

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: McGRAW-EDISON

Report Number: P591358

Luminaire Tested: **CTN-CA8-230-730-U-T4-SSS-HM-EX90**

Issue Date: 1/19/2022

**Test Information**

Test Method: LM-79-08  
Report Number: P591358  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2201-495-10)  
Test Lab: COOPER LIGHTING SOLUTIONS  
Issue Date: 1/19/2022  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: McGRAW-EDISON  
Catalog Number: CTN-CA8-230-730-U-T4-SSS-HM-EX90  
Description: CELESTEON HIGH MAST LUMINAIRE, 90D FIELD INSTALLED SHIELD ON STREET SIDE  
Light Source: (8) 3000K CCT, 70 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 22326 lumens  
Efficiency: N/A  
Efficacy: 97.7 lumens/watt  
Luminous Opening: Vertical Cylinder (Dia: 2.08' x H: 1')  
IES Classification: Type IV - Short  
BUG Rating: B3 - U0 - G4

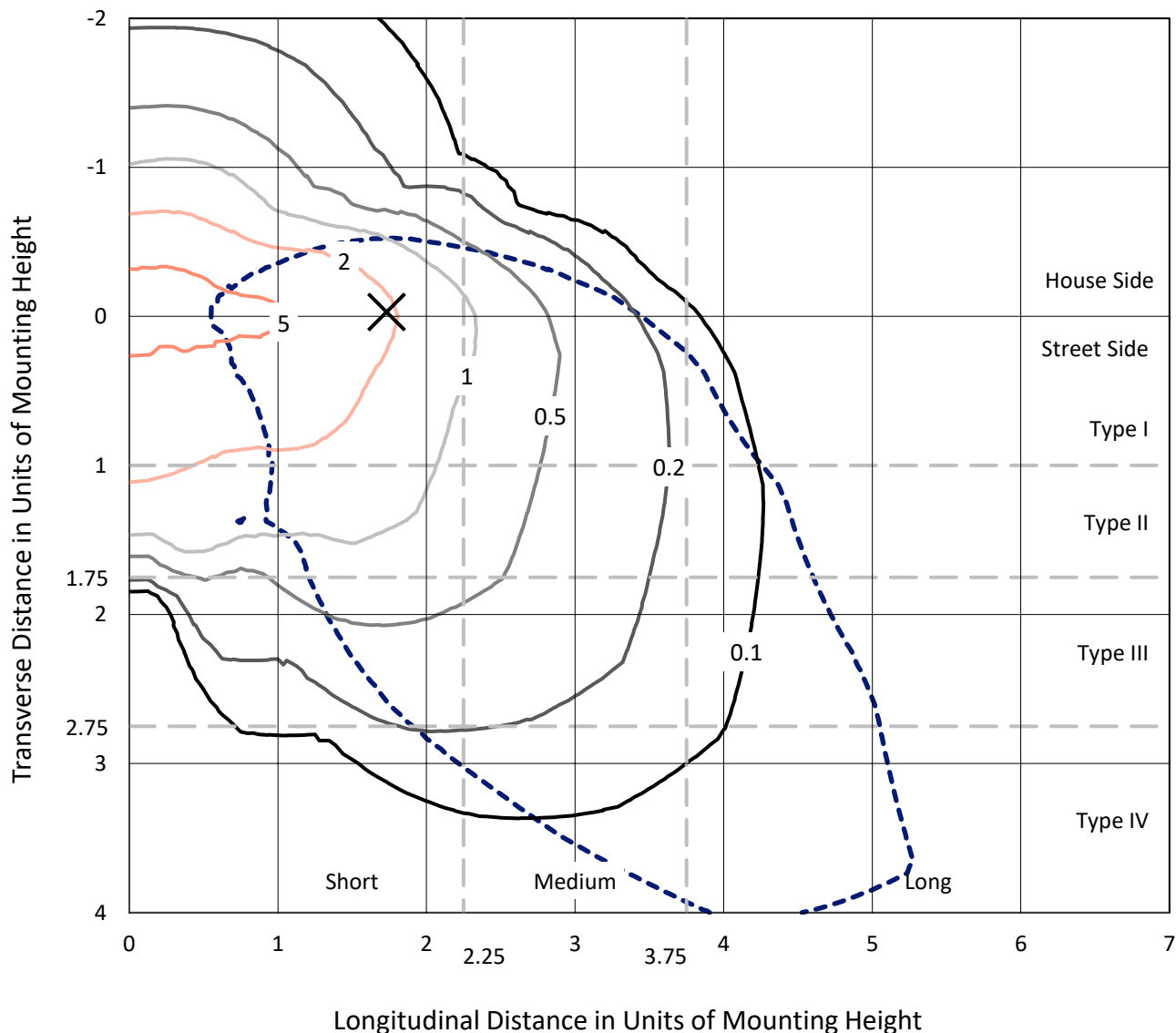
Input Watts (W): 228.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 24 FT



