

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: P195977

Luminaire Tested: **NAV-AF-05-D-UNV-5WQ**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P195977  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24131)  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: LUMARK  
Catalog Number: NAV-AF-05-D-UNV-5WQ  
Description: NAVION ROADWAY AND AREA LUMINAIRE  
(5) 70 CRI, 4000K, 1050mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE V WIDE OPTICS  
Light Source: -  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 32002 lumens  
Efficiency: N/A  
Efficacy: 114.7 lumens/watt  
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')  
IES Classification: Type V - Short - Semi-Cutoff  
BUG Rating: B5 - U0 - G4

Input Watts (W): 279  
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

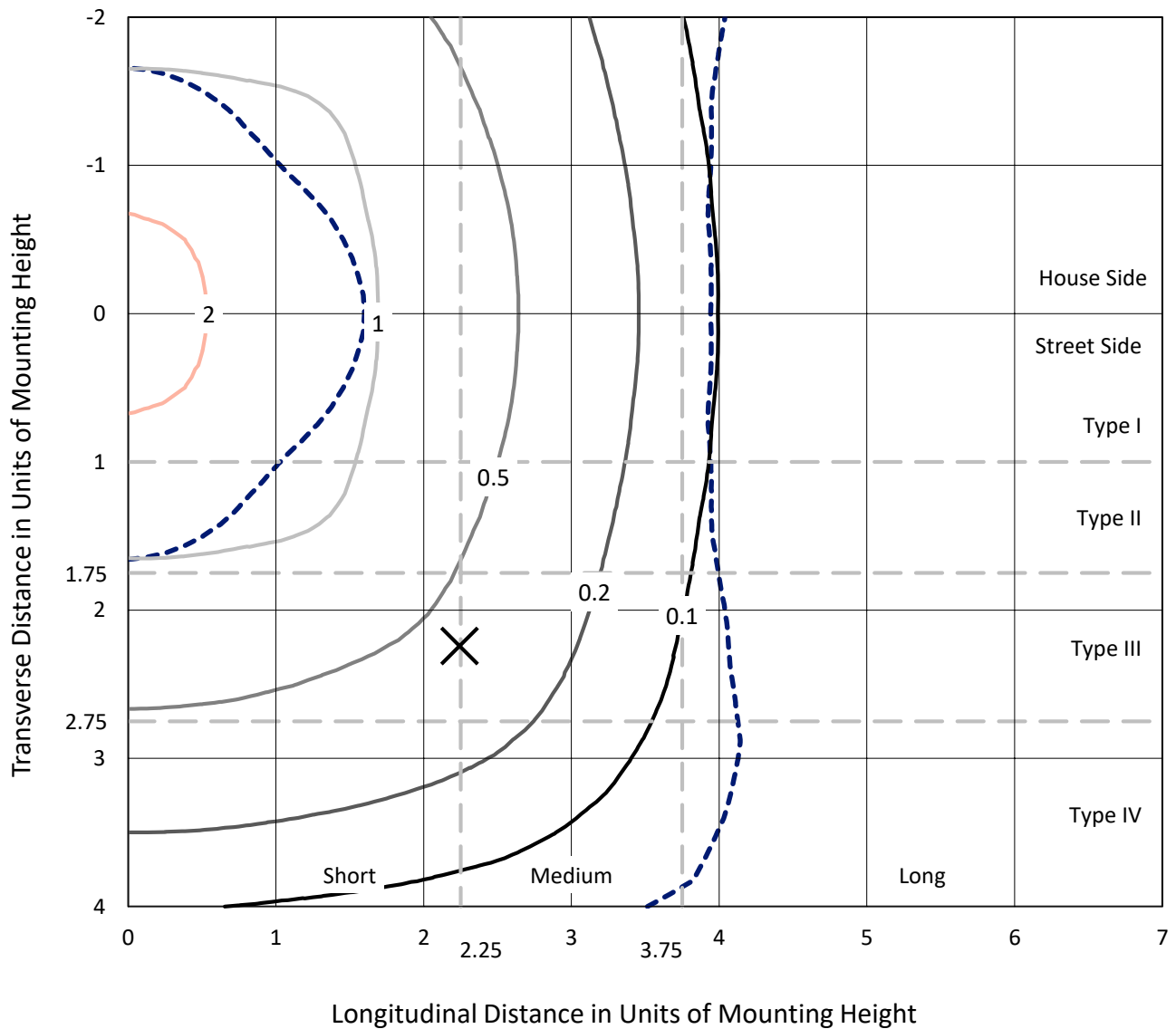


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### Iso-Footcandle Lines of Horizontal Illumination

