

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: P237533

Luminaire Tested: **CTN-10-9-D-E1-T3-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P237533
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-26)
Test Lab: INNOVATION CENTER(G2)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: CTN-10-9-D-E1-T3-7030-HSS
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 3000K LEDS AND TYPE III OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 83385 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type III - Medium - Non-Cutoff
BUG Rating: B4 - U0 - G5

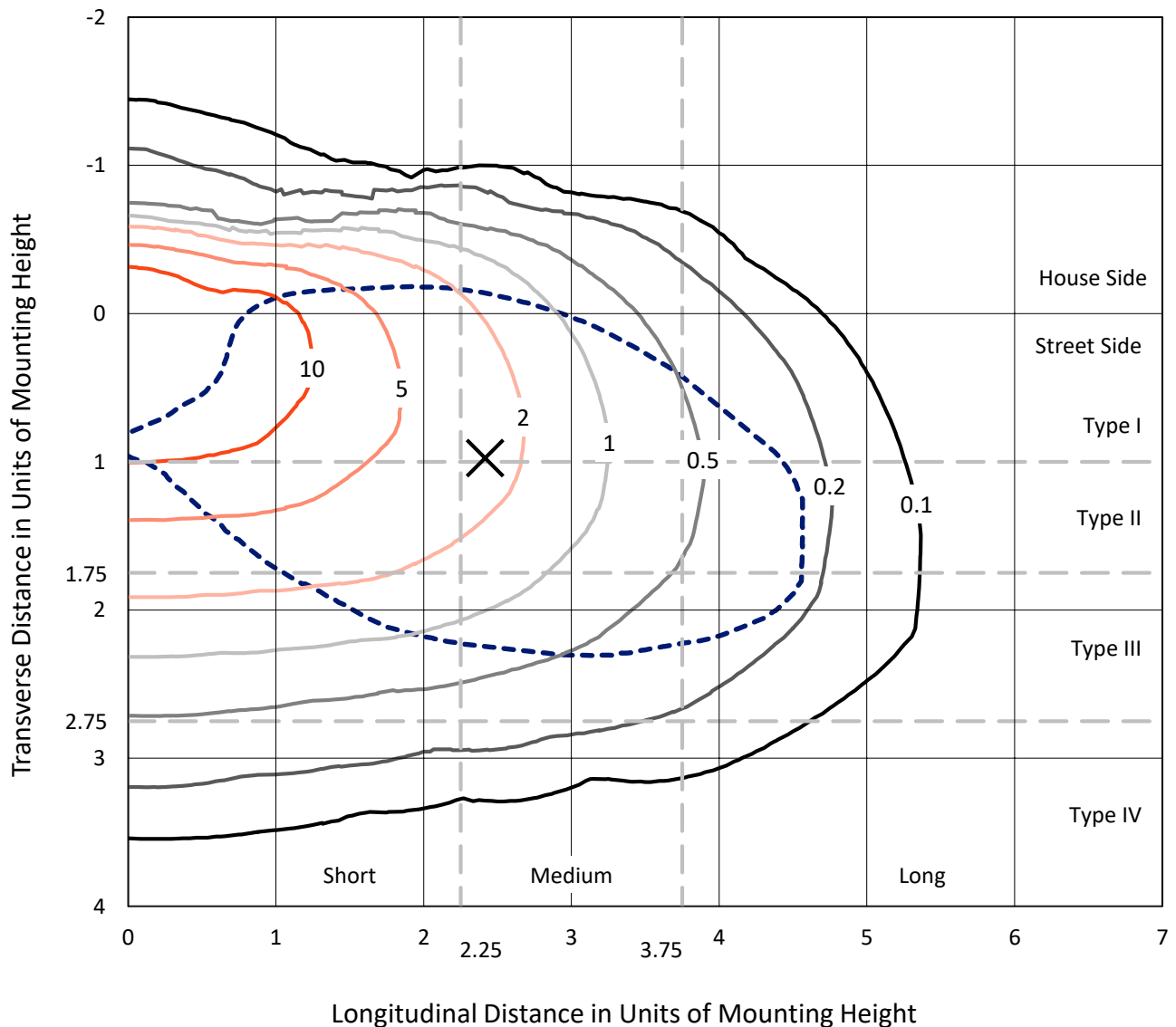
Input Watts (W): 760
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

