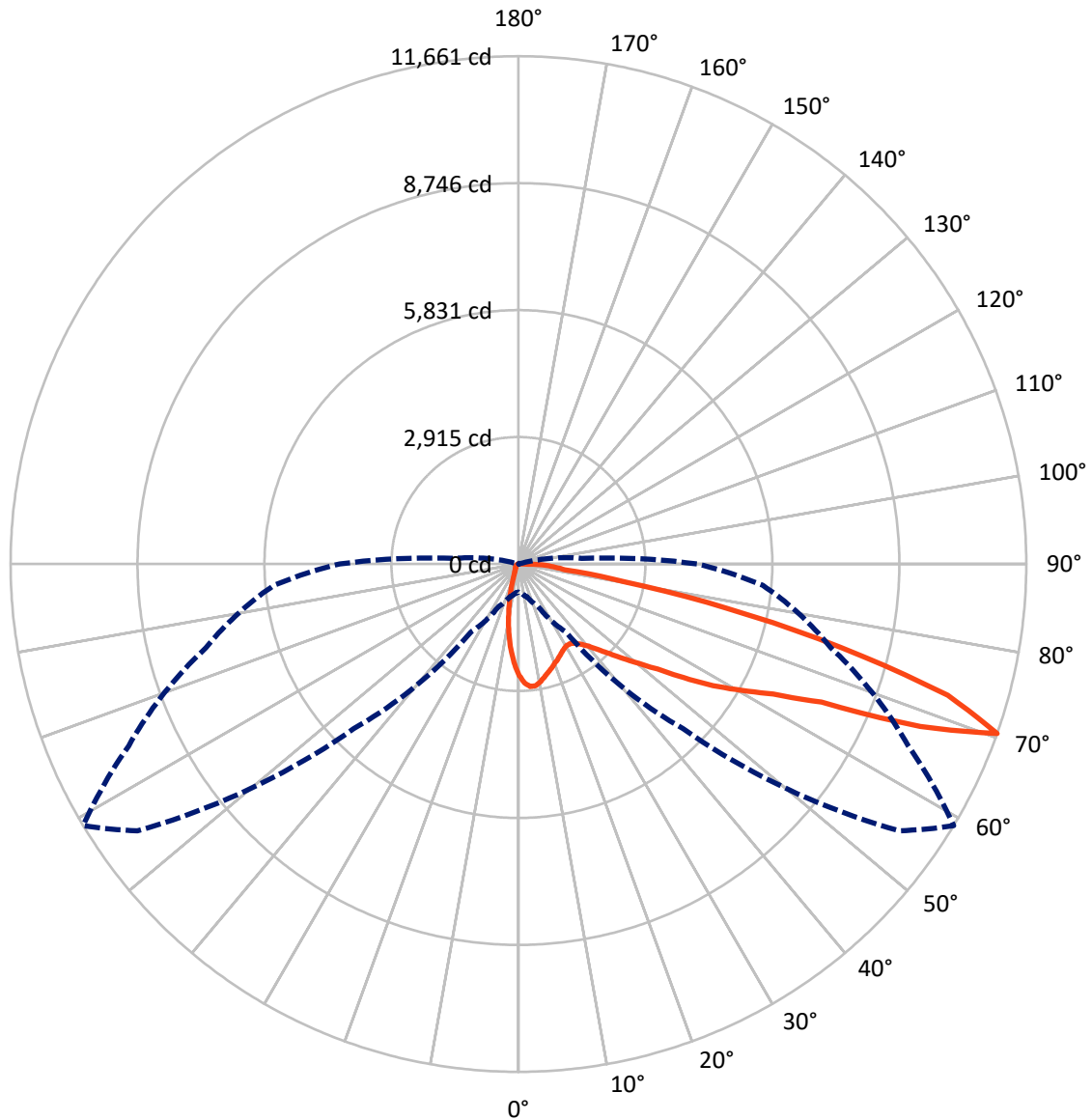


Based on 20 foot mounting height. Maximum calculated value = 6.8 fc  
 Type III - Medium - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 59-Deg Lateral      - - - Horizontal Cone Through 70-Deg Vertical

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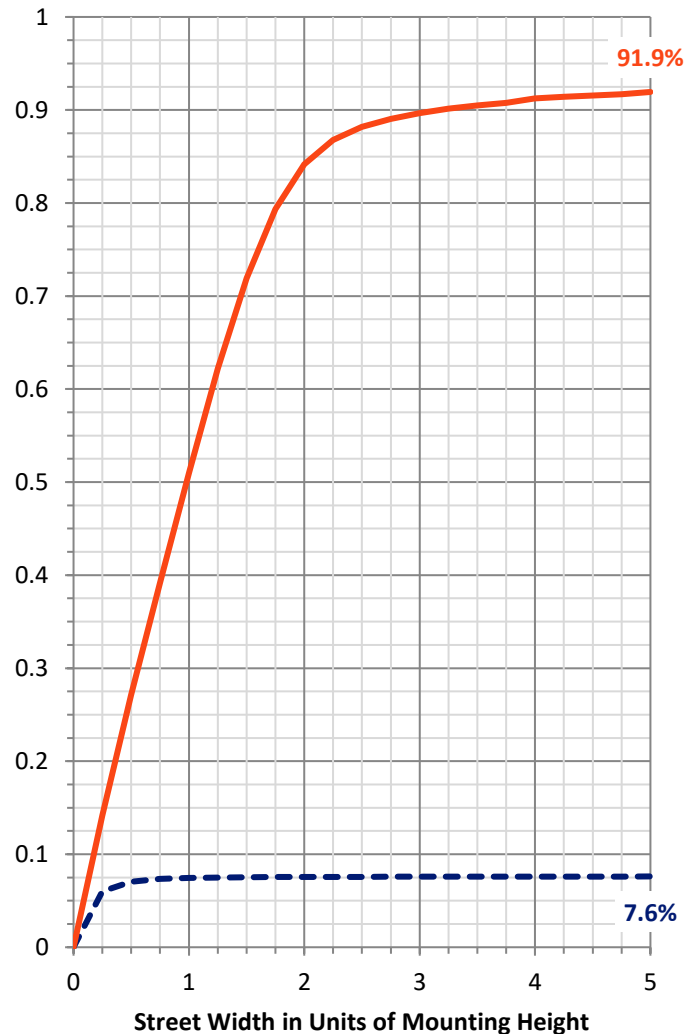
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	779.3	0.0	779.3
	% Fixture	7.7	0.0	7.7
<b>Street Side</b>	Lumens	9358.7	0.0	9358.7
	% Fixture	92.3	0.0	92.3
<b>Total</b>	Lumens	10138.0	0.0	10138.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	210.8	2.1
10°-20°	442.1	4.4
20°-30°	598.5	5.9
30°-40°	863.7	8.5
40°-50°	1434.5	14.1
50°-60°	2194.2	21.6
60°-70°	2729.1	26.9
70°-80°	1508.6	14.9
80°-90°	156.4	1.5
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°	10138.0	100.0
0°-180°	10138.0	100.0



--- HS    — SS

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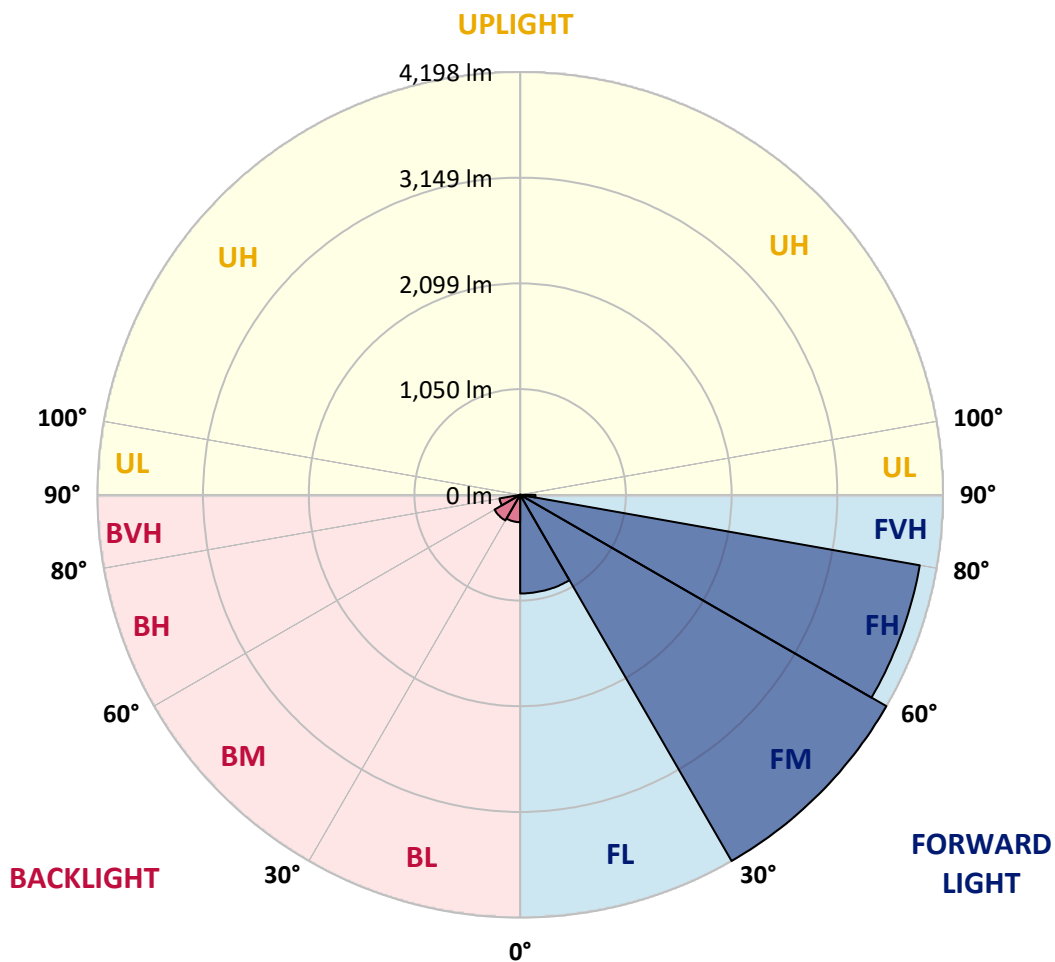
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	979.9	9.7			
FM (30°-60°)	4198.3	41.4			
FH (60°-80°)	4028.6	39.7			G2/5000
FVH (80°-90°)	151.9	1.5			G2/225
BL (0°-30°)	271.6	2.7	B1/500		
BM (30°-60°)	294.2	2.9	B1/1000		
BH (60°-80°)	209.1	2.1	B1/500		G1/500
BVH (80°-90°)	4.5	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-G2**

Type III Medium