× Max cd  
 - - - 1/2 Max cd

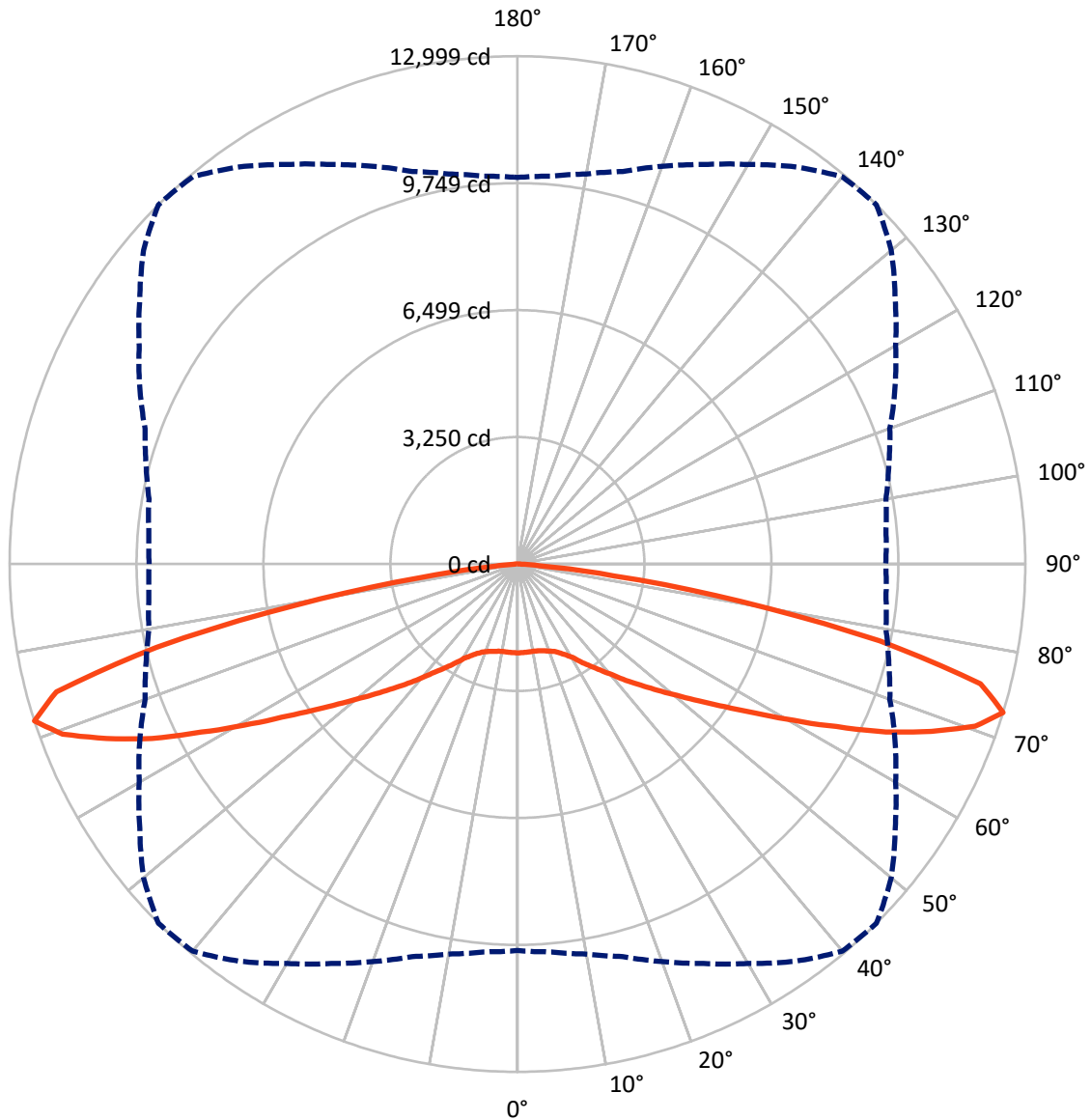


Based on 30 foot mounting height. Maximum calculated value = 2.5 fc  
 Type V - Short - Semi-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral    - - - Horizontal Cone Through 72.5-Deg Vertical

