

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: P270340

Luminaire Tested: **NAV-AF-02-D-UNV-AFL-7027-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270340
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-02-D-UNV-AFL-7027-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(2) 70 CRI, 2700K, 1050mA LIGHTSQUARES 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: 8882.4 lumens
Efficiency: N/A
Efficacy: 78.6 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1' x H: 0')
IES Classification: Type II - Short - Full Cutoff
BUG Rating: B1 - U0 - G1

Input Watts (W): 113
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

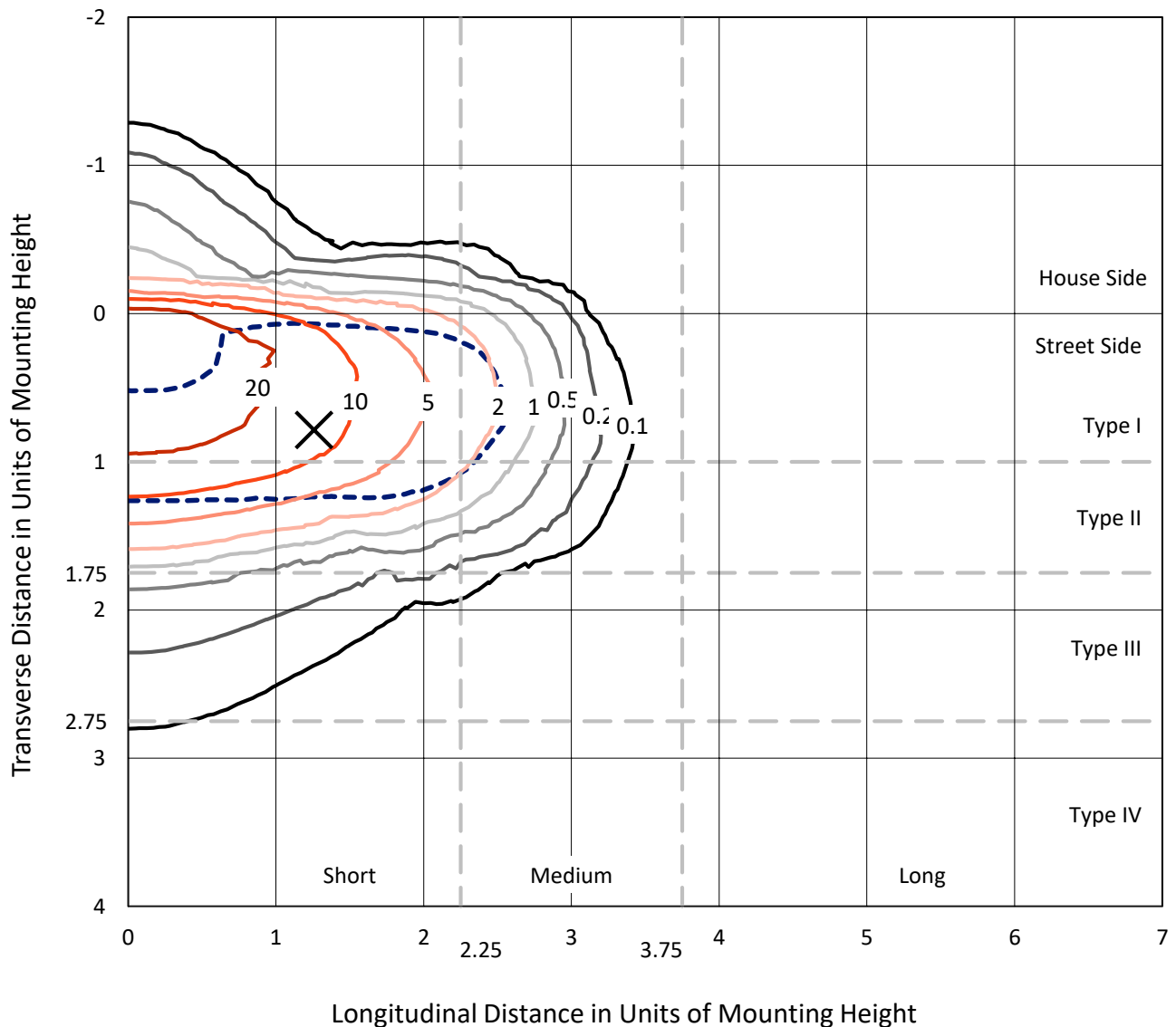


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Iso-Footcandle Lines of Horizontal Illumination

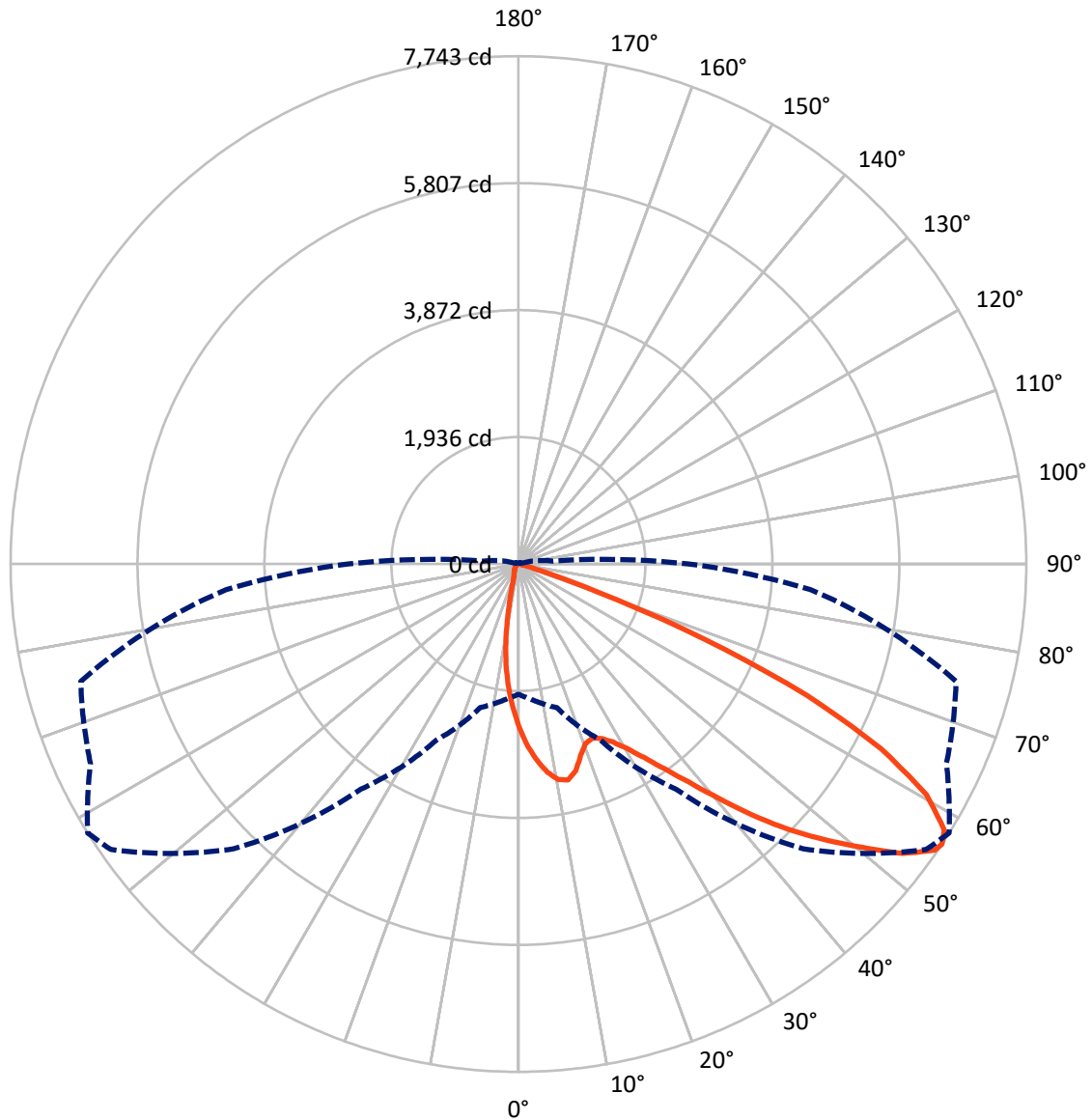
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 31.3 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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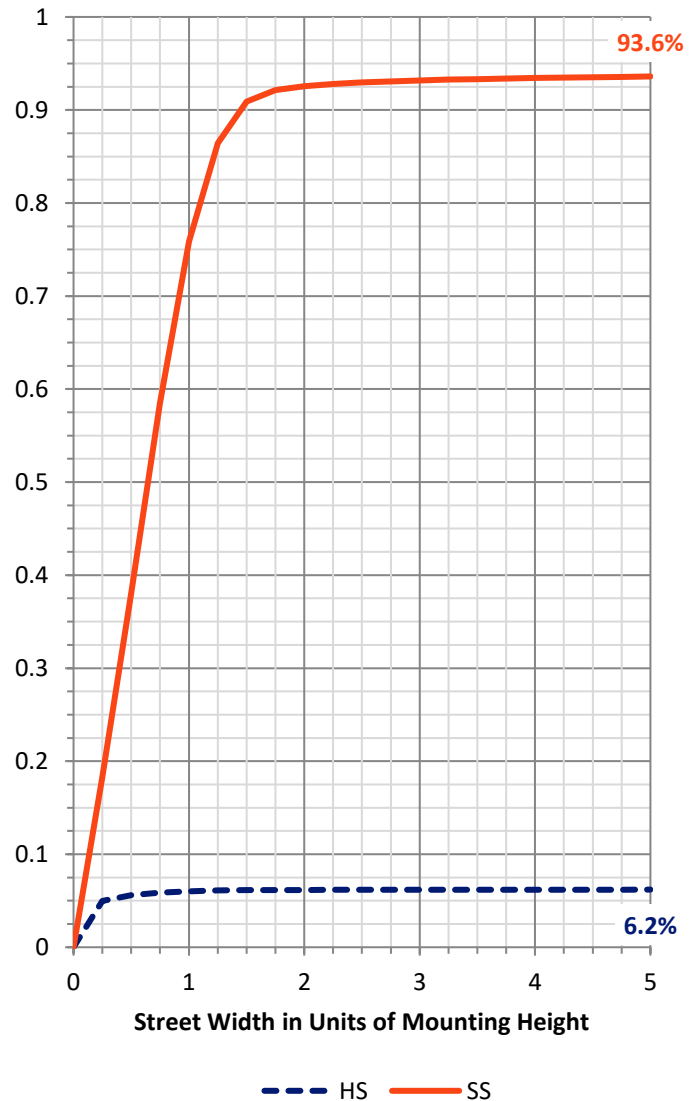
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	554.4	0.0	554.4
	% Fixture	6.2	0.0	6.2
Street Side	Lumens	8328.0	0.0	8328.0
	% Fixture	93.8	0.0	93.8
Total	Lumens	8882.4	0.0	8882.4