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### Iso-Footcandle Lines of Horizontal Illumination

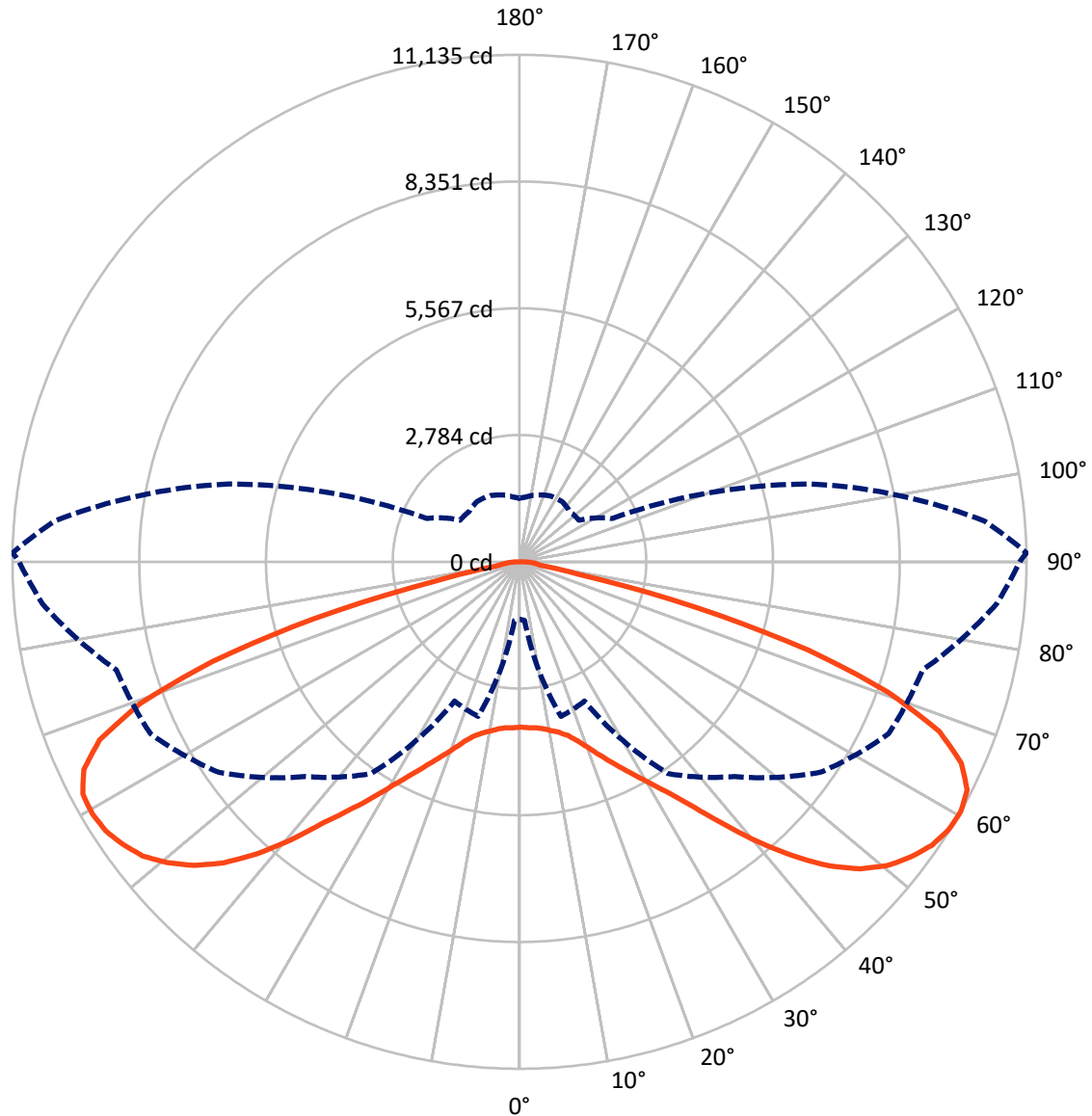
× Max cd  
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 6.1 fc  
 Type IV - Short - N/A

