

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: P270437

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7027-800-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270437
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-SL3-7027-800-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 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: 10794.3 lumens
Efficiency: N/A
Efficacy: 87.1 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

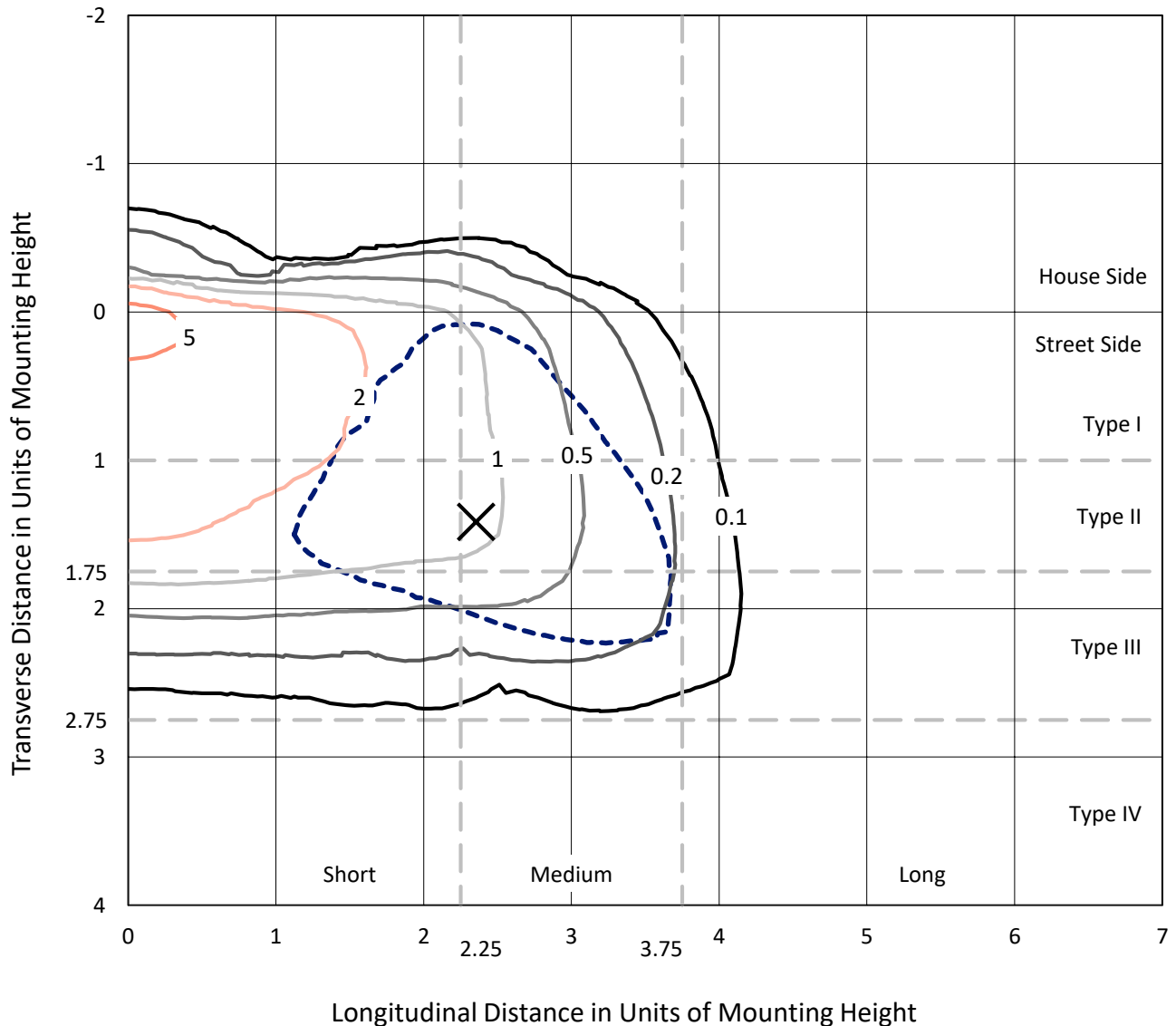


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 - - - 1/2 Max cd

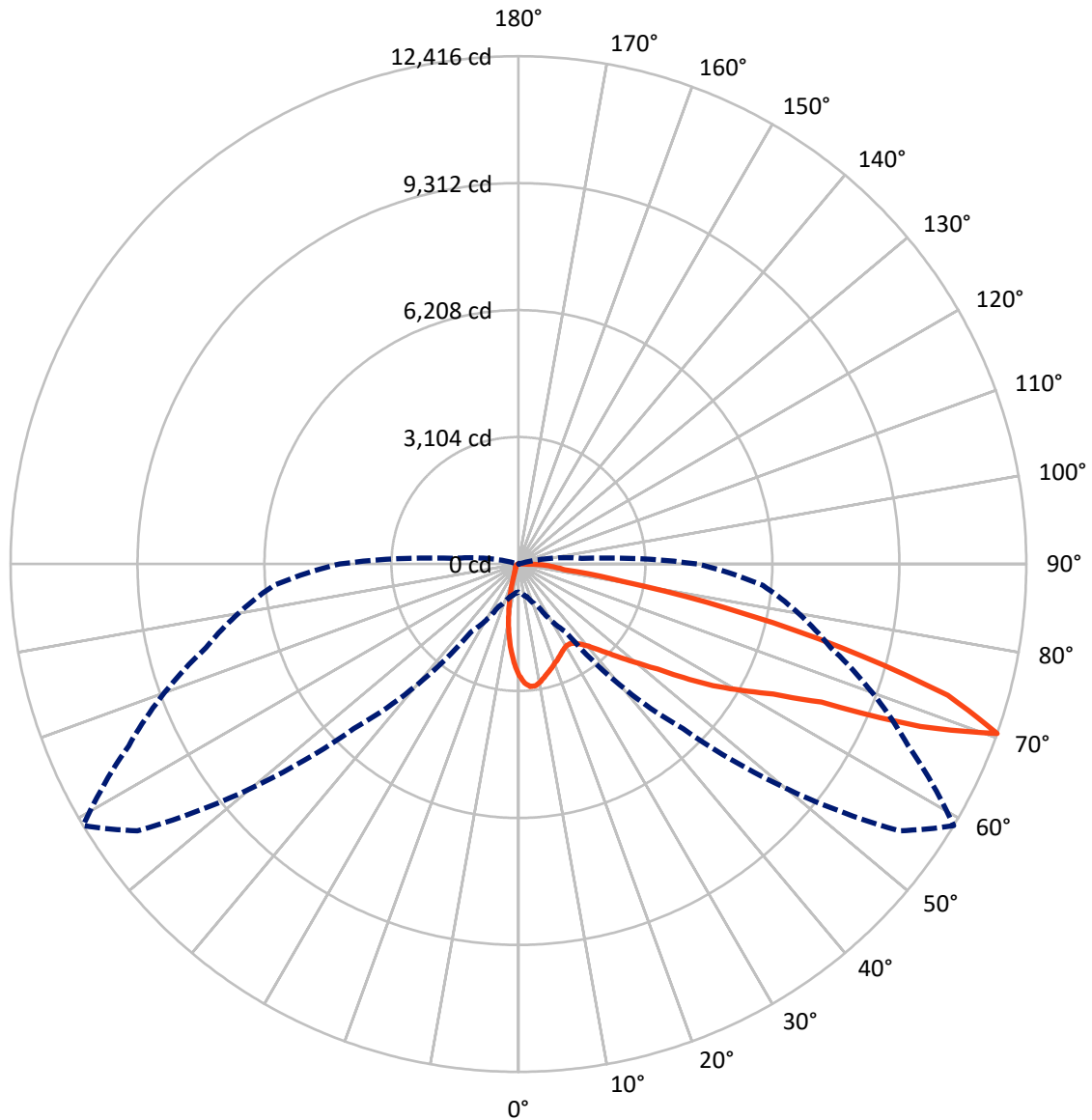


Based on 20 foot mounting height. Maximum calculated value = 7.3 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



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

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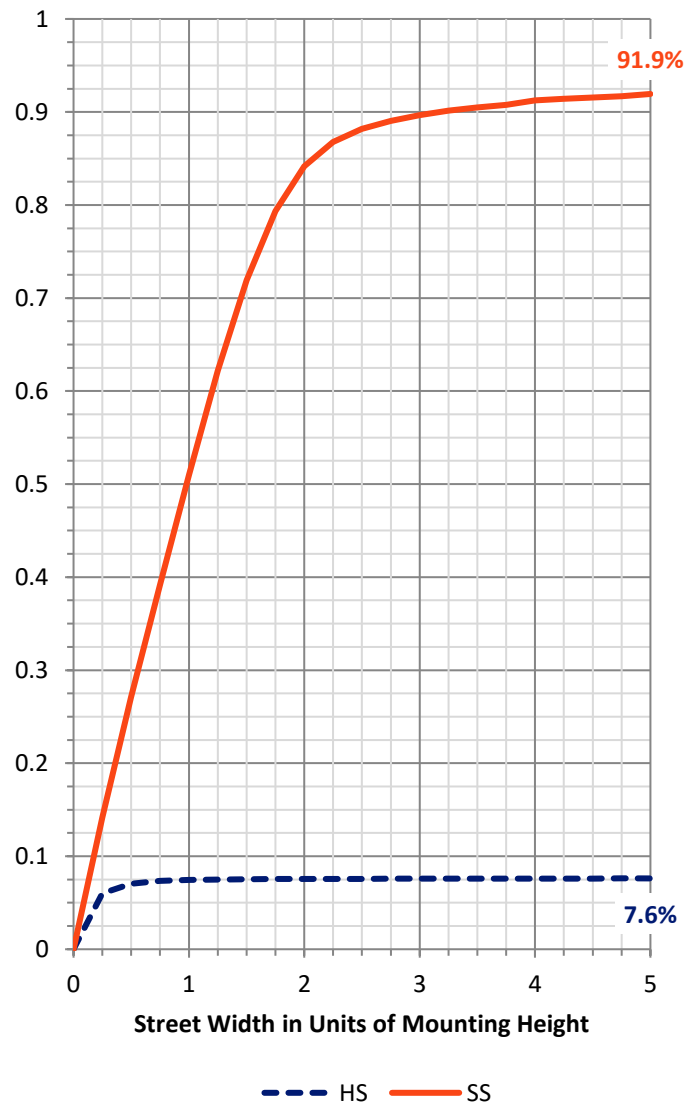
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	829.8	0.0	829.8
	% Fixture	7.7	0.0	7.7
Street Side	Lumens	9964.5	0.0	9964.5
	% Fixture	92.3	0.0	92.3
Total	Lumens	10794.3	0.0	10794.3
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	224.4	2.1
10°-20°	470.8	4.4
20°-30°	637.3	5.9
30°-40°	919.7	8.5