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	214.5	2.4
10°-20°	499.2	5.6
20°-30°	840.0	9.5
30°-40°	1438.4	16.2
40°-50°	2170.5	24.4
50°-60°	2256.2	25.4
60°-70°	1266.6	14.3
70°-80°	173.6	2.0
80°-90°	23.5	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°	8882.4	100.0
0°-180°	8882.4	100.0

Coefficient of Utilization



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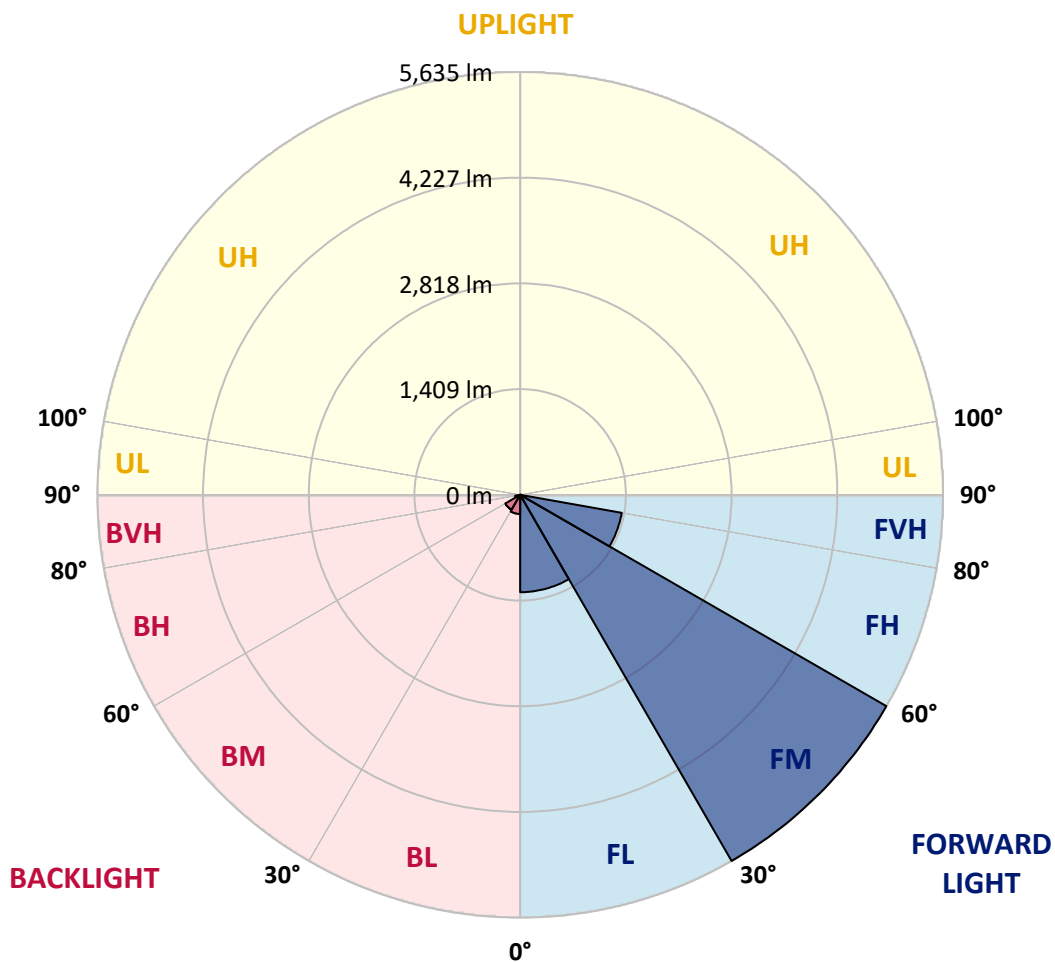
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1297.9	14.6			
FM	(30°-60°)	5635.4	63.4			
FH	(60°-80°)	1374.4	15.5			G1/1800
FVH	(80°-90°)	20.3	0.2			G1/100
BL	(0°-30°)	255.8	2.9	B1/500		
BM	(30°-60°)	229.7	2.6	B1/1000		
BH	(60°-80°)	65.8	0.7	B0/110		G0/110
BVH	(80°-90°)	3.2	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°	2514.8	2514.8	2514.8	2514.8	2514.8	2514.8	2514.8	2514.8	2514.8	2514.8	2514.8
2.5°	3025.9	3007.5	2988.7	2953.4	2920.7	2870.7	2801.5	2784.6	2730.4	2640.9	2557.6
5°	3286.8	3283.3	3270.5	3242.1	3206.8	3145.9	3067.9	3015.7	2931.7	2790.7	2630.1
7.5°	3132.2	3160.6	3207.5	3274.0	3318.6	3312.5	3252.9	3207.5	3124.1	2931.7	2701.3
10°	2640.3	2645.7	2710.0	2849.7	3070.5	3276.6	3354.5	3342.4	3265.8	3055.0	2763.5
12.5°	2466.7	2470.2	2485.0	2529.7	2673.4	2960.9	3313.8	3377.5	3371.5	3173.0	2830.0
