

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: P197022

Luminaire Tested: **NAV-AF-06-D-UNV-SL2-8030-600-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P197022
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24258)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: LUMARK
Catalog Number: NAV-AF-06-D-UNV-SL2-8030-600-HSS
Description: NAVION ROADWAY AND AREA LUMINAIRE
(6) 80 CRI, 3000K, 615mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE II SPILL
LIGHT ELIMINATOR OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 15798 lumens
Efficiency: N/A
Efficacy: 81.9 lumens/watt
Luminous Opening: Rectangular (W 1' x L: 1.5' x H: 0')
IES Classification: Type II - Medium - Semi-Cutoff
BUG Rating: B2 - U0 - G3

Input Watts (W): 193
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

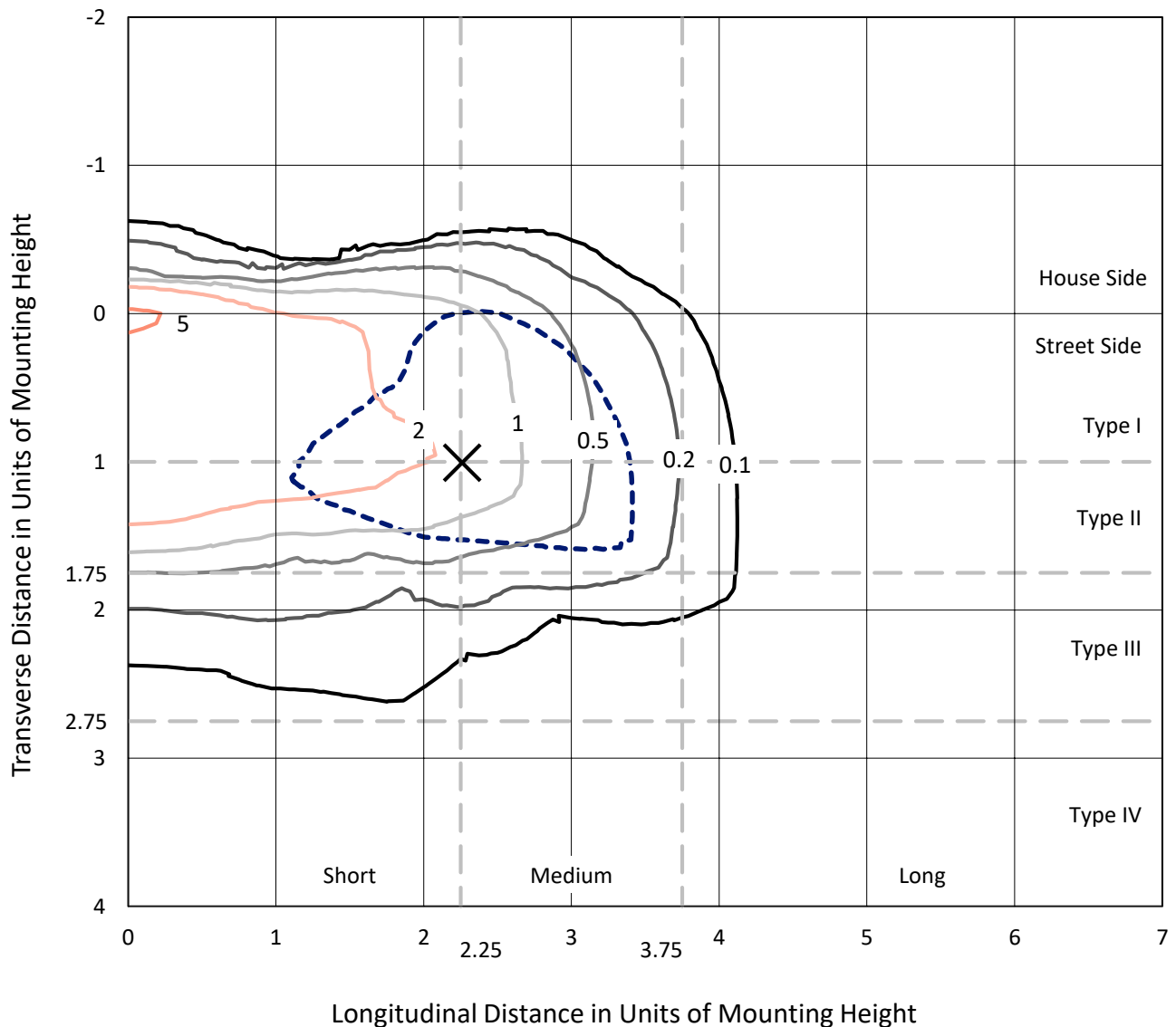


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Iso-Footcandle Lines of Horizontal Illumination