40°-50°	1527.3	14.1
50°-60°	2336.3	21.6
60°-70°	2905.8	26.9
70°-80°	1606.3	14.9
80°-90°	166.6	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°	10794.3	100.0
0°-180°	10794.3	100.0



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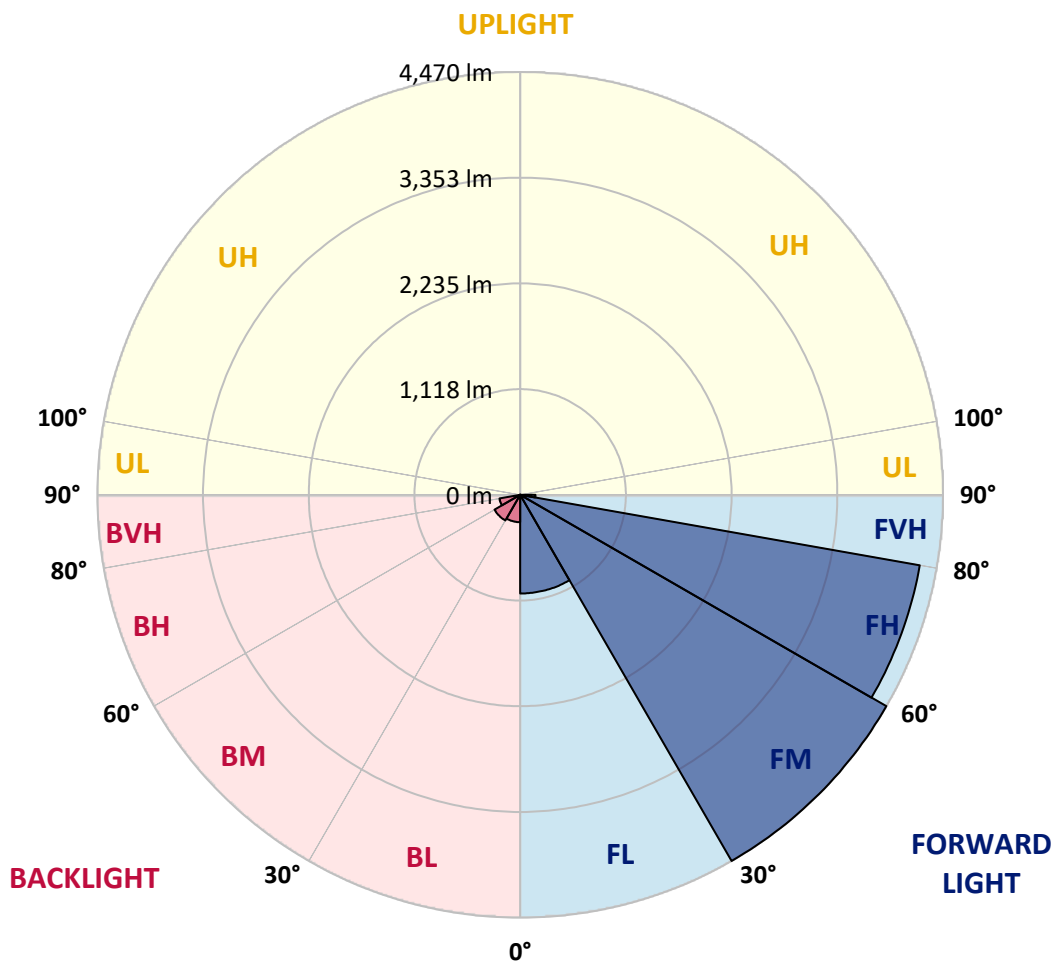
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1043.3	9.7			
FM	(30°-60°)	4470.0	41.4			
FH	(60°-80°)	4289.4	39.7			G2/5000
FVH	(80°-90°)	161.7	1.5			G2/225
BL	(0°-30°)	289.2	2.7	B1/500		
BM	(30°-60°)	313.2	2.9	B1/1000		
BH	(60°-80°)	222.6	2.1	B1/500		G1/500
BVH	(80°-90°)	4.8	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°	2729.5	2729.5	2729.5	2729.5	2729.5	2729.5	2729.5	2729.5	2729.5	2729.5	2729.5
2.5°	3085.4	3080.5	3060.0	3056.0	3033.2	2987.7	2934.8	2913.6	2870.4	2802.0	2726.3
5°	3136.6	3139.0	3140.7	3131.8	3128.4	3091.1	3032.4	3007.2	2949.3	2836.9	2698.6
7.5°	2944.5	2951.0	2971.4	2980.2	3019.5	3034.0	3021.8	3005.5	2959.9	2827.2	2632.7
10°	2741.6	2753.9	2775.9	2790.6	2838.6	2877.7	2927.3	2931.4	2921.6	2794.6	2558.6
12.5°	2567.4	2578.9	2603.3	2632.7	2681.4	2731.9	2806.0	2832.0	2864.7	2773.4	2505.6
15°	2417.6	2420.9	2444.5	2481.2	2545.4	2614.6	2702.6	2740.9	2804.4	2765.3	2464.9