15°	2480.3	2482.3	2486.4	2500.6	2541.3	2685.7	3107.9	3269.8	3439.3	3284.7	2895.1
17.5°	2587.4	2586.0	2573.1	2559.6	2572.4	2619.9	2897.8	3068.5	3425.0	3379.0	2948.5
20°	2796.2	2802.9	2759.6	2699.1	2668.1	2670.0	2794.1	2922.1	3345.1	3452.0	2988.7
22.5°	3089.5	3094.3	3023.2	2918.8	2827.2	2781.2	2815.7	2883.5	3252.9	3519.9	3021.1
25°	3439.9	3439.9	3340.3	3191.9	3050.3	2949.2	2919.4	2945.3	3217.5	3596.5	3053.7
27.5°	3818.1	3831.6	3701.5	3507.1	3320.0	3172.3	3078.8	3074.0	3244.8	3692.8	3090.2
30°	4229.4	4241.5	4087.1	3849.2	3627.6	3438.5	3295.0	3263.7	3348.4	3822.1	3143.8
32.5°	4638.8	4648.9	4478.1	4235.5	3977.3	3755.1	3565.9	3516.4	3534.8	4011.2	3222.4
35°	5159.1	5161.2	4945.0	4656.4	4380.6	4119.6	3880.4	3831.6	3811.2	4249.7	3335.5
37.5°	5573.3	5556.9	5420.2	5147.0	4830.5	4558.1	4276.8	4213.1	4164.4	4585.2	3511.0
40°	5670.8	5670.8	5650.5	5568.6	5317.1	5054.9	4782.3	4687.5	4579.7	4980.4	3746.9
42.5°	5416.7	5432.9	5567.2	5745.4	5747.4	5579.4	5313.0	5233.0	5043.4	5430.3	4004.5
45°	4848.2	4852.9	5174.7	5656.0	5982.6	6078.8	5882.3	5771.8	5508.9	5897.8	4240.3
47.5°	4643.5	4658.4	4795.3	5383.5	6000.1	6483.3	6428.5	6276.6	5940.0	6324.7	4460.5
50°	4329.0	4347.3	4514.7	4982.3	5841.6	6742.9	6950.9	6788.3	6332.2	6680.5	4569.6