✕ Max cd
 - - - 1/2 Max cd

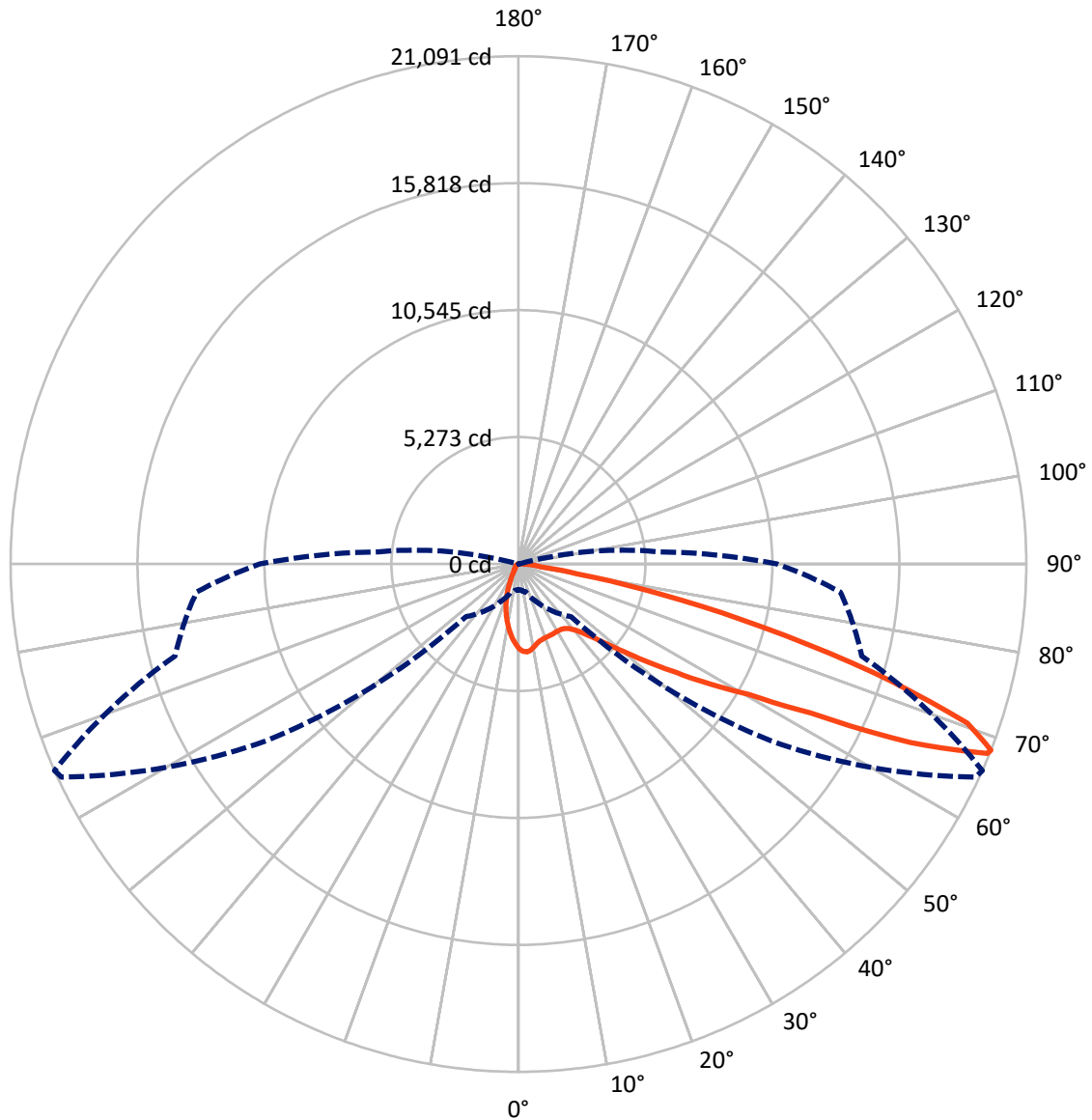


Based on 25 foot mounting height. Maximum calculated value = 5.6 fc
 Type II - Medium - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 66-Deg Lateral - - - Horizontal Cone Through 68-Deg Vertical

