

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: P196604

Luminaire Tested: **NAV-AF-02-D-UNV-SL3-7030-1200-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P196604
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-02-D-UNV-SL3-7030-1200-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 3000K, 1200mA 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: 10970.7 lumens
Efficiency: N/A
Efficacy: 85.0 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B1 - U0 - G2

Input Watts (W): 129
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

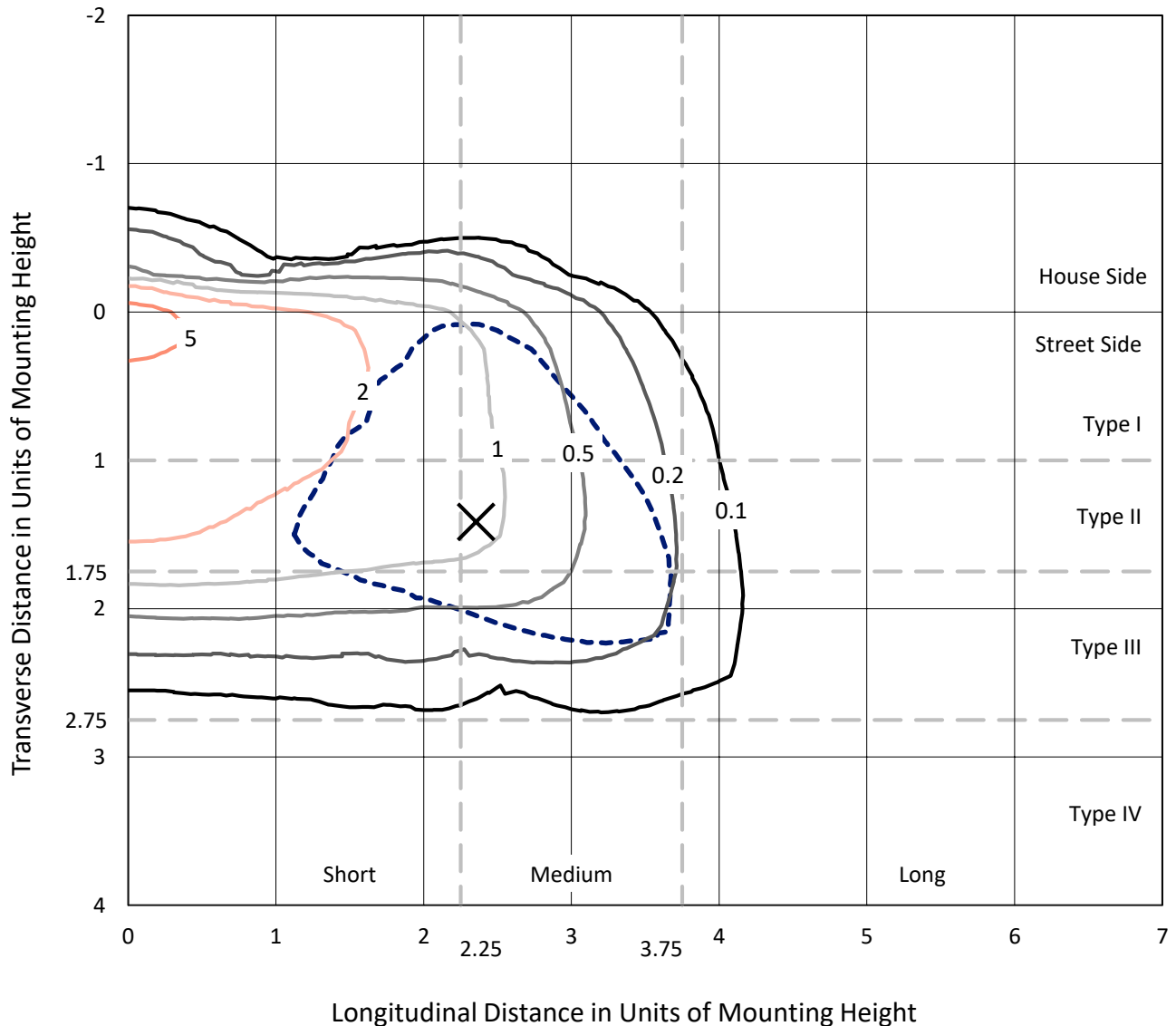


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

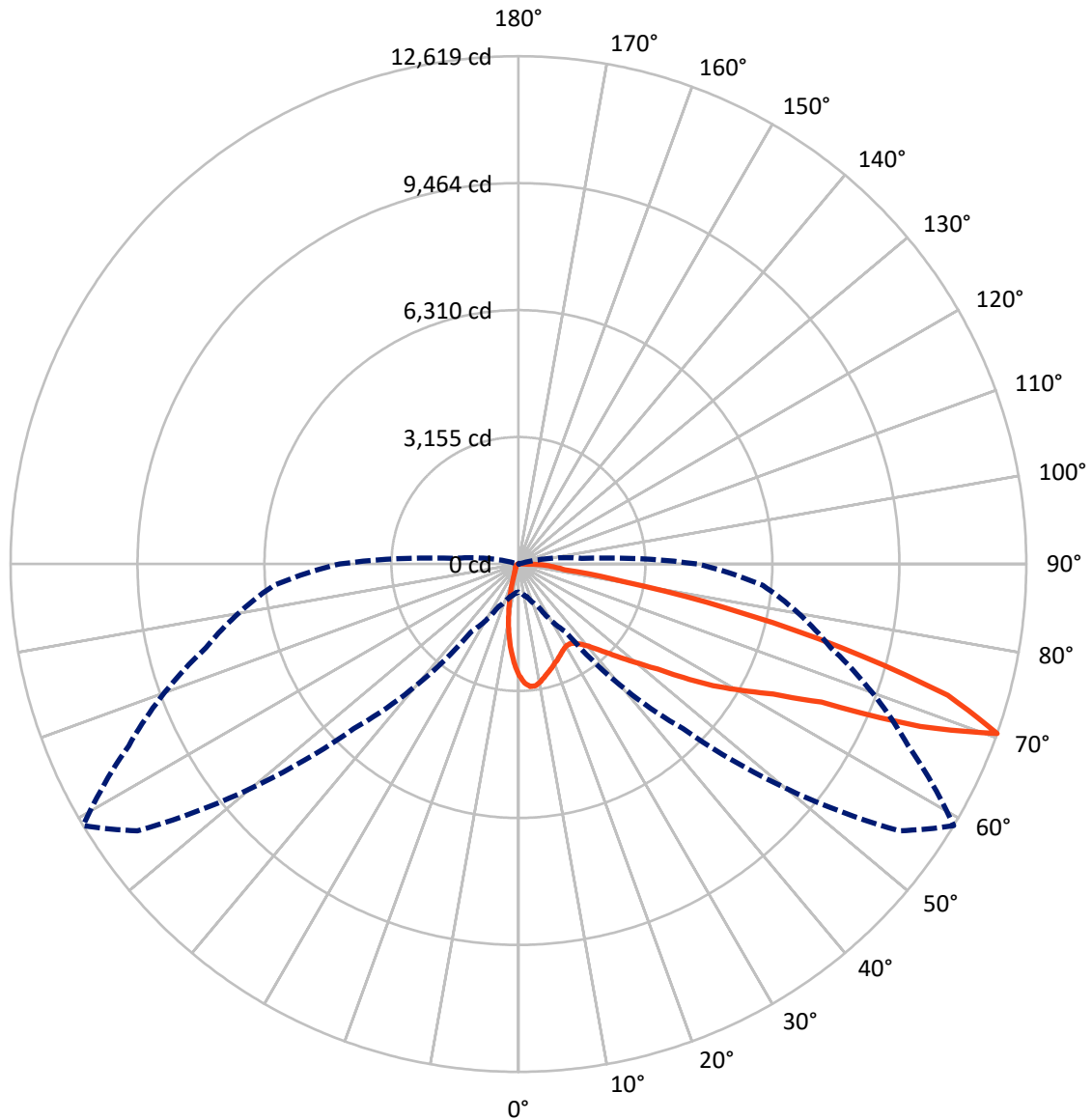


Based on 20 foot mounting height. Maximum calculated value = 7.4 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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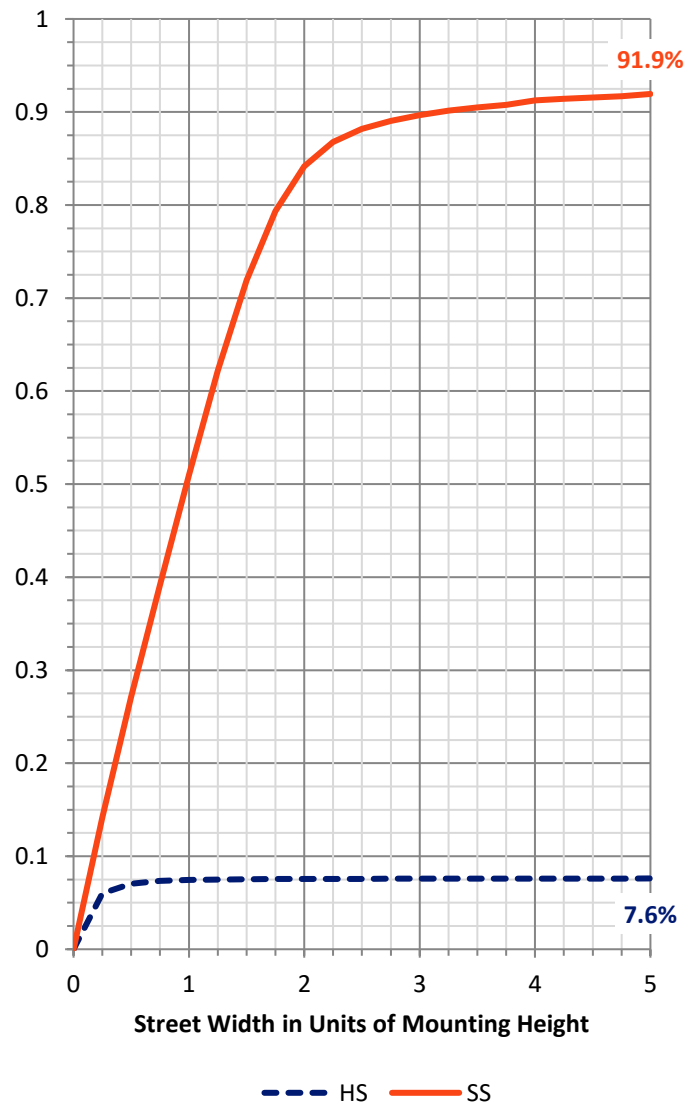
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	843.4	0.0	843.4
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	10127.4	0.0	10127.4
	% Fixture	92.3	0.0	92.3
Total	Lumens	10970.7	0.0	10970.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	228.1	2.1
10°-20°	478.5	4.4
20°-30°	647.7	5.9