52.5°	3576.8	3605.3	3841.8	4451.7	5445.2	6753.7	7429.4	7331.8	6734.1	6871.0	4556.7
55°	2461.4	2482.3	2758.2	3475.2	4645.6	6422.4	7635.5	7702.5	7092.6	6913.7	4494.4
56°	1985.7	2064.2	2266.2	2960.9	4190.1	6140.5	7588.1	7743.2	7198.9	6907.0	4467.4
57.5°	1312.7	1327.5	1547.8	2145.5	3364.7	5528.4	7373.8	7656.4	7335.9	6872.4	4447.6
60°	617.3	624.1	703.5	990.1	1821.0	4028.8	6677.9	7146.8	7386.0	6799.9	4447.0
62.5°	402.5	403.9	413.4	472.4	744.8	2194.3	5536.0	6210.9	6970.7	6791.7	4434.0
65°	331.4	334.8	323.3	330.7	389.7	827.5	3904.8	4842.0	5995.5	6600.7	4289.0
67.5°	292.0	292.8	277.1	268.4	285.3	363.3	1967.3	3054.2	4484.2	5608.5	3532.8
70°	266.3	265.7	248.0	227.7	228.3	241.3	641.1	1268.6	2480.9	3330.1	2028.4
72.5°	236.6	238.0	227.7	199.2	189.7	170.8	241.3	342.3	844.3	1069.4	534.8
75°	207.4	204.6	194.6	176.2	158.6	114.5	121.4	145.7	220.3	218.2	115.3
77.5°	157.3	154.5	159.3	150.5	124.1	79.9	66.5	75.8	99.6	92.9	46.7
80°	120.0	118.5	108.4	128.7	113.1	60.4	45.5	46.7	54.2	49.4	23.0
82.5°	86.7	86.1	81.9	79.3	71.9	44.0	34.6	36.7	40.7	34.6	17.0
85°	33.1	33.1	64.4	54.2	49.4	29.9	24.4	26.4	31.3	25.1	11.5
87.5°	5.4	5.4	43.4	35.9	22.4	14.9	15.6	17.0	18.2	14.9	8.9