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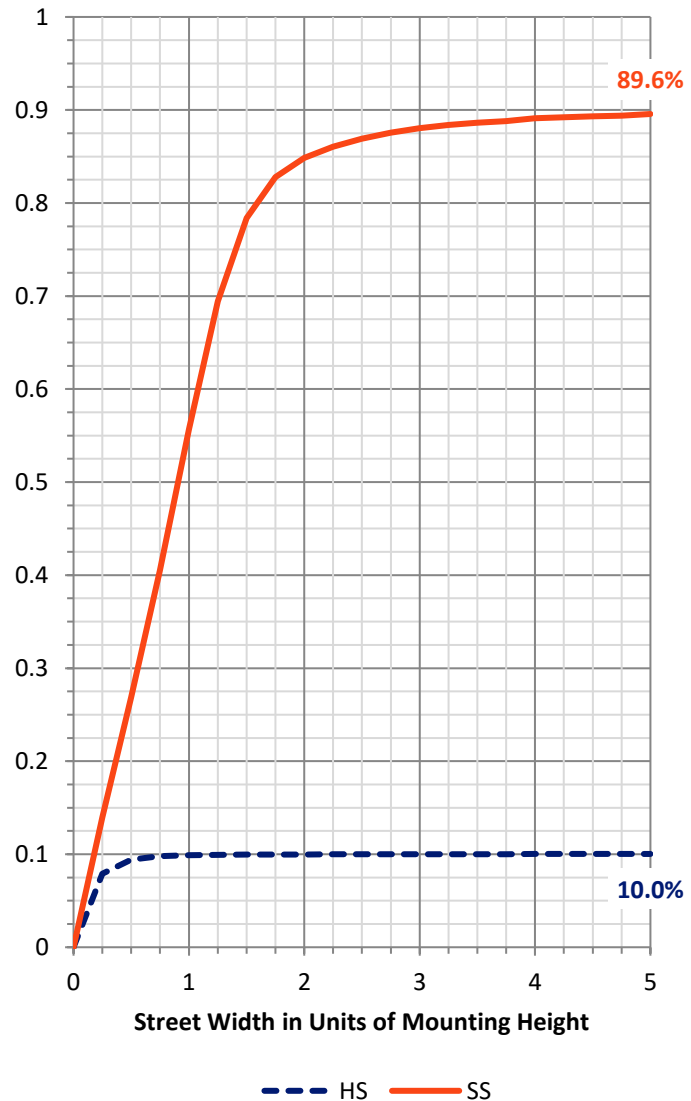
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1600.2	0.0	1600.2
	% Fixture	10.1	0.0	10.1
Street Side	Lumens	14197.8	0.0	14197.8
	% Fixture	89.9	0.0	89.9
Total	Lumens	15798.0	0.0	15798.0
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.5	1.8
10°-20°	620.8	3.9
20°-30°	899.6	5.7
30°-40°	1377.2	8.7
40°-50°	2355.5	14.9
50°-60°	3684.7	23.3
60°-70°	4242.8	26.9
70°-80°	2123.2	13.4
80°-90°	205.6	1.3
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°	15798.0	100.0
0°-180°	15798.0	100.0