30°-40°	934.7	8.5
40°-50°	1552.3	14.1
50°-60°	2374.4	21.6
60°-70°	2953.2	26.9
70°-80°	1632.5	14.9
80°-90°	169.3	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°	10970.7	100.0
0°-180°	10970.7	100.0

Coefficient of Utilization



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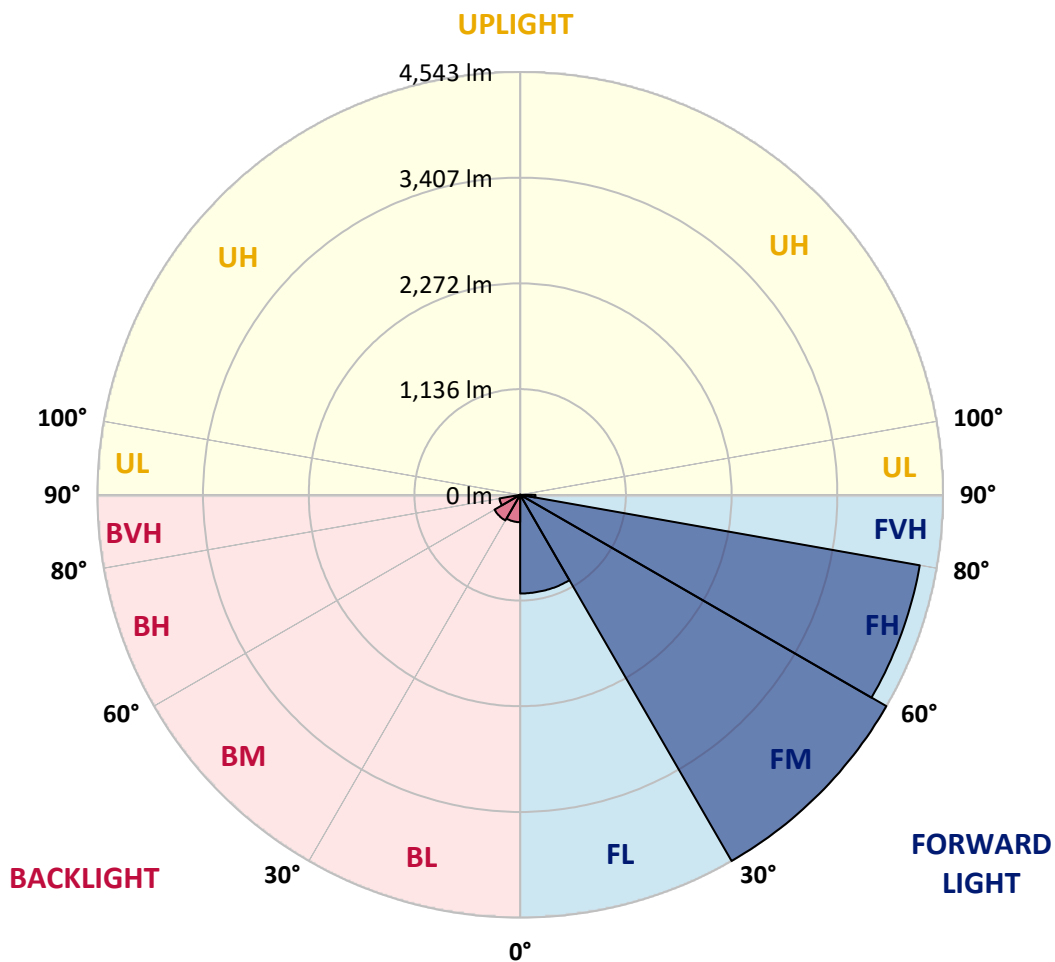
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1060.4	9.7			
FM	(30°-60°)	4543.1	41.4			
FH	(60°-80°)	4359.5	39.7			G2/5000
FVH	(80°-90°)	164.4	1.5			G2/225
BL	(0°-30°)	293.9	2.7	B1/500		
BM	(30°-60°)	318.3	2.9	B1/1000		
BH	(60°-80°)	226.2	2.1	B1/500		G1/500
BVH	(80°-90°)	4.9	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°	2774.1	2774.1	2774.1	2774.1	2774.1	2774.1	2774.1	2774.1	2774.1	2774.1	2774.1
2.5°	3135.7	3130.9	3110.1	3105.9	3082.7	3036.5	2982.7	2961.2	2917.2	2847.8	2770.9
5°	3187.8	3190.4	3192.0	3182.9	3179.7	3141.5	3081.9	3056.3	2997.5	2883.4	2742.6
7.5°	2992.6	2999.1	3019.9	3029.0	3068.8	3083.7	3071.2	3054.7	3008.4	2873.4	2675.6
10°	2786.5	2798.9	2821.3	2836.2	2885.0	2924.8	2975.2	2979.4	2969.4	2840.3	2600.3
12.5°	2609.4	2621.0	2645.8	2675.6	2725.3	2776.6	2851.8	2878.3	2911.4	2818.8	2546.5
15°	2457.1	2460.4	2484.4	2521.7	2587.0	2657.4	2746.8	2785.7	2850.2	2810.4	2505.1