17.5°	2286.5	2287.4	2302.8	2336.2	2414.4	2505.6	2608.1	2658.7	2739.3	2753.9	2429.0
20°	2200.2	2199.4	2200.2	2218.2	2287.4	2395.6	2520.3	2573.1	2676.6	2740.1	2392.4
22.5°	2170.9	2166.8	2148.0	2141.6	2185.5	2280.8	2429.8	2499.1	2620.4	2736.0	2365.4
25°	2206.7	2204.4	2164.3	2126.9	2131.0	2190.4	2337.7	2422.5	2576.3	2750.7	2358.9
27.5°	2322.4	2317.4	2256.5	2183.2	2136.7	2147.3	2269.4	2358.2	2541.3	2786.5	2367.9
30°	2473.8	2474.7	2409.4	2320.7	2211.5	2151.4	2232.7	2316.6	2517.8	2840.3	2387.4
32.5°	2642.4	2641.6	2595.2	2492.5	2353.3	2226.3	2249.0	2320.0	2521.1	2919.2	2425.0
35°	2816.6	2807.7	2792.2	2701.8	2539.0	2357.3	2323.1	2375.3	2555.3	3023.4	2488.5
37.5°	3017.8	3014.5	3030.0	2934.8	2768.5	2550.4	2453.5	2488.5	2641.6	3177.3	2591.2
40°	3337.7	3319.9	3327.2	3197.6	3027.6	2810.1	2635.8	2644.8	2779.1	3381.0	2753.1
42.5°	3947.7	3875.2	3739.3	3496.6	3312.5	3098.3	2874.4	2858.9	2973.7	3627.6	2966.5
45°	4676.4	4593.5	4250.6	3826.3	3597.5	3407.8	3169.2	3127.7	3213.1	3921.6	3241.8
47.5°	5284.8	5195.2	4740.7	4170.8	3887.4	3727.0	3495.8	3446.8	3499.8	4262.7	3572.3
50°	5492.3	5442.7	5043.8	4457.4	4179.8	4085.3	3905.3	3823.9	3836.9	4630.9	3958.2
52.5°	5397.0	5379.9	5113.0	4653.7	4450.2	4481.0	4354.1	4268.4	4253.8	5033.2	4384.9