Coefficient of Utilization



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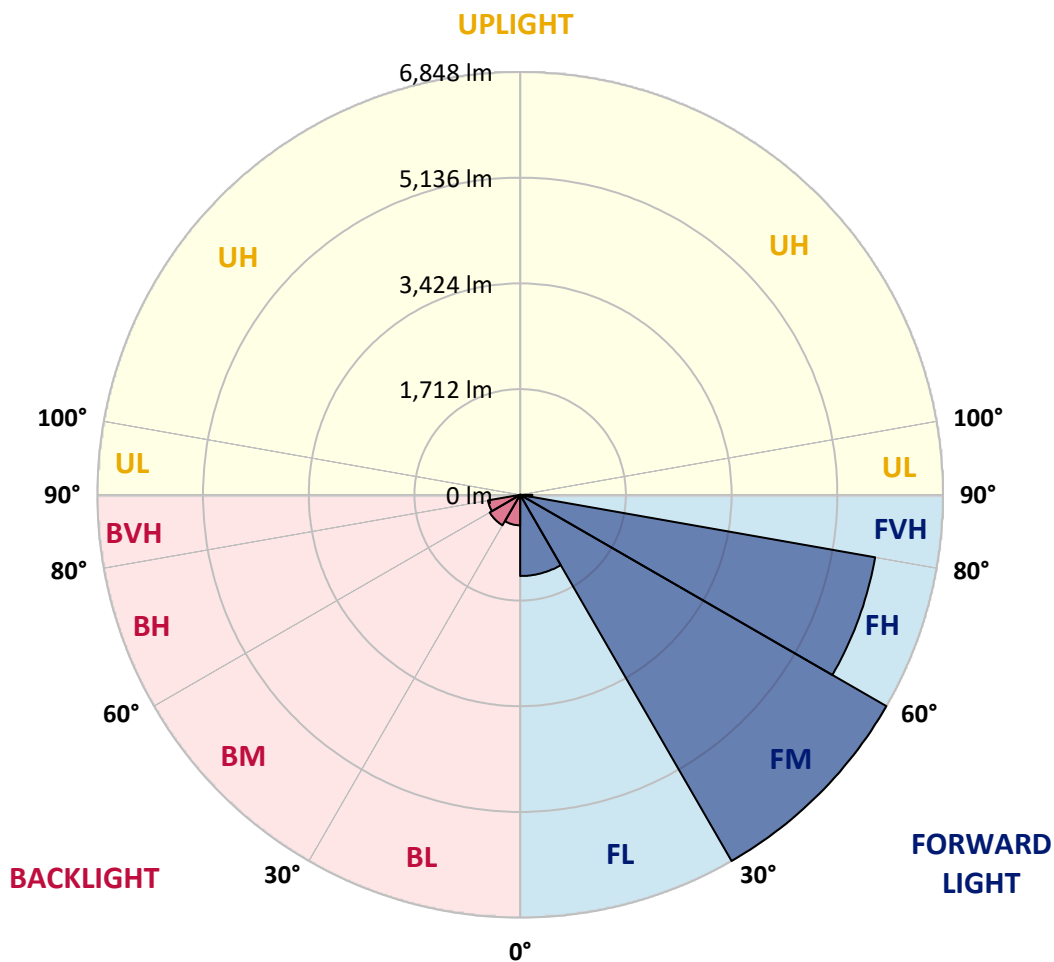
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	1315.1	8.3			
FM (30°-60°)	6847.6	43.3			
FH (60°-80°)	5837.3	36.9			G3/7500
FVH (80°-90°)	197.8	1.3			G2/225
BL (0°-30°)	493.9	3.1	B1/500		
BM (30°-60°)	569.8	3.6	B1/1000		
BH (60°-80°)	528.7	3.3	B2/1000		G2/1000
BVH (80°-90°)	7.8	0.0			G0/10
UL (90°-100°)	0.0	0.0		U0/0	
UH (100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type II Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	66°	75°	85°
0°	3519.6	3519.6	3519.6	3519.6	3519.6	3519.6	3519.6	3519.6	3519.6	3519.6	3519.6
2.5°	3702.0	3704.4	3703.2	3706.9	3704.4	3685.8	3666.0	3623.8	3627.5	3573.0	3512.2
5°	3441.5	3462.6	3483.7	3504.8	3555.6	3600.3	3653.6	3666.0	3666.0	3618.9	3529.6
7.5°	3176.1	3177.4	3200.9	3229.4	3297.7	3379.5	3503.5	3615.1	3617.6	3630.0	3532.0
10°	2976.4	2982.6	2998.8	3029.8	3098.0	3178.6	3317.5	3492.4	3506.0	3597.8	3507.2
12.5°	2821.4	2828.9	2846.2	2882.2	2944.2	3027.3	3173.6	3373.3	3391.9	3566.8	3499.8
15°	2702.4	2712.3	2725.9	2761.9	2828.9	2916.9	3076.9	3293.9	3316.3	3554.4	3523.4
17.5°	2652.8	2652.8	2651.5	2676.3	2743.3	2832.6	3000.0	3251.8	3280.3	3564.3	3563.1
20°	2673.8	2670.1	2644.1	2637.9	2678.8	2768.1	2939.2	3224.5	3256.7	3582.9	3611.4
22.5°	2785.5	2778.0	2719.7	2671.4	2659.0	2718.5	2898.3	3205.9	3244.3	3621.3	3675.9
25°	3022.3	3000.0	2919.4	2810.3	2712.3	2706.1	2869.8	3196.0	3236.9	3666.0	3746.6
27.5°	3329.9	3323.7	3194.7	3048.4	2859.9	2747.0	2861.1	3188.5	3229.4	3698.2	3803.6
30°	3711.9	3714.4	3565.5	3374.5	3089.3	2862.3	2888.4	3184.8	3227.0	3700.7	3828.5
32.5°	4106.3	4108.7	3984.7	3780.1	3403.1	3060.8	2965.3	3202.2	3240.6	3690.8	3827.2
35°	4485.7	4489.5	4415.1	4250.1	3822.3	3336.1	3110.4	3261.7	3289.0	3697.0	3824.7
37.5°	4965.7	4980.6	4888.8	4735.0	4348.1	3740.4	3347.3	3382.0	3404.3	3747.8	3843.3
40°	5784.2	5764.4	5501.5	5241.0	4918.6	4232.8	3689.6	3589.1	3596.5	3879.3	3914.0
42.5°	6737.9	6713.1	6262.9	5814.0	5505.2	4826.8	4127.3	3906.6	3905.3	4100.1	4067.8