17.5°	2323.8	2324.7	2340.5	2374.4	2453.9	2546.5	2650.7	2702.1	2784.0	2798.9	2468.7
20°	2236.2	2235.3	2236.2	2254.3	2324.7	2434.8	2561.4	2615.2	2720.3	2784.9	2431.4
22.5°	2206.4	2202.2	2183.2	2176.6	2221.2	2318.1	2469.6	2539.8	2663.2	2780.7	2404.1
25°	2242.8	2240.3	2199.7	2161.7	2165.8	2226.2	2376.1	2462.0	2618.5	2795.6	2397.5
27.5°	2360.3	2355.3	2293.3	2218.8	2171.6	2182.4	2306.5	2396.7	2582.9	2832.0	2406.7
30°	2514.3	2515.0	2448.8	2358.7	2247.8	2186.5	2269.4	2354.5	2559.0	2886.6	2426.5
32.5°	2685.6	2684.7	2637.5	2533.2	2391.8	2262.6	2285.8	2357.9	2562.2	2966.9	2464.6
35°	2862.7	2853.6	2837.8	2746.0	2580.4	2395.8	2361.1	2414.1	2597.0	3072.9	2529.2
37.5°	3067.0	3063.7	3079.5	2982.7	2813.9	2592.0	2493.6	2529.2	2684.7	3229.2	2633.3
40°	3392.3	3374.2	3381.6	3249.9	3077.0	2856.0	2678.9	2688.0	2824.6	3436.2	2798.1
42.5°	4012.2	3938.6	3800.4	3553.6	3366.6	3149.0	2921.4	2905.6	3022.3	3687.0	3014.9
45°	4752.9	4668.4	4320.0	3888.9	3656.4	3463.5	3221.0	3178.8	3265.6	3985.7	3294.7
47.5°	5371.0	5280.1	4818.3	4238.9	3951.0	3787.9	3552.9	3503.2	3557.1	4332.4	3630.6
50°	5582.2	5531.7	5126.1	4530.2	4248.0	4152.1	3969.2	3886.4	3899.7	4706.6	4022.9
52.5°	5485.3	5467.9	5196.5	4729.8	4522.8	4554.3	4425.1	4338.2	4323.4	5115.4	4456.5
