

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: P270438

Luminaire Tested: **NAV-AF-03-D-UNV-SL3-7027-1200**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P270438
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P24262)
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-SL3-7027-1200
Description: NAVION ROADWAY AND AREA LUMINAIRE
(3) 70 CRI, 2700K, 1200mA LIGHTSQUARES WITH 16 LEDS EACH AND TYPE III
SPILL LIGHT ELIMINATOR OPTICS
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 17241.7 lumens
Efficiency: N/A
Efficacy: 90.3 lumens/watt
Luminous Opening: Rectangular (W 0.5' x L: 1.5' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B2 - U0 - G3

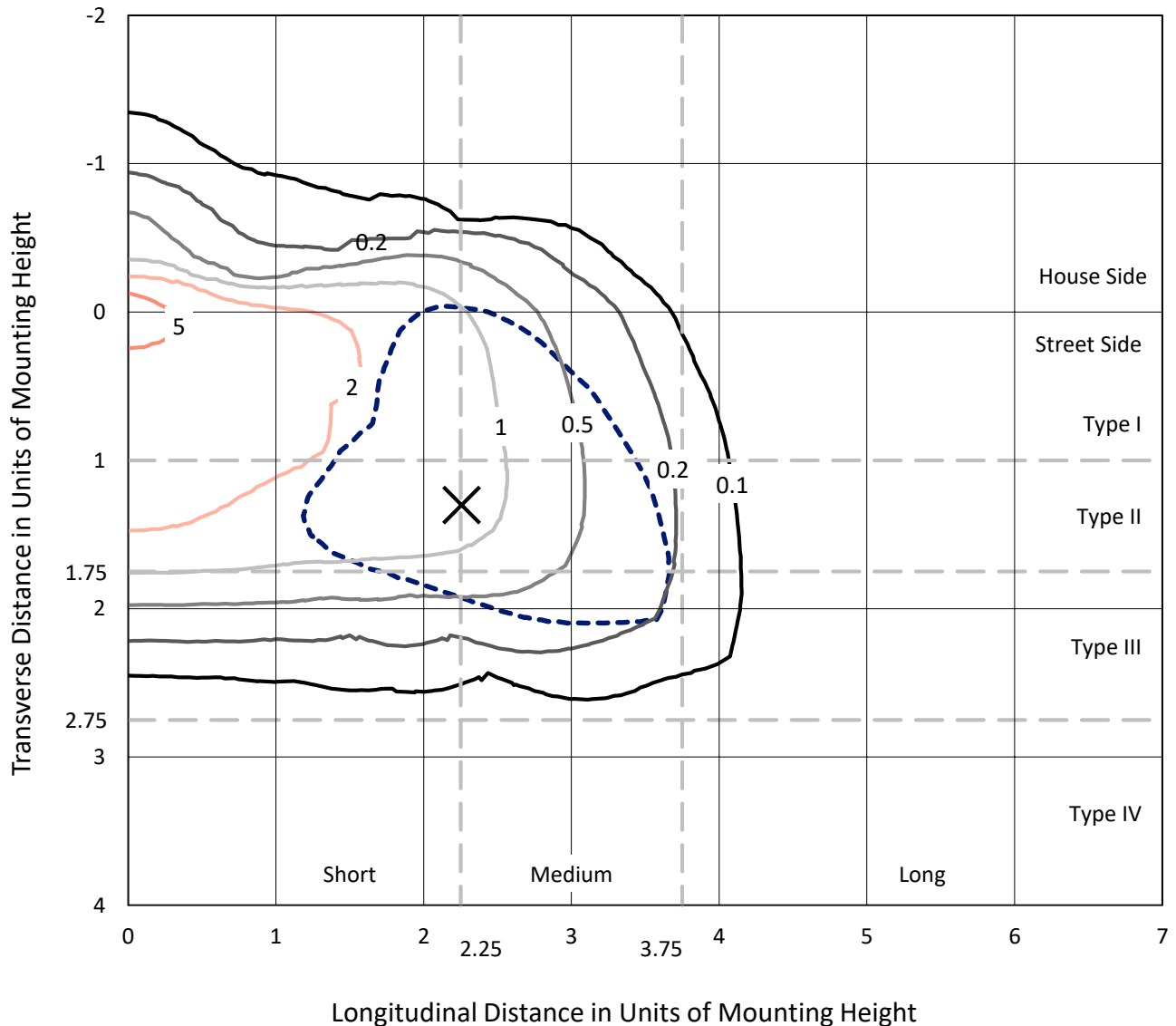
Input Watts (W): 191
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

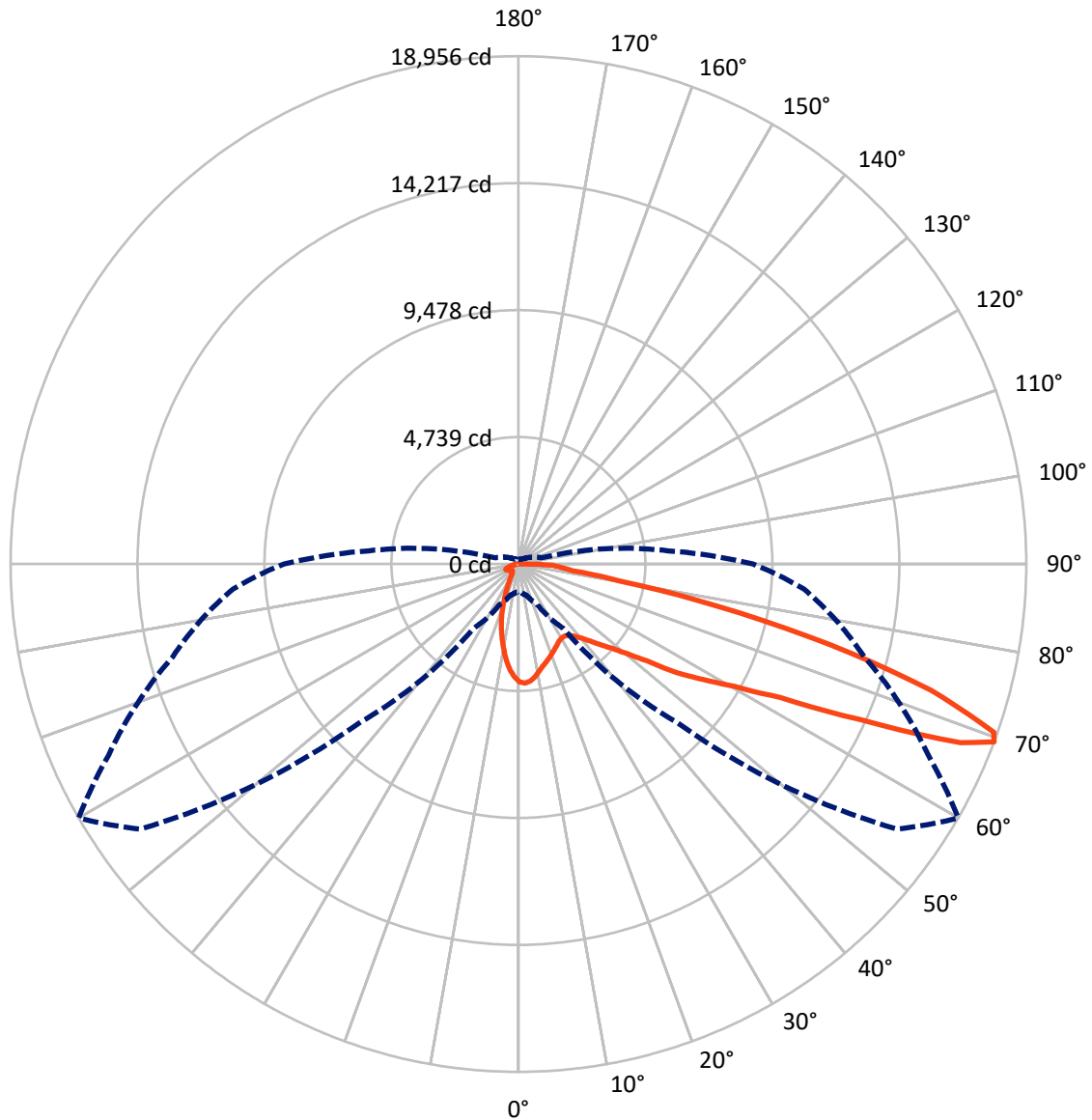
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 7 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 60-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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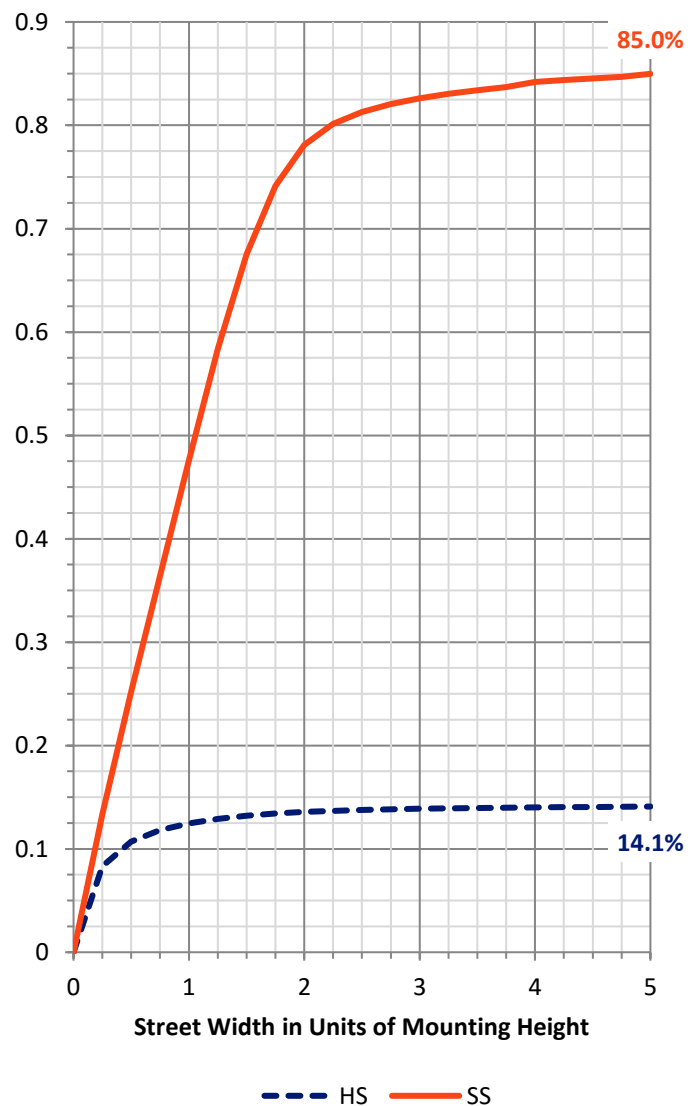
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2459.2	0.0	2459.2
	% Fixture	14.3	0.0	14.3
Street Side	Lumens	14782.5	0.0	14782.5
	% Fixture	85.7	0.0	85.7
Total	Lumens	17241.7	0.0	17241.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	373.2	2.2