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	59°	65°	75°	85°
0°	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5
2.5°	2897.7	2893.2	2874.0	2870.2	2848.8	2806.0	2756.3	2736.4	2695.8	2631.6	2560.5
5°	2945.9	2948.2	2949.7	2941.3	2938.3	2903.1	2848.0	2824.3	2770.0	2664.5	2534.5
7.5°	2765.4	2771.6	2790.7	2799.1	2835.8	2849.6	2838.1	2822.8	2780.0	2655.3	2472.5
10°	2575.0	2586.5	2607.1	2620.9	2666.0	2702.7	2749.4	2753.2	2744.0	2624.7	2402.9
12.5°	2411.3	2422.1	2445.0	2472.5	2518.4	2565.8	2635.4	2659.9	2690.5	2604.8	2353.2
15°	2270.6	2273.7	2295.9	2330.3	2390.7	2455.7	2538.3	2574.2	2633.9	2597.2	2315.0
17.5°	2147.5	2148.3	2162.8	2194.1	2267.6	2353.2	2449.6	2497.0	2572.7	2586.5	2281.3
20°	2066.4	2065.7	2066.4	2083.3	2148.3	2250.0	2367.0	2416.7	2513.8	2573.5	2246.9
22.5°	2038.9	2035.1	2017.5	2011.4	2052.7	2142.1	2282.1	2347.1	2461.1	2569.7	2221.7
25°	2072.5	2070.3	2032.8	1997.6	2001.4	2057.3	2195.7	2275.2	2419.8	2583.4	2215.6
27.5°	2181.1	2176.6	2119.2	2050.4	2006.8	2016.7	2131.4	2214.8	2386.9	2617.1	2224.0
30°	2323.4	2324.2	2263.0	2179.6	2077.1	2020.5	2097.0	2175.8	2364.7	2667.5	2242.3
32.5°	2481.7	2480.9	2437.3	2341.0	2210.2	2090.9	2112.3	2178.9	2367.8	2741.7	2277.5
35°	2645.4	2637.0	2622.4	2537.5	2384.6	2214.0	2181.9	2230.9	2399.9	2839.6	2337.2
37.5°	2834.3	2831.2	2845.7	2756.3	2600.2	2395.3	2304.3	2337.2	2480.9	2984.2	2433.5