55°	5280.9	5272.7	5140.2	4840.6	4765.4	4922.5	5064.9	4989.6	4848.9	5549.9	4814.9
57.5°	4988.8	5020.3	5115.4	5054.2	5063.2	5311.5	5659.1	5698.0	5487.8	5895.7	5080.5
60°	4208.3	4292.7	4728.8	5283.3	5707.9	5958.7	6295.5	6368.4	6029.0	6132.5	5387.7
62.5°	3110.9	3231.8	3853.2	4872.1	6063.1	7189.4	7142.2	7109.8	6545.5	6449.5	5946.3
65°	1827.4	1968.9	2494.4	3806.9	5527.5	7980.6	8722.8	8276.0	7332.5	7108.2	6836.0
67.5°	910.3	911.2	1148.8	2009.4	4084.9	7428.5	11030.2	10772.0	9005.9	8078.9	7186.8
70°	700.2	719.2	849.9	1167.8	2065.6	5785.8	11559.1	12619.2	10687.5	8035.9	6097.8
72.5°	593.4	605.9	756.4	1016.3	1544.3	3176.2	10006.5	11154.4	10198.5	6789.6	4494.7
75°	426.9	436.9	669.5	921.9	1421.8	1575.7	6864.1	8272.7	7652.0	4776.0	2473.6
77.5°	106.0	105.1	233.4	748.1	1272.0	1312.5	3938.6	5304.9	4390.4	1955.6	635.6
80°	47.2	45.6	53.0	157.3	1183.5	1238.9	1732.2	2678.9	1684.1	317.0	194.5
82.5°	33.1	31.4	33.1	57.9	395.6	1149.5	1046.9	1161.1	616.6	108.3	82.7
85°	10.7	10.0	18.2	48.8	110.9	662.8	1021.2	867.3	458.5	46.3	55.4
87.5°	1.6	1.6	6.7	26.4	32.2	220.9	599.2	600.8	206.1	27.4	24.8
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°	2774.1	2774.1	2774.1	2774.1	2774.1	2774.1	2774.1	2774.1	2774.1	2774.1	2774.1