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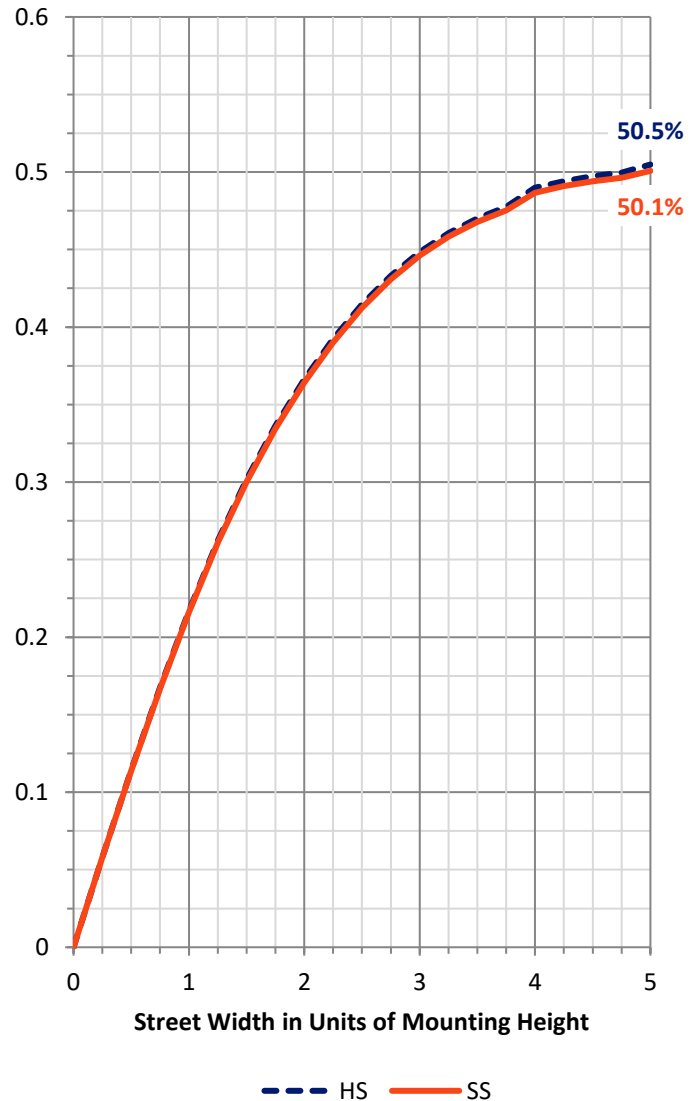
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	16001.0	0.0	16001.0
	% Fixture	50.0	0.0	50.0
<b>Street Side</b>	Lumens	16001.0	0.0	16001.0
	% Fixture	50.0	0.0	50.0
<b>Total</b>	Lumens	32002.0	0.0	32002.0
	% Fixture	100.0	0.0	100.0

**Coefficient of Utilization**

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	217.2	0.7
10°-20°	657.2	2.1
20°-30°	1186.4	3.7
30°-40°	2023.7	6.3
40°-50°	3445.4	10.8
50°-60°	5544.9	17.3
60°-70°	9221.4	28.8
70°-80°	8920.6	27.9
80°-90°	785.1	2.5
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°	32002.0	100.0
0°-180°	32002.0	100.0