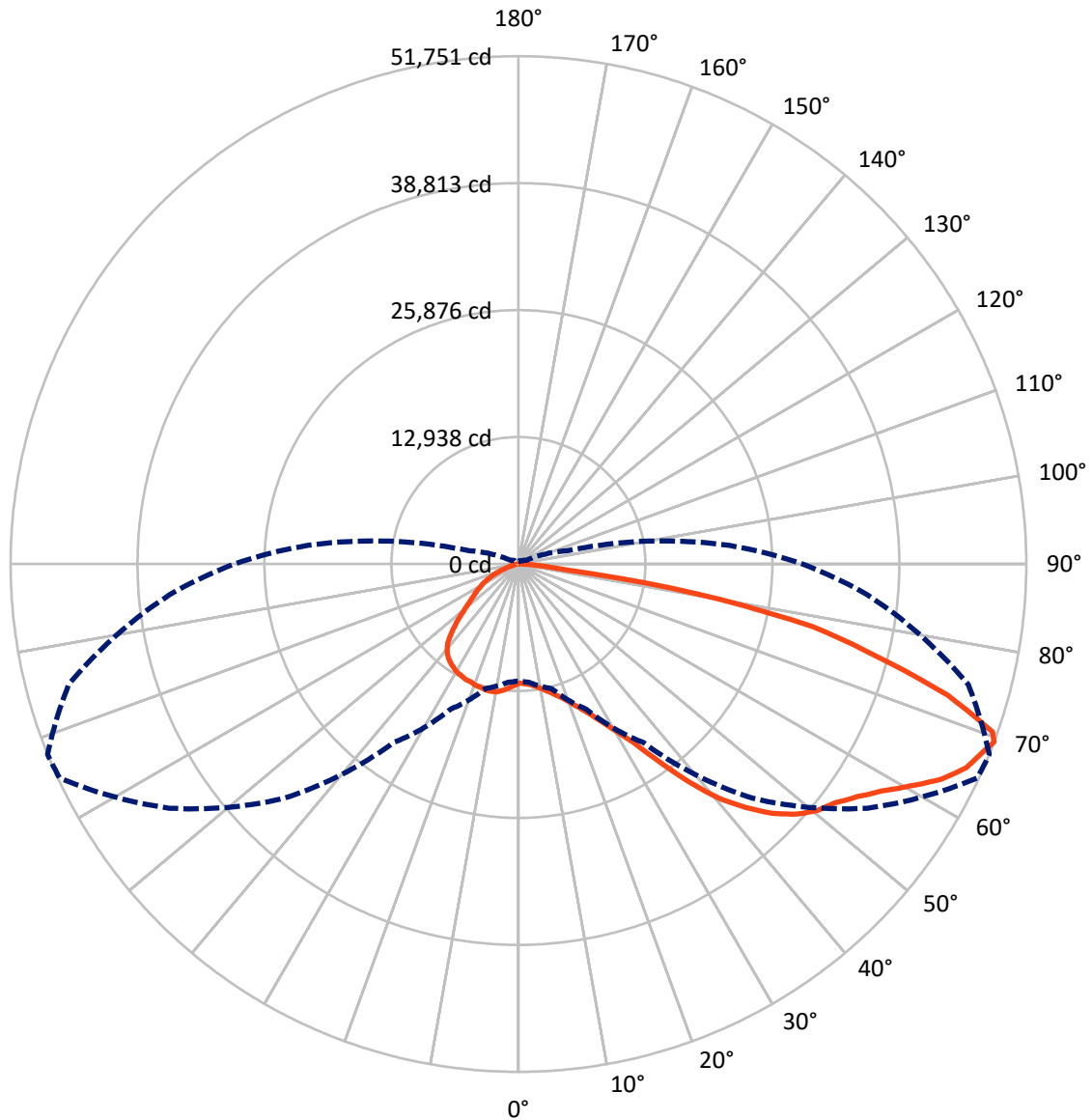
✕ Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 16.5 fc
 Type III - Medium - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 68-Deg Lateral - - - Horizontal Cone Through 69-Deg Vertical