2.5°	2731.9	2683.1	2614.3	2545.6	2483.6	2419.9	2368.6	2344.6	2333.8	2318.9	2286.7
5°	2668.9	2580.4	2429.8	2281.7	2143.4	2011.0	1897.8	1833.2	1763.6	1760.2	1726.4
7.5°	2568.0	2442.3	2204.8	1974.7	1763.6	1561.7	1387.9	1275.3	1198.3	1150.4	1117.2
10°	2455.5	2294.1	1979.6	1656.1	1368.8	1099.0	875.6	730.0	641.4	596.7	571.0
12.5°	2366.1	2163.4	1757.8	1350.7	990.7	681.1	473.4	367.4	320.2	302.1	293.8
15°	2289.1	2043.3	1550.1	1077.6	661.2	391.4	273.9	239.2	231.7	231.7	230.9
17.5°	2211.3	1927.5	1348.1	809.4	416.3	256.5	216.0	211.1	211.9	214.3	214.3
20°	2137.6	1817.4	1153.7	576.8	273.1	205.3	196.1	194.5	197.0	200.3	199.4
22.5°	2078.1	1720.7	971.7	396.4	210.3	186.2	180.4	178.0	179.6	182.0	181.3
25°	2035.9	1637.8	804.4	276.4	182.9	169.7	163.1	159.7	158.1	159.7	158.9
27.5°	2010.3	1568.3	647.2	207.7	163.9	153.1	144.9	138.2	134.1	134.1	132.4
30°	1993.7	1502.9	507.3	172.2	148.1	136.6	125.0	115.9	109.3	107.6	106.7
32.5°	1992.9	1446.6	379.0	152.3	133.3	119.9	106.0	94.4	86.9	85.2	84.4
35°	2013.5	1401.1	278.9	137.3	119.9	104.3	88.5	76.2	69.5	69.5	68.8
37.5°	2067.3	1374.6	211.1	125.7	109.3	91.0	74.6	63.0	57.2	58.8	58.8
40°	2167.4	1369.7	172.2	116.7	100.2	79.4	60.4	51.4	48.8	51.4	51.4