55°	5195.9	5187.8	5057.5	4762.8	4688.7	4843.4	4983.4	4909.3	4770.9	5460.6	4737.5
57.5°	4908.6	4939.5	5033.2	4972.8	4981.8	5226.1	5568.1	5606.4	5399.5	5801.1	4998.9
60°	4140.6	4223.7	4652.9	5198.4	5616.2	5862.9	6194.4	6265.9	5932.0	6033.8	5301.0
62.5°	3061.0	3179.8	3791.3	4793.7	5965.5	7073.8	7027.4	6995.6	6440.2	6345.7	5850.8
65°	1798.0	1937.1	2454.3	3745.8	5438.7	7852.2	8582.5	8142.9	7214.6	6993.9	6726.0
67.5°	895.7	896.5	1130.2	1977.1	4019.3	7309.1	10852.9	10598.8	8861.2	7949.1	7071.3
70°	688.9	707.7	836.3	1148.9	2032.4	5692.6	11373.3	12416.4	10515.6	7906.7	5999.7
72.5°	583.9	596.0	744.2	1000.0	1519.5	3125.3	9845.6	10975.0	10034.4	6680.4	4422.4
75°	420.1	430.0	658.7	907.1	1398.9	1550.5	6753.6	8139.6	7529.0	4699.3	2433.9
77.5°	104.3	103.5	229.6	736.2	1251.6	1291.5	3875.2	5219.6	4319.8	1924.2	625.4
80°	46.4	44.7	52.1	154.7	1164.5	1219.0	1704.4	2635.8	1657.1	311.9	191.3
82.5°	32.6	30.9	32.6	57.0	389.2	1131.1	1030.0	1142.5	606.6	106.7	81.4
85°	10.6	9.8	18.0	48.0	109.1	652.3	1004.8	853.4	451.0	45.6	54.5
87.5°	1.6	1.6	6.5	26.1	31.8	217.4	589.6	591.2	202.7	26.9	24.4
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°	2729.5	2729.5	2729.5	2729.5	2729.5	2729.5	2729.5	2729.5	2729.5	2729.5	2729.5