10°-20°	799.1	4.6
20°-30°	1019.4	5.9
30°-40°	1402.8	8.1
40°-50°	2272.2	13.2
50°-60°	3566.1	20.7
60°-70°	4754.3	27.6
70°-80°	2644.5	15.3
80°-90°	410.1	2.4
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°	17241.7	100.0
0°-180°	17241.7	100.0

Coefficient of Utilization



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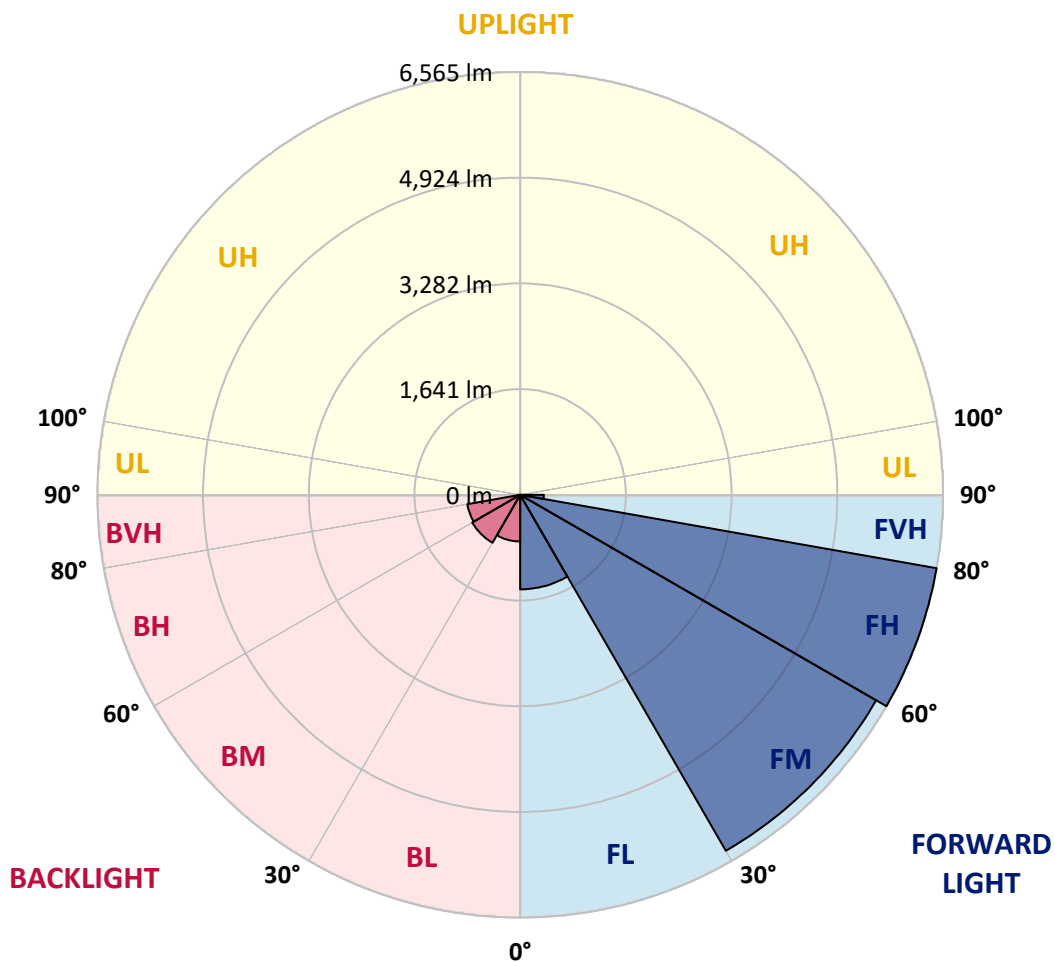
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	1466.9	8.5			
FM	(30°-60°)	6382.0	37.0			
FH	(60°-80°)	6565.0	38.1			G3/7500
FVH	(80°-90°)	368.6	2.1			G3/500
BL	(0°-30°)	724.7	4.2	B2/1000		
BM	(30°-60°)	859.1	5.0	B1/1000		
BH	(60°-80°)	833.8	4.8	B2/1000		G2/1000
BVH	(80°-90°)	41.6	0.2			G1/100
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B2-U0-G3

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	60°	65°	75°	85°
0°	4399.3	4399.3	4399.3	4399.3	4399.3	4399.3	4399.3	4399.3	4399.3	4399.3	4399.3
2.5°	4516.5	4528.6	4528.6	4518.7	4513.2	4481.0	4462.3	4449.0	4425.8	4382.7	4344.1
5°	4355.1	4378.2	4388.2	4392.6	4421.4	4411.4	4412.6	4403.8	4383.8	4337.3	4274.3
7.5°	4058.7	4063.2	4080.8	4110.7	4180.4	4229.0	4268.8	4276.6	4272.1	4237.8	4149.5
10°	3766.9	3774.6	3795.6	3846.5	3912.7	3982.5	4068.8	4104.0	4130.5	4119.5	4007.9
12.5°	3524.7	3525.8	3549.1	3607.7	3681.8	3769.1	3886.2	3941.6	4004.6	4029.9	3905.0