42.5°	2320.5	1396.2	153.1	110.1	91.9	67.8	50.5	43.8	43.0	45.6	45.6
45°	2520.1	1448.3	142.4	104.3	82.7	56.3	42.2	38.0	37.2	40.5	40.5
47.5°	2761.6	1518.6	132.4	97.7	73.6	46.3	35.6	32.2	32.2	35.6	36.4
50°	3048.0	1613.8	122.5	91.0	66.2	38.9	29.8	27.4	28.2	31.4	32.2
52.5°	3377.4	1730.4	113.4	85.2	57.9	31.4	24.8	23.2	24.0	27.4	28.2
55°	3661.3	1832.3	102.6	79.4	47.2	25.6	20.6	19.8	20.6	24.8	24.8
57.5°	3908.7	1929.9	92.7	70.4	37.2	20.6	16.5	16.5	18.2	22.4	23.2
60°	4237.3	2083.9	84.4	59.5	28.2	15.8	13.2	14.1	16.5	19.8	20.6
62.5°	4819.1	2345.4	73.6	49.6	20.6	12.4	10.7	11.6	14.9	19.0	19.8
65°	5547.4	2592.8	61.3	41.4	15.8	9.1	8.3	10.7	14.9	19.0	19.8
67.5°	5472.9	2255.2	48.0	33.1	11.6	7.4	6.7	10.0	14.1	19.0	19.8
70°	4438.4	1580.7	35.6	22.4	9.1	6.7	6.7	10.0	14.1	18.2	19.0
72.5°	3078.7	879.7	27.4	14.9	8.3	6.7	5.8	9.1	13.2	18.2	19.0
75°	1464.8	269.8	21.6	10.7	7.4	5.8	4.9	9.1	13.2	18.2	19.0
77.5°	281.4	68.8	17.4	9.1	6.7	5.8	4.9	8.3	13.2	17.4	18.2
80°	95.2	30.6	14.1	8.3	6.7	5.8	4.9	8.3	12.4	16.5	17.4
82.5°	52.1	17.4	12.4	7.4	6.7	4.9	4.2	7.4	11.6	16.5	17.4
85°	40.5	12.4	10.0	7.4	6.7	4.9	4.2	7.4	11.6	15.8	16.5
87.5°	20.6	9.1	8.3	7.4	6.7	4.9	4.2	6.7	10.7	14.9	16.5
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)