2.5°	2688.0	2639.8	2572.3	2504.7	2443.7	2381.0	2330.6	2306.8	2296.2	2281.7	2249.8
5°	2626.0	2539.0	2390.7	2245.0	2109.0	1978.7	1867.1	1803.6	1735.3	1732.0	1698.7
7.5°	2526.8	2403.0	2169.2	1942.9	1735.3	1536.6	1365.6	1254.8	1179.0	1131.9	1099.3
10°	2416.0	2257.3	1947.7	1629.3	1346.7	1081.4	861.6	718.3	631.1	587.1	561.9
12.5°	2328.0	2128.5	1729.5	1329.0	974.8	670.1	465.9	361.6	315.1	297.2	289.1
15°	2252.3	2010.4	1525.1	1060.2	650.6	385.2	269.5	235.4	228.0	228.0	227.2
17.5°	2175.8	1896.5	1326.4	796.3	409.5	252.5	212.4	207.7	208.4	210.9	210.9
20°	2103.3	1788.2	1135.1	567.5	268.8	201.9	193.0	191.3	193.9	197.1	196.2
22.5°	2044.7	1692.9	955.9	390.0	206.8	183.3	177.5	175.1	176.6	179.1	178.4
25°	2003.1	1611.5	791.4	271.9	180.0	166.9	160.3	157.2	155.5	157.2	156.3
27.5°	1977.9	1543.1	636.8	204.4	161.2	150.6	142.6	136.1	132.0	132.0	130.3
30°	1961.5	1478.8	499.2	169.4	145.7	134.3	123.0	114.1	107.4	105.9	105.0
32.5°	1960.8	1423.4	372.9	149.8	131.2	118.0	104.3	92.9	85.5	83.9	83.1
35°	1981.1	1378.5	274.4	135.1	118.0	102.5	87.1	74.9	68.5	68.5	67.6
37.5°	2034.1	1352.6	207.7	123.7	107.4	89.7	73.3	62.0	56.1	57.9	57.9
40°	2132.7	1347.6	169.4	114.9	98.5	78.2	59.5	50.5	48.0	50.5	50.5