40°	3134.8	3118.0	3124.9	3003.3	2843.4	2639.2	2475.6	2484.0	2610.2	3175.4	2585.7
42.5°	3707.6	3639.6	3511.9	3284.0	3111.1	2910.0	2699.7	2685.1	2793.0	3407.1	2786.1
45°	4392.1	4314.1	3992.1	3593.7	3378.8	3200.6	2976.5	2937.5	3017.8	3683.2	3044.6
47.5°	4963.4	4879.3	4452.5	3917.2	3651.0	3500.4	3283.2	3237.3	3287.0	4003.6	3355.1
50°	5158.4	5111.8	4737.0	4186.4	3925.6	3836.9	3667.9	3591.4	3603.6	4349.3	3717.6
52.5°	5068.9	5052.9	4802.0	4370.7	4179.5	4208.6	4089.3	4009.0	3995.2	4727.1	4118.3
55°	4880.0	4872.4	4750.0	4473.2	4403.6	4548.9	4680.4	4610.8	4480.8	5128.6	4449.5
57.5°	4610.1	4639.1	4727.1	4670.5	4678.9	4908.3	5229.6	5265.5	5071.2	5448.3	4695.0
60°	3888.9	3966.9	4369.9	4882.3	5274.7	5506.4	5817.7	5885.0	5571.4	5667.0	4978.7
62.5°	2874.8	2986.5	3560.8	4502.2	5602.8	6643.6	6600.0	6570.2	6048.6	5959.9	5494.9
65°	1688.6	1819.4	2305.0	3518.0	5108.0	7374.8	8060.8	7647.8	6775.9	6568.7	6317.1
67.5°	841.3	842.0	1061.5	1856.9	3774.9	6864.6	10193.0	9954.3	8322.3	7465.8	6641.3
70°	647.0	664.6	785.4	1079.1	1908.9	5346.6	10681.7	11661.3	9876.3	7426.0	5634.9
72.5°	548.3	559.8	699.0	939.1	1427.1	2935.2	9246.9	10307.7	9424.4	6274.2	4153.5
75°	394.6	403.8	618.7	852.0	1313.9	1456.1	6343.1	7644.7	7071.1	4413.5	2285.9
77.5°	97.9	97.1	215.7	691.4	1175.5	1212.9	3639.6	4902.2	4057.1	1807.2	587.3
80°	43.6	42.1	48.9	145.3	1093.6	1144.9	1600.7	2475.6	1556.3	292.9	179.7