45°	7558.9	7544.0	7070.3	6471.3	6155.0	5482.9	4666.8	4364.2	4349.3	4482.0	4348.1
47.5°	8141.8	8129.4	7771.0	7170.7	6906.6	6204.6	5340.2	4988.0	4957.0	4981.8	4803.2
50°	8198.9	8185.2	8060.0	7674.3	7784.6	7263.8	6172.4	5805.3	5765.6	5727.2	5491.5
52.5°	7665.6	7664.3	7730.1	7705.3	8399.8	8626.7	7193.1	6816.1	6768.9	6671.0	6436.6
55°	6575.5	6569.3	6818.5	7180.7	8386.1	10033.1	8749.5	8019.0	7957.0	7761.1	7453.5
57.5°	4804.5	4772.2	5293.1	6060.8	7797.0	10648.2	11221.2	9513.5	9410.5	8789.2	8315.4
60°	2652.8	2665.2	3334.9	4243.9	6401.8	10526.7	13495.7	11255.9	10985.6	9675.9	9198.5
62.5°	1487.0	1518.0	2016.5	2758.2	4081.4	9540.7	14716.0	14254.7	13603.6	10710.2	10314.6
65°	1124.8	1143.5	1394.0	2128.2	2573.4	6667.2	14910.7	18447.8	17885.9	12277.8	12091.8
67.5°	1059.1	1074.0	1196.8	1764.8	2343.9	3457.6	13444.8	20928.1	20998.8	14415.9	13468.4
68°	1066.6	1085.2	1207.9	1697.8	2340.2	3093.0	12819.8	20940.5	21090.6	14760.7	13421.3
70°	979.7	984.7	1277.4	1665.6	2268.3	2437.0	9274.1	19505.6	19774.8	15171.2	12183.6
72.5°	374.5	375.8	573.0	1442.3	2376.2	2450.6	4671.8	15416.7	15430.4	13203.0	9498.6
75°	194.7	163.7	179.8	451.4	2269.5	2388.6	2343.9	10526.7	10461.0	8929.3	5820.2
77.5°	133.9	114.1	120.3	156.3	943.8	2387.4	1692.9	6053.3	6039.7	3798.7	1660.6
80°	75.7	65.7	71.9	131.5	331.1	2241.0	1577.5	2601.9	2451.8	667.2	269.1
82.5°	38.4	32.2	38.4	110.4	205.9	1410.1	1534.1	1020.7	909.1	158.7	174.9
85°	9.9	9.9	18.6	76.9	127.7	462.6	1375.4	736.7	662.3	69.5	124.0
87.5°	2.5	1.2	7.4	28.5	45.9	100.5	762.7	410.5	353.5	36.0	71.9
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°	3519.6	3519.6	3519.6	3519.6	3519.6	3519.6	3519.6	3519.6	3519.6	3519.6	3519.6
2.5°	3487.4	3452.7	3384.5	3307.6	3253.0	3193.5	3158.8	3116.6	3084.3	3055.8	3076.9
5°	3475.0	3408.0	3256.7	3086.8	2944.2	2807.8	2706.1	2609.3	2536.2	2490.3	2508.9
7.5°	3442.8	3343.5	3098.0	2832.6	2599.4	2379.9	2201.3	2041.3	1917.3	1850.4	1871.4
10°	3388.2	3248.0	2918.2	2549.8	2223.7	1913.6	1648.2	1410.1	1230.3	1145.9	1165.8
12.5°	3348.5	3163.7	2732.1	2277.0	1847.9	1407.6	1055.4	782.6	642.4	558.1	565.5