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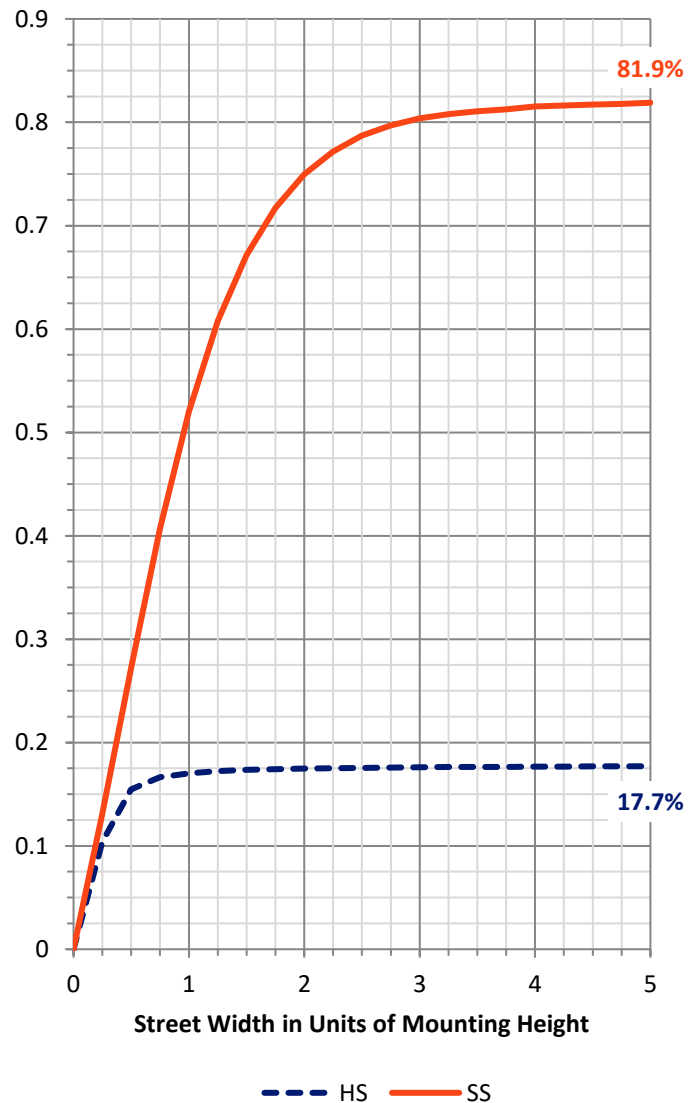
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	14964.6	0.0	14964.6
	% Fixture	17.9	0.0	17.9
Street Side	Lumens	68420.4	0.0	68420.4
	% Fixture	82.1	0.0	82.1
Total	Lumens	83385.0	0.0	83385.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1218.1	1.5
10°-20°	3822.3	4.6
20°-30°	6533.8	7.8
30°-40°	10067.8	12.1
40°-50°	14447.7	17.3
50°-60°	17388.5	20.9
60°-70°	18247.7	21.9
70°-80°	10571.5	12.7
80°-90°	1087.7	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°	83385.0	100.0
0°-180°	83385.0	100.0



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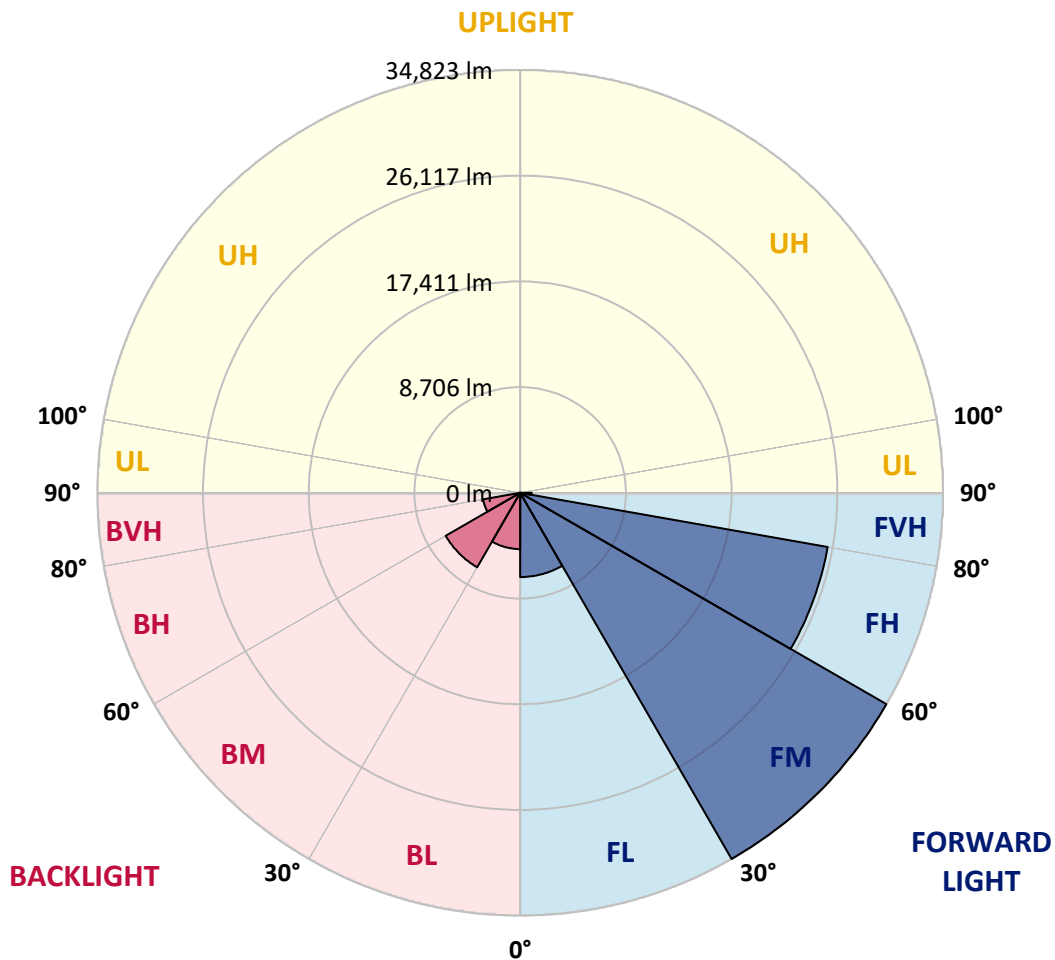
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	6937.2	8.3			
FM	(30°-60°)	34822.8	41.8			
FH	(60°-80°)	25715.0	30.8			G5
FVH	(80°-90°)	945.4	1.1			G5
BL	(0°-30°)	4636.9	5.6	B4/5000		
BM	(30°-60°)	7081.3	8.5	B4/8500		
BH	(60°-80°)	3104.1	3.7	B4/5000		G4/5000
BVH	(80°-90°)	142.4	0.2			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type III Medium