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### Luminous Intensity Polar Plot



— Vertical Plane Through 91-Deg Lateral      - - - Horizontal Cone Through 60-Deg Vertical

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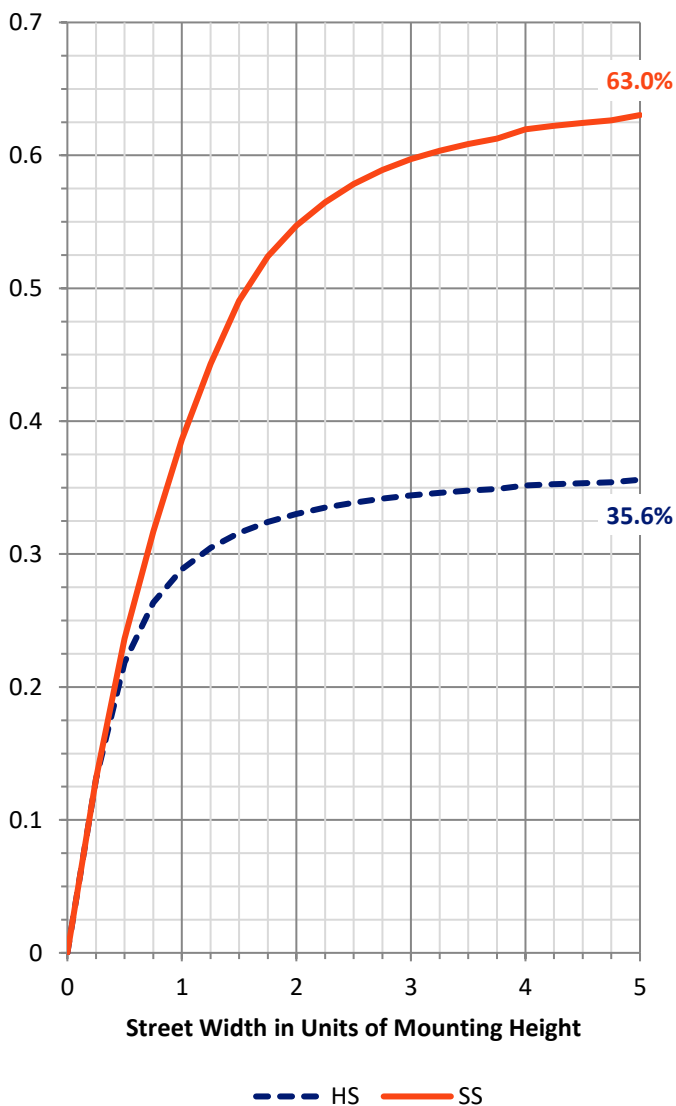
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	8108.0	0.0	8108.0
	% Fixture	36.3	0.0	36.3
<b>Street Side</b>	Lumens	14218.0	0.0	14218.0
	% Fixture	63.7	0.0	63.7
<b>Total</b>	Lumens	22326.0	0.0	22326.0
	% Fixture	100.0	0.0	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	354.0	1.6
10°-20°	1085.8	4.9
20°-30°	1779.8	8.0
30°-40°	2513.6	11.3
40°-50°	3538.5	15.8
50°-60°	4452.4	19.9
60°-70°	4481.7	20.1
70°-80°	3297.1	14.8
80°-90°	823.1	3.7
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°	22326.0	100.0
0°-180°	22326.0	100.0