82.5°	30.6	29.1	30.6	53.5	365.6	1062.3	967.4	1073.0	569.8	100.2	76.5
85°	9.9	9.2	16.8	45.1	102.5	612.6	943.7	801.5	423.7	42.8	51.2
87.5°	1.5	1.5	6.1	24.5	29.8	204.2	553.7	555.2	190.4	25.2	22.9
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°	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5	2563.5
2.5°	2524.5	2479.4	2415.9	2352.5	2295.1	2236.2	2188.8	2166.6	2156.7	2142.9	2113.1
5°	2466.4	2384.6	2245.4	2108.5	1980.8	1858.4	1753.6	1694.0	1629.7	1626.7	1595.3
7.5°	2373.1	2256.9	2037.4	1824.8	1629.7	1443.1	1282.5	1178.5	1107.4	1063.0	1032.5
10°	2269.1	2120.0	1829.3	1530.3	1264.9	1015.6	809.1	674.5	592.7	551.4	527.7
12.5°	2186.5	1999.1	1624.4	1248.1	915.4	629.4	437.5	339.6	296.0	279.1	271.5
15°	2115.4	1888.2	1432.4	995.7	611.1	361.7	253.1	221.0	214.1	214.1	213.4
17.5°	2043.5	1781.2	1245.8	748.0	384.7	237.1	199.6	195.0	195.8	198.1	198.1
20°	1975.4	1679.5	1066.1	533.1	252.4	189.7	181.3	179.7	182.0	185.1	184.3
22.5°	1920.4	1590.0	897.8	366.3	194.3	172.1	166.7	164.4	166.0	168.3	167.5
25°	1881.4	1513.5	743.4	255.4	169.0	156.8	150.7	147.6	146.1	147.6	146.8
27.5°	1857.6	1449.3	598.1	192.0	151.4	141.5	133.8	127.7	123.9	123.9	122.4
30°	1842.3	1388.8	468.8	159.1	136.9	126.2	115.5	107.1	101.0	99.4	98.7
32.5°	1841.6	1336.8	350.3	140.7	123.1	110.9	97.9	87.2	80.3	78.8	78.0
35°	1860.7	1294.8	257.7	127.0	110.9	96.4	81.8	70.4	64.2	64.2	63.5