15°	3291.4	3306.9	3328.9	3399.7	3491.5	3602.2	3736.9	3813.2	3896.2	3969.3	3825.4
17.5°	3114.6	3126.7	3139.9	3198.5	3304.8	3442.9	3609.8	3691.7	3801.1	3912.7	3743.6
20°	3017.2	3021.7	3011.7	3040.5	3130.1	3279.3	3472.8	3571.1	3701.6	3858.6	3659.7
22.5°	2997.4	2997.4	2960.9	2955.3	2995.0	3121.3	3331.3	3451.7	3610.9	3821.0	3584.4
25°	3090.2	3083.6	3015.0	2952.0	2937.6	3001.7	3196.3	3344.5	3533.6	3820.0	3528.1
27.5°	3266.0	3257.2	3172.1	3065.8	2974.1	2946.5	3092.4	3243.9	3472.8	3857.5	3499.3
30°	3485.0	3481.7	3395.4	3262.7	3111.2	2968.5	3051.5	3191.9	3431.9	3927.2	3498.2
32.5°	3724.8	3709.5	3656.3	3523.6	3326.9	3091.2	3075.8	3194.2	3420.7	4028.9	3523.6
35°	3980.2	3969.3	3956.0	3822.2	3601.0	3308.0	3183.1	3270.4	3475.0	4170.4	3595.5
37.5°	4305.2	4293.1	4315.3	4169.4	3927.2	3592.1	3364.4	3423.0	3585.6	4376.1	3729.3
40°	4883.5	4848.2	4786.2	4561.9	4307.6	3940.4	3626.5	3635.4	3774.6	4651.3	3943.7
42.5°	5833.2	5719.4	5413.1	5000.8	4708.8	4345.1	3968.1	3926.0	4035.5	5015.1	4255.5
45°	6785.2	6657.0	6139.6	5479.4	5124.6	4779.6	4390.5	4289.9	4360.6	5438.6	4656.9
47.5°	7400.0	7336.8	6753.2	5958.2	5560.1	5252.7	4873.6	4707.7	4758.6	5918.5	5152.1
50°	7580.2	7526.0	7067.1	6333.1	5971.5	5824.4	5471.8	5251.8	5260.6	6478.9	5745.9
52.5°	7445.2	7423.1	7119.1	6565.3	6349.6	6427.0	6299.9	5993.6	5920.5	7093.6	6389.4
55°	7265.0	7272.8	7155.5	6798.5	6734.4	6988.6	7383.3	7136.8	6827.2	7733.8	7059.4