**Coefficient of Utilization**



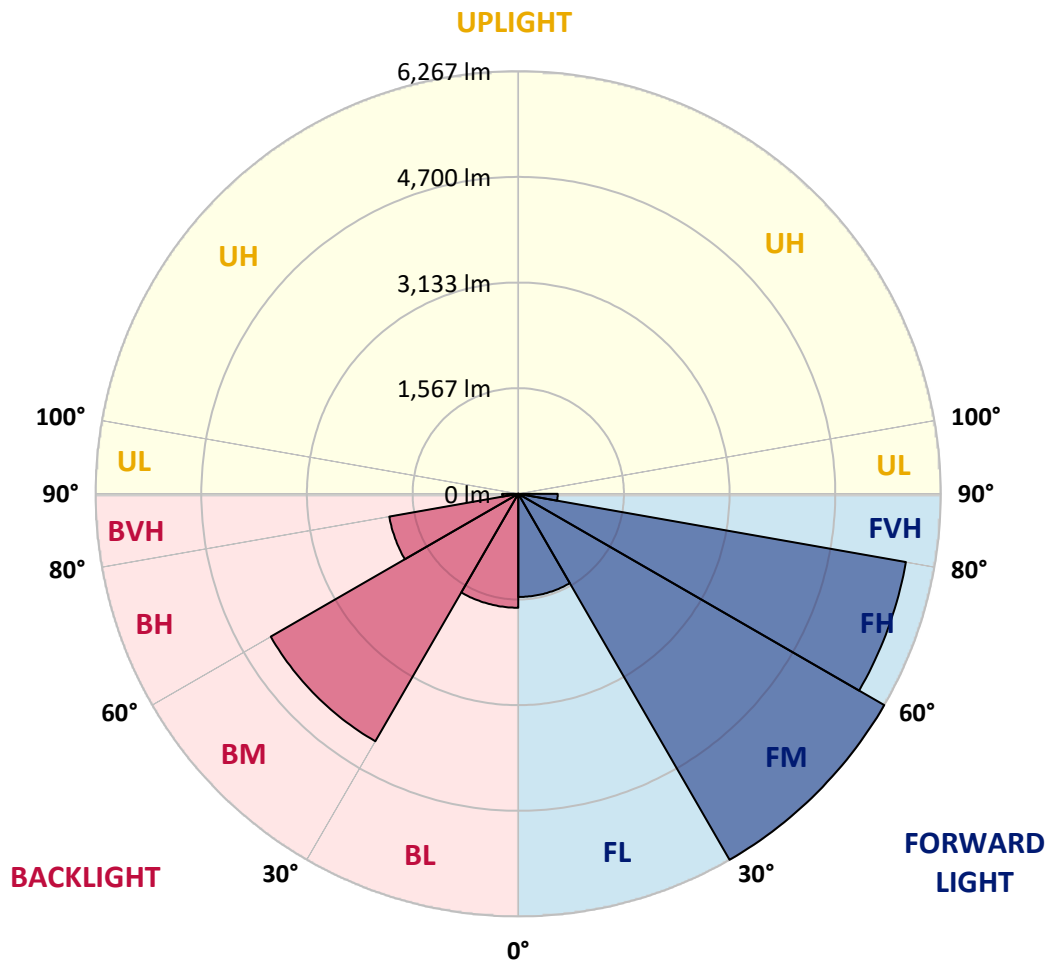
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 CATALOG NUMBER: CTN-CA8-230-730-U-T4-SSS-HM-EX90

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

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1529.6	6.9			
FM	(30°-60°)	6266.9	28.1			
FH	(60°-80°)	5836.9	26.1			G3/7500
FVH	(80°-90°)	584.6	2.6			G4/750
BL	(0°-30°)	1690.0	7.6	B3/2500		
BM	(30°-60°)	4237.7	19.0	B3/5000		
BH	(60°-80°)	1941.9	8.7	B3/2500		G3/2500
BVH	(80°-90°)	238.5	1.1			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