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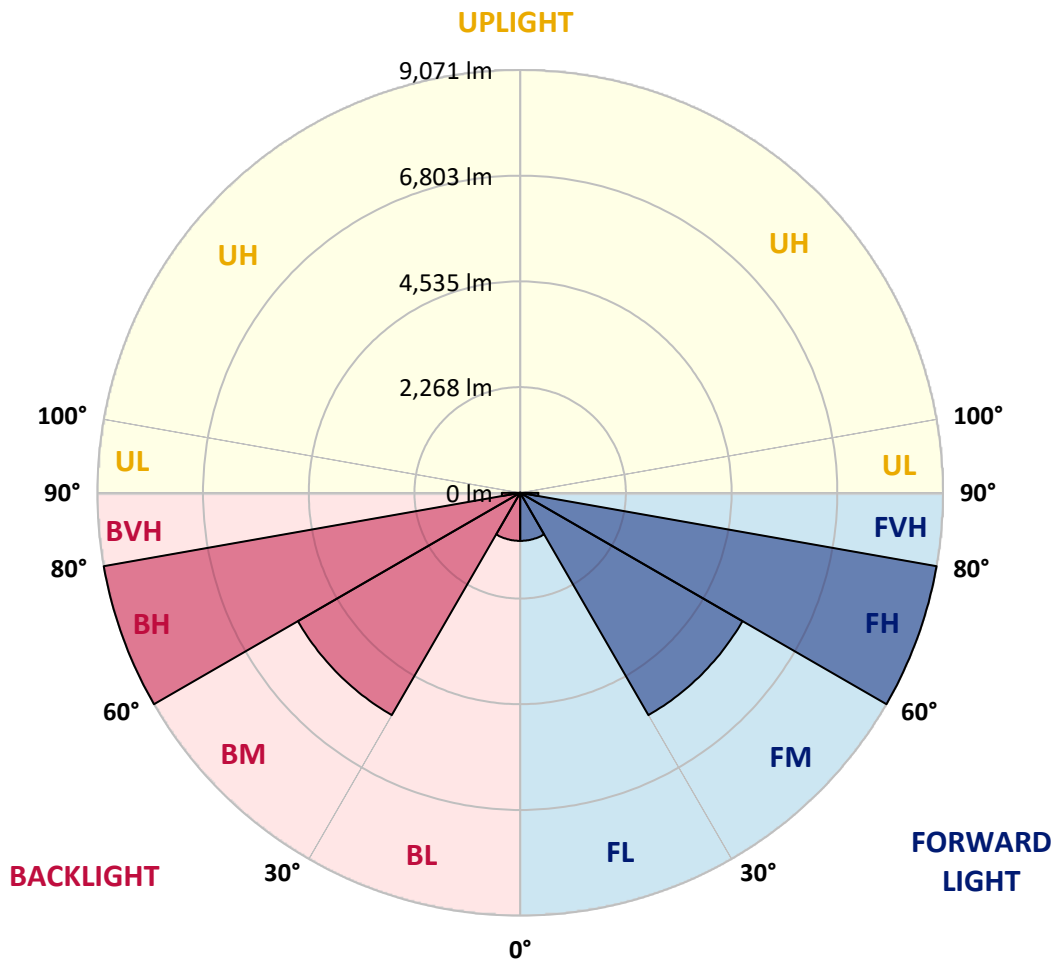
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**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1030.4	3.2			
FM	(30°-60°)	5507.1	17.2			
FH	(60°-80°)	9071.0	28.3			G4/12000
FVH	(80°-90°)	392.6	1.2			G3/500
BL	(0°-30°)	1030.4	3.2	B3/2500		
BM	(30°-60°)	5507.1	17.2	B4/8500		
BH	(60°-80°)	9071.0	28.3	B5		G4/12000
BVH	(80°-90°)	392.6	1.2			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B5-U0-G4**