57.5°	6697.9	6703.4	7010.7	7242.9	7468.5	7775.9	8226.9	8123.1	7762.6	8424.8	7810.1
60°	5393.2	5436.4	6120.7	7151.1	8307.6	9327.0	9437.7	9258.6	8757.7	9220.9	8786.4
62.5°	3853.1	3891.7	4684.5	6208.0	8209.3	11082.7	11673.1	10961.2	10107.5	10411.6	10159.7
65°	2024.4	2017.8	2631.3	4289.9	6914.6	11489.6	15195.6	13983.9	12381.9	12049.1	11486.3
67.5°	1131.1	1167.5	1405.3	2163.7	4506.4	10112.0	17445.7	17802.7	15543.9	13348.2	11428.9
69°	1045.9	1058.1	1217.4	1672.9	2937.6	8343.0	17252.0	18955.9	16877.4	13353.8	10692.4
70°	1016.1	1029.4	1174.2	1541.2	2467.7	6836.0	16547.9	18821.0	17201.3	13057.5	10022.5
72.5°	911.1	928.7	1069.2	1385.4	2079.7	3523.6	13329.4	16108.9	15581.6	11412.2	7771.3
75°	777.3	807.0	1019.3	1375.3	1970.3	2240.1	8889.2	12001.5	11596.8	8161.7	4409.2
77.5°	321.8	325.0	445.6	1007.2	2067.4	2143.8	4777.4	7602.3	6729.9	3578.8	1327.9
80°	224.4	220.1	222.2	294.0	1668.4	2158.2	2451.1	3866.3	3005.1	944.2	621.4
82.5°	189.1	186.8	195.7	184.6	564.9	2449.0	2049.8	2015.5	1415.2	508.6	296.4
85°	125.0	121.6	160.3	168.1	268.7	1944.8	2204.6	1584.4	1054.8	271.9	126.0
87.5°	60.8	62.0	91.7	113.8	142.7	615.9	2111.7	1252.6	814.9	118.2	50.8
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°	4399.3	4399.3	4399.3	4399.3	4399.3	4399.3	4399.3	4399.3	4399.3	4399.3	4399.3