**BUG Rating: B3-U0-G4**

Type IV Short





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	3631.0	3631.0	3631.0	3631.0	3631.0	3631.0	3631.0	3631.0	3631.0	3631.0	3631.0
2.5°	3595.1	3572.3	3573.4	3607.1	3556.0	3588.6	3581.0	3633.2	3623.4	3641.9	3646.3
5°	3570.1	3551.6	3551.6	3591.9	3557.1	3585.4	3561.4	3607.1	3623.4	3650.6	3656.1
7.5°	3579.9	3560.3	3568.0	3602.8	3563.6	3593.0	3590.8	3631.0	3640.8	3686.5	3693.0
10°	3597.3	3579.9	3582.1	3611.5	3585.4	3639.7	3630.0	3687.6	3686.5	3758.3	3763.8
12.5°	3566.9	3553.8	3553.8	3593.0	3608.2	3665.9	3685.4	3745.3	3751.8	3832.3	3838.8
15°	3519.0	3497.2	3529.9	3588.6	3620.2	3710.5	3744.2	3838.8	3856.2	3932.4	3948.7
17.5°	3418.9	3428.7	3520.1	3478.8	3335.2	3469.0	3839.9	3960.6	3998.7	4089.0	4128.2
20°	3108.9	2988.2	2748.8	2814.1	3110.0	3491.8	3973.7	4115.1	4198.9	4305.5	4371.8
22.5°	2348.5	2424.7	2871.8	2918.5	2931.6	3186.1	4160.8	4304.4	4415.3	4550.2	4638.3
25°	2435.6	2427.9	2581.3	3061.0	3074.1	3219.9	3917.1	4551.3	4651.4	4838.5	4926.6
27.5°	2516.1	2516.1	2507.4	2890.3	3222.0	3365.6	4044.4	4369.7	4961.4	5164.8	5268.2
30°	2649.9	2654.2	2605.3	2604.2	3343.9	3499.4	4290.2	4451.2	5235.5	5620.6	5644.5
32.5°	2915.3	2900.0	2839.1	2745.6	2892.4	3655.0	4530.6	4746.0	4971.2	6133.0	6111.2
35°	3106.7	3094.8	3051.3	2986.0	2918.5	3725.7	4755.8	5055.0	5423.7	6284.2	6701.9
37.5°	3338.4	3318.8	3269.9	3192.7	3149.2	3216.6	4987.5	5404.1	5989.4	6463.6	7368.7
40°	3591.9	3586.4	3511.4	3411.3	3351.5	3401.5	5164.8	5839.3	6691.0	7226.2	8104.0
42.5°	3786.6	3782.2	3720.2	3662.6	3634.3	3735.5	4724.3	6415.8	7493.8	7919.1	8812.2
45°	3961.7	3955.2	3953.0	3933.4	3956.3	4202.1	5207.3	6771.5	8282.4	8515.2	9456.2
47.5°	4094.4	4074.9	4019.4	4024.8	4089.0	4503.5	5709.8	6235.2	8922.1	9040.6	9958.7
50°	4409.9	4390.3	4198.9	4205.4	4329.4	4877.6	6142.7	6856.3	8327.0	9495.3	10343.8
52.5°	4691.6	4529.6	4425.1	4429.5	4599.2	5275.8	6634.4	7499.2	8185.6	9855.4	10654.9
55°	4052.0	3947.6	4963.6	4822.2	4915.7	5709.8	7112.0	8056.2	8574.0	10130.6	10833.3
57.5°	2377.9	2364.9	5462.9	5585.8	5477.0	6178.6	7594.9	8519.6	8914.4	10387.3	10953.0
60°	1261.8	1292.3	3513.6	3376.5	5677.2	6668.2	8062.7	8940.5	9166.8	10520.0	10985.6
62.5°	116.4	103.3	2309.4	2623.7	5088.7	7307.8	8617.5	9369.1	9337.6	10590.7	10927.9
65°	22.8	30.5	2265.9	2592.2	5654.3	8368.4	9523.6	9698.7	9430.1	10505.9	10625.5
67.5°	17.4	26.1	2140.8	2563.9	6001.3	8776.3	10566.8	9815.1	9435.5	10235.0	9959.8
70°	17.4	27.2	1889.5	2396.4	6165.6	8793.7	10813.7	9769.4	9313.7	9621.5	8705.6
72.5°	17.4	27.2	1587.1	2076.6	5886.0	8416.2	10380.8	9516.0	8860.0	8284.6	6790.0
75°	17.4	25.0	1245.5	1687.2	5087.6	7834.3	9637.8	8413.0	7457.9	6062.3	4356.6
77.5°	17.4	23.9	918.1	1320.6	4245.6	6909.6	8381.4	6915.1	5621.7	3174.2	1603.4
80°	16.3	23.9	559.1	931.1	3271.0	5573.8	6586.6	5109.3	2954.4	798.4	463.4
82.5°	16.3	22.8	266.5	596.1	2298.5	3982.4	4297.9	2188.6	628.7	368.8	368.8
85°	14.1	20.7	142.5	324.2	1502.2	2610.7	2073.3	370.9	245.8	249.1	283.9
87.5°	8.7	10.9	67.4	145.8	865.9	1395.6	798.4	136.0	102.3	107.7	161.0
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):**