Type V Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	2275.1	2275.1	2275.1	2275.1	2275.1	2275.1	2275.1	2275.1	2275.1	2275.1	2275.1
2.5°	2292.8	2292.8	2294.8	2292.8	2288.9	2286.9	2281.0	2277.1	2273.1	2271.2	2267.3
5°	2294.8	2294.8	2296.7	2294.8	2290.9	2286.9	2283.0	2277.1	2273.1	2269.2	2267.3
7.5°	2302.7	2304.6	2306.7	2304.6	2296.7	2292.8	2286.9	2281.0	2273.1	2269.2	2265.2
10°	2318.4	2318.4	2318.4	2316.5	2310.5	2302.7	2294.8	2288.9	2279.0	2269.2	2263.3
12.5°	2330.3	2332.2	2332.2	2328.2	2320.4	2310.5	2302.7	2296.7	2288.9	2281.0	2275.1
15°	2348.0	2348.0	2346.0	2338.2	2326.3	2318.4	2314.5	2312.5	2310.5	2306.7	2300.7
17.5°	2383.5	2381.4	2375.6	2363.7	2349.9	2344.1	2340.1	2340.1	2340.1	2338.2	2334.2
20°	2434.6	2434.6	2426.7	2407.1	2395.2	2389.3	2383.5	2383.5	2383.5	2377.5	2371.6
22.5°	2517.4	2519.3	2507.6	2483.9	2468.2	2456.3	2448.4	2442.5	2436.7	2432.7	2422.9
25°	2629.7	2627.7	2613.9	2584.4	2572.5	2560.8	2545.0	2535.1	2527.2	2521.4	2509.5
27.5°	2747.9	2745.9	2730.2	2704.5	2696.6	2678.9	2667.1	2653.3	2643.4	2633.6	2621.8
30°	2899.6	2889.6	2877.9	2858.1	2854.2	2840.4	2824.7	2804.9	2789.2	2773.4	2759.7
32.5°	3035.4	3035.4	3017.7	3007.9	3015.8	3009.8	3011.8	3000.0	2990.1	2984.3	2970.4
35°	3224.5	3224.5	3216.7	3204.8	3206.8	3193.0	3191.1	3193.0	3200.9	3200.9	3185.2
37.5°	3476.7	3480.6	3455.0	3451.0	3441.2	3421.6	3411.6	3415.6	3433.3	3443.2	3421.6
40°	3789.8	3797.7	3789.8	3764.3	3752.5	3718.9	3699.3	3699.3	3713.0	3722.9	3715.1
42.5°	4099.2	4112.9	4099.2	4079.4	4069.6	4043.9	4034.1	4042.0	4059.7	4071.5	4059.7
45°	4443.8	4453.7	4435.9	4412.3	4400.5	4386.7	4380.8	4386.7	4406.4	4418.2	4414.2
47.5°	4782.6	4796.4	4774.7	4764.9	4764.9	4751.1	4766.8	4782.6	4800.4	4827.9	4816.2
50°	5113.5	5131.3	5117.5	5119.5	5135.2	5160.8	5190.4	5221.9	5253.5	5282.9	5286.9
52.5°	5409.1	5436.6	5438.6	5474.0	5523.3	5562.7	5645.4	5714.3	5789.2	5814.8	5803.0
55°	5720.2	5757.7	5806.9	5862.1	5940.9	6021.6	6161.4	6285.6	6384.0	6445.1	6435.3
57.5°	6165.4	6202.9	6254.1	6344.6	6462.9	6573.2	6764.3	6957.3	7107.0	7199.5	7154.2
60°	6742.6	6782.0	6849.0	6945.4	7099.1	7248.8	7510.8	7788.5	8021.0	8127.3	8044.6
62.5°	7506.8	7544.3	7587.6	7715.6	7887.1	8080.1	8409.0	8765.6	9061.0	9163.4	9047.2
65°	8596.2	8641.5	8655.2	8759.6	8927.1	9106.3	9460.9	9862.7	10199.5	10367.0	10134.6
67.5°	9823.3	9841.1	9896.2	10018.4	10189.7	10351.2	10630.9	11011.1	11334.2	11426.8	11178.5
70°	10542.3	10577.7	10674.3	10843.7	11048.5	11302.6	11607.9	12017.6	12384.0	12427.4	12112.2
72.5°	9892.2	9965.2	10136.5	10400.4	10829.9	11281.0	11806.9	12411.6	12937.6	12998.6	12492.4
75°	7934.3	8017.1	8221.9	8511.5	9019.7	9689.4	10449.7	11357.8	12145.7	12246.2	11576.4
77.5°	4229.1	4331.6	4629.0	5019.0	5743.9	6630.3	7546.2	8582.4	9252.1	9478.6	8996.0
80°	1065.6	1120.8	1264.6	1493.1	1983.6	2698.6	3488.5	4603.4	5434.6	5787.2	5434.6
82.5°	413.7	455.0	494.4	522.0	569.3	667.8	921.9	1502.9	2024.9	2493.7	2158.8
85°	159.6	169.4	244.3	277.7	277.7	305.4	350.7	413.7	512.2	559.5	468.8
87.5°	63.0	68.9	84.7	130.0	133.9	118.2	126.0	141.8	108.3	90.6	102.4
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):**