2.5°	4328.6	4295.3	4265.5	4228.0	4199.1	4174.9	4141.6	4140.6	4135.0	4142.8	4145.0
5°	4232.4	4177.1	4092.9	3999.1	3932.7	3845.4	3760.2	3731.5	3699.4	3696.0	3706.0
7.5°	4087.5	4001.2	3857.5	3713.9	3570.0	3423.0	3283.8	3213.0	3144.3	3123.3	3133.4
10°	3926.0	3816.5	3596.5	3362.1	3159.9	2941.0	2728.7	2591.6	2466.7	2413.6	2426.9
12.5°	3800.0	3660.8	3351.1	3047.1	2744.1	2430.2	2150.5	1879.6	1675.0	1583.3	1588.8
15°	3691.7	3513.7	3121.3	2716.6	2337.3	1907.2	1519.2	1205.2	1026.0	959.7	957.5
17.5°	3574.4	3358.9	2881.3	2409.2	1917.2	1385.4	1017.2	831.4	760.7	738.5	738.5
20°	3449.5	3199.7	2630.2	2074.1	1474.8	967.5	765.0	693.2	666.7	660.1	658.9
22.5°	3333.4	3043.7	2378.3	1717.0	1066.9	734.2	651.2	623.6	619.1	624.7	624.7
25°	3241.7	2906.6	2122.8	1341.1	776.1	614.7	579.3	576.1	592.6	612.6	615.9
27.5°	3173.2	2783.9	1870.7	979.6	610.3	535.1	523.0	537.4	576.1	615.9	623.6
30°	3125.7	2678.9	1568.9	704.4	508.6	468.7	474.3	499.7	558.3	619.1	635.7
32.5°	3104.6	2593.8	1264.9	540.7	434.5	412.4	426.8	459.9	520.7	581.6	601.4
35°	3124.5	2531.9	984.1	449.0	380.3	363.8	380.3	414.6	454.5	484.2	496.5
37.5°	3196.3	2509.8	740.7	397.9	344.9	328.4	341.6	364.8	382.6	393.5	399.1
40°	3347.9	2533.0	580.5	371.4	325.0	306.2	309.6	320.6	332.8	341.6	342.8
42.5°	3588.9	2609.2	516.3	361.6	312.9	288.5	283.1	290.8	304.0	316.3	318.4
45°	3909.5	2736.3	509.7	364.8	307.4	274.3	263.2	270.8	288.5	308.5	311.8