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°	2514.8	2514.8	2514.8	2514.8	2514.8	2514.8	2514.8	2514.8	2514.8	2514.8	2514.8
2.5°	2508.1	2462.8	2363.1	2266.9	2182.8	2090.6	2044.0	1989.7	1969.4	1928.8	1932.8
5°	2533.8	2439.0	2239.0	2028.4	1835.1	1638.7	1499.0	1367.6	1294.4	1221.9	1221.9
7.5°	2560.3	2415.3	2106.3	1769.4	1444.1	1107.3	868.8	677.7	571.3	500.1	498.1
10°	2578.6	2384.8	1955.2	1469.2	989.5	570.7	344.3	271.1	244.7	233.1	232.4
12.5°	2602.3	2354.3	1783.0	1115.4	549.7	271.1	214.9	203.2	198.5	195.8	195.8
15°	2622.6	2310.9	1574.3	750.2	288.6	203.2	185.1	181.0	180.3	179.7	180.3
17.5°	2627.4	2249.3	1324.2	439.1	209.5	177.5	169.4	166.0	166.0	165.4	165.4
20°	2616.6	2167.9	1047.8	271.1	181.0	163.3	154.5	150.5	149.7	149.7	149.7
22.5°	2594.1	2064.2	774.6	205.4	164.7	150.5	138.9	134.8	134.8	135.6	136.3
25°	2566.4	1941.5	531.9	176.8	152.5	136.9	125.4	121.4	122.7	124.1	124.7
27.5°	2531.2	1795.3	348.4	153.2	136.3	123.3	113.1	110.4	113.1	115.9	117.3
30°	2495.9	1634.6	235.9	132.8	117.9	108.4	102.3	101.7	105.7	111.7	112.5
32.5°	2472.9	1469.8	178.3	119.3	103.7	95.6	92.9	94.2	100.3	107.1	108.4
35°	2470.8	1309.3	151.9	108.4	94.2	86.7	85.3	89.4	96.2	101.7	103.0
37.5°	2502.7	1158.9	137.6	100.3	86.7	79.3	77.3	84.7	90.8	96.2	97.6
40°	2567.0	1024.0	128.1	92.9	80.7	71.9	70.4	76.5	82.6	88.8	90.8