15°	3331.1	3098.0	2558.5	1989.3	1437.4	904.1	570.5	413.0	364.6	347.3	348.5
17.5°	3333.6	3045.9	2393.6	1690.4	1023.2	519.6	349.7	315.0	307.6	303.8	303.8
20°	3339.8	2993.8	2222.4	1379.1	654.8	334.8	291.4	280.3	276.6	271.6	272.8
22.5°	3358.4	2954.1	2050.0	1066.6	403.1	272.8	258.0	248.0	241.8	234.4	235.6
25°	3386.9	2924.4	1880.1	767.7	284.0	238.1	224.5	210.8	199.7	191.0	192.2
27.5°	3404.3	2882.2	1699.1	523.4	235.6	208.4	189.7	171.1	158.7	151.3	150.1
30°	3391.9	2814.0	1493.2	343.5	208.4	179.8	157.5	136.4	124.0	117.8	117.8
32.5°	3358.4	2725.9	1266.2	250.5	184.8	155.0	127.7	109.1	100.5	96.7	98.0
35°	3320.0	2634.2	1024.4	212.1	166.2	131.5	104.2	89.3	85.6	84.3	84.3
37.5°	3298.9	2554.8	792.5	192.2	148.8	109.1	85.6	76.9	73.2	73.2	73.2
40°	3322.5	2494.0	586.6	177.3	131.5	90.5	71.9	65.7	64.5	64.5	64.5
42.5°	3422.9	2472.9	429.1	164.9	114.1	75.7	62.0	57.0	55.8	57.0	57.0
45°	3618.9	2518.8	324.9	152.5	98.0	62.0	53.3	49.6	49.6	50.8	50.8
47.5°	3951.2	2636.6	266.6	140.1	81.9	52.1	45.9	43.4	43.4	44.6	44.6
50°	4467.1	2854.9	239.4	126.5	68.2	44.6	38.4	37.2	37.2	38.4	39.7
52.5°	5250.9	3270.4	225.7	112.9	55.8	37.2	32.2	31.0	32.2	33.5	33.5
55°	6122.8	3802.4	209.6	99.2	47.1	31.0	26.0	26.0	27.3	29.8	29.8
57.5°	6935.1	4315.8	194.7	81.9	40.9	24.8	21.1	21.1	23.6	26.0	26.0
60°	7793.3	4819.4	174.9	65.7	34.7	19.8	17.4	17.4	21.1	23.6	24.8
62.5°	8853.7	5404.7	148.8	52.1	27.3	14.9	12.4	16.1	19.8	23.6	23.6
65°	10386.5	6132.7	116.6	40.9	21.1	11.2	9.9	14.9	18.6	22.3	23.6
67.5°	10943.4	6039.7	88.1	33.5	16.1	8.7	8.7	13.6	18.6	22.3	22.3
68°	10740.0	5836.3	84.3	32.2	14.9	8.7	8.7	13.6	18.6	22.3	22.3
70°	9358.4	4771.0	69.5	24.8	12.4	7.4	7.4	12.4	18.6	21.1	22.3
72.5°	7007.0	3169.9	59.5	16.1	11.2	7.4	6.2	12.4	17.4	21.1	21.1
75°	4019.4	1315.8	50.8	12.4	9.9	6.2	6.2	11.2	17.4	21.1	21.1
77.5°	1136.0	307.6	40.9	9.9	8.7	6.2	5.0	11.2	16.1	19.8	19.8
80°	208.4	91.8	32.2	8.7	7.4	6.2	5.0	11.2	16.1	19.8	19.8
82.5°	137.7	43.4	23.6	8.7	7.4	6.2	5.0	9.9	14.9	18.6	18.6
85°	102.9	31.0	14.9	8.7	7.4	6.2	5.0	9.9	14.9	18.6	18.6
87.5°	57.0	13.6	11.2	9.9	8.7	6.2	5.0	8.7	13.6	17.4	17.4
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)