	91°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	3631.0	3631.0	3631.0	3631.0	3631.0	3631.0	3631.0	3631.0	3631.0	3631.0	3631.0
2.5°	3649.5	3644.1	3656.1	3694.1	3687.6	3714.8	3693.0	3731.1	3738.7	3727.9	3745.3
5°	3661.5	3669.1	3709.4	3745.3	3725.7	3769.2	3781.2	3834.5	3833.4	3823.6	3845.3
7.5°	3700.7	3721.3	3761.6	3806.2	3816.0	3850.8	3846.4	3913.9	3906.3	3901.9	3923.7
10°	3768.1	3799.6	3837.7	3911.7	3887.8	3946.5	3906.3	3951.9	3947.6	3936.7	3956.3
12.5°	3843.2	3886.7	3932.4	3999.8	3990.0	3988.9	3953.0	3967.2	3955.2	3929.1	3945.4
15°	3956.3	4009.6	4072.7	4116.2	4058.5	4036.8	3980.2	3949.8	3908.4	3847.5	3857.3
17.5°	4132.5	4195.6	4263.0	4270.7	4181.5	4124.9	3987.8	3879.1	3771.4	3689.8	3697.4
20°	4369.7	4427.3	4477.3	4441.4	4320.7	4194.5	3987.8	3816.0	3614.7	3464.6	3453.7
22.5°	4647.0	4664.4	4712.3	4624.2	4416.4	4240.2	3977.0	3721.3	3393.9	3193.8	3169.8
25°	4946.2	4944.0	4923.3	4740.6	4476.3	4215.2	3894.3	3559.2	3141.5	2932.7	2915.3
27.5°	5271.4	5244.2	5102.8	4838.5	4451.2	4124.9	3737.6	3286.2	2912.0	2732.5	2727.1
30°	5638.0	5566.2	5280.1	4848.3	4357.7	3946.5	3483.1	3011.0	2707.5	2547.6	2532.4
32.5°	6065.5	5925.2	5421.5	4816.7	4189.1	3674.6	3173.1	2794.5	2540.0	2364.9	2331.1
35°	6623.6	6377.7	5552.1	4713.4	3938.9	3351.5	2887.0	2602.0	2384.4	2205.0	2169.1
37.5°	7325.2	6964.0	5749.0	4562.2	3652.8	3063.2	2689.0	2474.7	2276.7	2064.6	2021.1
40°	8104.0	7653.7	5979.6	4415.3	3380.9	2848.9	2559.6	2414.9	2207.1	1974.3	1933.0
42.5°	8841.6	8347.7	6325.5	4225.0	3122.0	2677.1	2512.8	2397.5	2174.5	1935.2	1890.6
45°	9522.5	8957.9	6682.3	4033.5	2858.7	2536.7	2473.6	2346.4	2124.5	1889.5	1838.4
47.5°	10078.4	9438.8	6997.8	3835.5	2627.0	2426.9	2398.6	2248.5	2036.3	1815.5	1767.7
50°	10481.9	9807.5	7182.7	3651.7	2404.0	2317.0	2267.0	2109.2	1912.3	1728.5	1693.7
52.5°	10768.0	10126.2	7275.1	3631.0	2201.7	2169.1	2113.6	1965.6	1807.9	1665.4	1624.1
55°	10988.9	10300.3	7195.7	3510.3	2010.2	1983.0	1925.4	1834.0	1739.4	1606.7	1579.5
57.5°	11108.5	10379.7	7014.1	2961.0	1806.8	1760.0	1752.4	1732.8	1650.2	1518.6	1497.9
60°	11134.6	10253.5	6602.9	2251.7	1593.6	1563.2	1620.8	1595.8	1521.8	1423.9	1394.5
62.5°	11032.4	9983.7	5822.9	1683.9	1416.3	1466.3	1525.1	1487.0	1401.1	1305.3	1286.9
65°	10663.6	9364.8	4692.7	1310.8	1334.7	1420.7	1472.9	1427.2	1322.8	1214.0	1202.0
67.5°	9942.4	8401.0	3089.3	1179.2	1296.6	1382.6	1441.3	1368.4	1262.9	1145.4	1131.3
70°	8590.3	6641.0	1471.8	1099.8	1223.8	1308.6	1355.4	1272.7	1170.5	1055.2	1039.9
72.5°	6634.4	4513.2	812.6	1012.7	1133.5	1211.8	1245.5	1147.6	1053.0	1005.1	1000.8
75°	3993.3	1939.5	734.3	926.8	1017.1	1090.0	1149.8	1075.8	993.2	899.6	875.7
77.5°	1318.4	563.5	690.7	824.5	926.8	1014.9	1043.2	971.4	868.1	788.6	782.1
80°	462.3	472.1	644.0	686.4	807.1	881.1	912.7	830.0	781.0	698.4	682.0
82.5°	376.4	423.2	520.0	517.8	637.4	724.5	772.3	751.7	687.5	621.1	614.6
85°	307.8	387.3	329.6	362.2	456.9	551.5	642.9	645.1	596.1	528.7	484.1
87.5°	182.7	198.0	164.3	184.9	241.5	310.0	359.0	342.7	280.6	237.1	231.7
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)