42.5°	2647.8	897.9	117.3	85.3	73.9	63.7	62.3	67.2	73.2	81.9	83.4
45°	2717.6	780.6	105.7	77.3	66.5	54.8	54.2	59.6	64.4	72.6	73.9
47.5°	2776.4	683.2	95.0	68.5	57.0	48.8	48.1	50.8	53.4	60.9	62.3
50°	2745.3	600.4	84.0	56.2	46.2	42.0	41.3	41.3	44.7	52.2	53.4
52.5°	2668.8	549.0	73.9	46.7	38.0	35.9	33.9	34.6	38.0	41.3	42.0
55°	2607.1	524.5	65.0	41.3	31.9	29.9	27.8	27.0	27.8	26.4	25.1
56°	2592.1	521.8	63.1	40.0	30.5	27.8	25.1	23.7	23.0	20.3	19.7
57.5°	2585.3	521.8	59.6	37.3	28.4	25.1	21.6	19.0	16.3	14.3	14.3
60°	2579.9	525.1	55.5	32.5	24.4	20.3	15.6	11.5	9.5	9.5	9.5
62.5°	2568.4	523.8	50.8	27.0	21.0	15.6	9.5	7.5	6.7	7.5	8.2
65°	2439.0	486.6	44.7	21.6	16.3	10.8	5.4	5.4	6.1	7.5	8.2
67.5°	1965.3	368.7	36.7	17.0	11.5	8.2	4.8	4.8	6.1	7.5	8.2
70°	1079.6	194.6	31.3	12.1	8.9	6.7	4.8	4.0	6.1	7.5	8.2
72.5°	263.7	81.3	28.4	9.5	8.2	6.1	4.0	4.0	6.1	7.5	8.2
75°	65.0	60.9	23.0	7.5	6.7	5.4	4.0	4.0	6.1	7.5	8.2
77.5°	30.5	80.7	15.6	6.7	6.1	4.8	4.0	4.0	6.1	7.5	7.5
80°	18.2	60.9	9.5	6.1	5.4	4.8	4.0	4.0	6.1	7.5	8.2
82.5°	10.8	17.6	6.7	6.1	5.4	4.0	4.0	4.0	6.1	7.5	8.2
85°	9.5	8.9	6.7	6.1	5.4	4.8	4.0	4.0	6.7	8.2	8.2
87.5°	7.5	6.7	6.1	5.4	5.4	4.8	4.0	4.0	6.1	7.5	8.2
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)