37.5°	1910.4	1270.3	195.0	116.2	101.0	84.1	68.8	58.1	52.8	54.3	54.3
40°	2003.0	1265.7	159.1	107.8	92.5	73.4	55.8	47.4	45.1	47.4	47.4
42.5°	2144.4	1290.2	141.5	101.7	84.9	62.7	46.7	40.5	39.8	42.1	42.1
45°	2328.7	1338.4	131.5	96.4	76.5	52.0	39.0	35.2	34.4	37.5	37.5
47.5°	2552.1	1403.4	122.4	90.2	68.1	42.8	32.9	29.8	29.8	32.9	33.7
50°	2816.7	1491.3	113.2	84.1	61.2	35.9	27.5	25.2	26.0	29.1	29.8
52.5°	3121.1	1599.2	104.8	78.8	53.5	29.1	22.9	21.4	22.2	25.2	26.0
55°	3383.4	1693.2	94.8	73.4	43.6	23.7	19.1	18.4	19.1	22.9	22.9
57.5°	3612.0	1783.5	85.7	65.0	34.4	19.1	15.3	15.3	16.8	20.6	21.4
60°	3915.7	1925.7	78.0	55.1	26.0	14.5	12.2	13.0	15.3	18.4	19.1
62.5°	4453.3	2167.4	68.1	45.9	19.1	11.5	9.9	10.7	13.8	17.6	18.4
65°	5126.3	2396.0	56.6	38.2	14.5	8.4	7.6	9.9	13.8	17.6	18.4
67.5°	5057.5	2084.0	44.4	30.6	10.7	6.9	6.1	9.2	13.0	17.6	18.4
70°	4101.5	1460.7	32.9	20.6	8.4	6.1	6.1	9.2	13.0	16.8	17.6
72.5°	2845.0	813.0	25.2	13.8	7.6	6.1	5.4	8.4	12.2	16.8	17.6
75°	1353.7	249.3	19.9	9.9	6.9	5.4	4.6	8.4	12.2	16.8	17.6
77.5°	260.0	63.5	16.1	8.4	6.1	5.4	4.6	7.6	12.2	16.1	16.8
80°	87.9	28.3	13.0	7.6	6.1	5.4	4.6	7.6	11.5	15.3	16.1
82.5°	48.2	16.1	11.5	6.9	6.1	4.6	3.8	6.9	10.7	15.3	16.1
85°	37.5	11.5	9.2	6.9	6.1	4.6	3.8	6.9	10.7	14.5	15.3
87.5°	19.1	8.4	7.6	6.9	6.1	4.6	3.8	6.1	9.9	13.8	15.3
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)