42.5°	2283.2	1373.7	150.6	108.2	90.4	66.7	49.6	43.2	42.3	44.7	44.7
45°	2479.5	1425.0	140.0	102.5	81.4	55.3	41.5	37.5	36.7	40.0	40.0
47.5°	2717.4	1494.2	130.3	96.1	72.5	45.6	35.0	31.8	31.8	35.0	35.8
50°	2999.0	1587.8	120.6	89.7	65.1	38.3	29.4	26.9	27.7	30.9	31.8
52.5°	3323.1	1702.6	111.6	83.9	57.0	30.9	24.4	22.7	23.6	26.9	27.7
55°	3602.5	1802.9	101.0	78.2	46.4	25.2	20.3	19.6	20.3	24.4	24.4
57.5°	3846.0	1898.9	91.2	69.2	36.7	20.3	16.3	16.3	18.0	22.0	22.7
60°	4169.2	2050.4	83.1	58.6	27.7	15.5	13.0	13.8	16.3	19.6	20.3
62.5°	4741.7	2307.7	72.5	48.9	20.3	12.1	10.6	11.4	14.6	18.8	19.6
65°	5458.2	2551.1	60.2	40.8	15.5	9.0	8.2	10.6	14.6	18.8	19.6
67.5°	5384.9	2219.0	47.3	32.6	11.4	7.4	6.5	9.8	13.8	18.8	19.6
70°	4367.0	1555.2	35.0	22.0	9.0	6.5	6.5	9.8	13.8	18.0	18.8
72.5°	3029.2	865.5	26.9	14.6	8.2	6.5	5.7	9.0	13.0	18.0	18.8
75°	1441.3	265.4	21.2	10.6	7.4	5.7	4.9	9.0	13.0	18.0	18.8
77.5°	276.9	67.6	17.1	9.0	6.5	5.7	4.9	8.2	13.0	17.1	18.0
80°	93.7	30.2	13.8	8.2	6.5	5.7	4.9	8.2	12.1	16.3	17.1
82.5°	51.4	17.1	12.1	7.4	6.5	4.9	4.0	7.4	11.4	16.3	17.1
85°	40.0	12.1	9.8	7.4	6.5	4.9	4.0	7.4	11.4	15.5	16.3
87.5°	20.3	9.0	8.2	7.4	6.5	4.9	4.0	6.5	10.6	14.6	16.3
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)