	55°	60°	65°	70°	75°	80°	85°	90°
0°	2275.1	2275.1	2275.1	2275.1	2275.1	2275.1	2275.1	2275.1
2.5°	2265.2	2263.3	2259.4	2261.3	2259.4	2259.4	2259.4	2259.4
5°	2263.3	2263.3	2259.4	2259.4	2259.4	2261.3	2259.4	2259.4
7.5°	2261.3	2259.4	2255.4	2253.5	2253.5	2251.5	2251.5	2251.5
10°	2257.3	2253.5	2249.5	2247.5	2247.5	2243.5	2243.5	2243.5
12.5°	2267.3	2261.3	2257.3	2255.4	2255.4	2255.4	2257.3	2257.3
15°	2294.8	2283.0	2277.1	2275.1	2277.1	2281.0	2283.0	2285.0
17.5°	2324.3	2312.5	2302.7	2298.8	2300.7	2306.7	2312.5	2316.5
20°	2361.8	2352.0	2340.1	2336.2	2336.2	2344.1	2348.0	2353.9
22.5°	2415.0	2407.1	2397.2	2391.4	2387.4	2397.2	2403.1	2407.1
25°	2499.7	2491.8	2483.9	2478.0	2476.1	2485.9	2489.8	2491.8
27.5°	2611.9	2604.0	2600.1	2598.2	2592.3	2596.1	2602.1	2600.1
30°	2757.7	2763.6	2757.7	2757.7	2747.9	2751.8	2747.9	2743.9
32.5°	2952.7	2946.8	2929.1	2917.3	2903.4	2903.4	2897.5	2891.7
35°	3147.7	3128.0	3118.2	3124.1	3118.2	3122.1	3112.2	3102.4
37.5°	3378.2	3366.3	3364.4	3382.1	3378.2	3382.1	3382.1	3368.4
40°	3683.5	3675.7	3689.4	3718.9	3730.8	3728.8	3732.7	3715.1
42.5°	4034.1	4020.3	4026.2	4051.8	4065.6	4069.6	4067.6	4051.8
45°	4384.8	4388.7	4388.7	4416.3	4430.1	4438.0	4424.2	4418.2
47.5°	4780.7	4786.6	4772.8	4790.5	4794.5	4808.3	4796.4	4786.6
50°	5237.6	5216.0	5184.5	5190.4	5190.4	5186.5	5172.7	5160.8
52.5°	5747.9	5698.6	5639.5	5619.8	5598.1	5576.4	5548.9	5527.2
55°	6328.9	6244.2	6137.8	6088.6	6047.3	5998.0	5935.0	5913.3
57.5°	7002.6	6856.8	6715.0	6626.4	6520.0	6455.0	6374.2	6370.3
60°	7802.4	7605.3	7355.2	7223.2	7116.9	7040.0	6979.0	6955.3
62.5°	8726.2	8387.4	8117.5	7975.6	7851.6	7804.3	7727.5	7737.3
65°	9673.6	9328.9	9066.9	8952.7	8836.5	8804.9	8734.1	8759.6
67.5°	10699.9	10416.2	10128.6	10022.3	9915.9	9884.4	9811.5	9833.2
70°	11619.8	11259.3	10932.3	10723.5	10542.3	10396.6	10304.0	10266.5
72.5°	11802.9	11178.5	10664.4	10142.5	9841.1	9577.1	9468.7	9427.4
75°	10605.3	9636.2	8903.5	8290.8	7952.0	7567.9	7526.6	7469.4
77.5°	8249.5	7146.3	6259.9	5472.1	5017.1	4548.2	4386.7	4264.6
80°	4920.5	3782.0	2931.1	2054.5	1676.3	1349.3	1268.6	1183.9
82.5°	1761.0	1128.7	760.4	592.9	529.9	488.5	457.0	415.6
85°	425.4	358.5	338.8	307.3	303.3	258.1	183.2	163.5
87.5°	136.0	124.1	126.0	120.2	126.0	94.5	76.8	68.9
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)