47.5°	4324.1	2937.6	540.7	382.6	310.6	266.4	249.9	257.6	280.8	307.4	311.8
50°	4814.9	3216.2	598.1	409.1	326.2	266.4	244.3	250.9	275.3	305.2	309.6
52.5°	5393.2	3604.3	657.9	435.6	348.3	276.4	246.6	245.4	267.5	295.3	300.8
55°	6031.2	4086.4	715.3	458.9	360.4	289.7	252.1	238.8	256.5	278.7	283.1
57.5°	6781.8	4746.5	815.9	481.0	367.0	299.7	258.7	232.2	242.2	257.6	260.9
60°	7800.2	5716.1	1011.6	518.5	379.3	304.0	259.8	225.6	224.4	235.4	236.7
62.5°	9127.9	6851.6	1198.5	562.8	403.6	305.2	255.4	221.2	210.1	213.3	213.3
65°	10072.2	7269.4	1144.4	600.3	425.6	304.0	250.9	217.7	199.1	193.4	193.4
67.5°	9534.9	6421.4	971.8	610.3	427.9	291.9	241.0	210.1	189.1	175.8	175.8
69°	8745.4	5628.7	892.2	592.6	410.2	277.4	230.0	202.3	182.4	166.9	166.9
70°	8102.1	5028.4	843.6	571.6	389.1	265.4	220.1	194.7	175.8	162.6	161.4
72.5°	6048.8	3355.6	720.9	493.1	319.5	224.4	192.3	173.6	158.1	149.3	149.3
75°	3191.9	1681.6	590.4	402.4	246.6	179.1	158.1	146.0	137.1	136.1	134.8
77.5°	1045.9	760.7	424.5	303.0	181.3	139.2	126.0	118.2	117.1	121.6	121.6
80°	564.9	454.5	273.1	204.5	126.0	103.9	97.2	96.2	99.5	106.1	106.1
82.5°	274.3	224.4	162.6	126.0	86.2	76.3	76.3	77.4	81.8	89.6	89.6
85°	118.2	106.1	94.1	70.7	53.1	47.5	54.2	59.6	63.1	68.5	70.7
87.5°	56.5	49.8	43.1	27.7	23.3	24.3	28.7	35.4	42.0	46.4	47.5
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)