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	68°	75°	85°
0°	12128.8	12128.8	12128.8	12128.8	12128.8	12128.8	12128.8	12128.8	12128.8	12128.8	12128.8
2.5°	12264.6	12166.3	12177.9	12255.9	12024.8	12123.0	12062.3	12189.5	12209.7	12149.0	12203.9
5°	12507.3	12423.5	12420.6	12498.6	12241.5	12316.6	12221.2	12307.9	12333.9	12270.4	12365.7
7.5°	12978.2	12888.6	12871.3	12949.3	12622.8	12645.9	12515.9	12559.3	12582.4	12495.7	12591.0
10°	13654.3	13556.0	13492.5	13535.8	13168.9	13111.1	12888.6	12882.9	12917.5	12799.1	12952.2
12.5°	14411.2	14295.7	14203.2	14211.9	13792.9	13694.7	13400.0	13296.0	13319.1	13160.2	13345.1
15°	15234.6	15067.1	14980.4	14983.3	14512.4	14347.7	13969.2	13798.7	13784.3	13631.2	13738.1
17.5°	16225.6	16089.8	15980.1	15922.3	15422.4	15096.0	14645.3	14422.8	14341.9	14240.8	14185.9
20°	17390.0	17219.5	17103.9	17083.7	16471.2	16037.8	15439.8	15145.1	15049.7	14966.0	14720.4
22.5°	18687.2	18513.9	18355.0	18329.0	17678.9	17156.0	16352.8	15988.7	15904.9	15809.6	15318.4
25°	19883.3	19863.1	19686.9	19658.0	19031.0	18352.1	17410.2	16945.0	16945.0	16832.4	16078.3
27.5°	21218.1	21247.0	21088.1	21053.5	20464.1	19712.9	18591.9	18146.9	18239.4	18037.2	17034.6
30°	22625.2	22564.5	22521.2	22558.7	22012.7	21218.1	20050.9	19675.3	19819.8	19588.6	18317.4
32.5°	23884.9	23838.6	23867.5	24012.0	23619.1	22885.2	21882.7	21648.6	21787.3	21931.8	20617.2
35°	24881.6	24783.4	25147.4	25465.2	25352.6	24656.3	23850.2	24344.2	24725.6	25384.3	24006.2
37.5°	25759.9	25687.7	26129.7	26779.8	26921.4	26534.2	26285.8	27663.9	28100.2	28987.1	26979.2
40°	26199.1	26184.6	26727.8	27574.3	28149.3	28400.6	28836.9	30714.9	31350.5	31593.2	29241.4
42.5°	26057.5	26103.7	27063.0	28368.9	29299.2	30376.8	31255.2	33320.9	33904.5	33705.2	31223.4
45°	25661.7	25684.8	26658.5	28695.3	30295.9	32407.9	33580.9	35736.3	36253.4	35551.4	32800.9
47.5°	25112.8	25121.4	26150.0	28470.0	31110.7	34245.5	35586.0	37666.2	38085.2	37094.2	33936.3
50°	24370.2	24384.7	25612.6	28186.8	31812.8	35750.7	37154.9	39162.8	39486.4	38189.2	34918.6
52.5°	23431.3	23558.4	24901.8	27733.2	32251.9	36819.7	38342.3	40260.7	40419.6	39498.0	35788.3
55°	22347.8	22480.7	23997.5	27117.8	32422.4	37426.4	39174.4	41612.9	41867.1	40959.9	36496.1
57.5°	21065.0	21247.0	22844.8	26118.2	32023.7	37680.7	40020.9	43282.8	43626.6	42488.3	37224.2
60°	19577.1	19802.4	21483.9	24870.1	31102.0	37949.4	41604.2	45521.9	45920.6	44132.2	37859.8
62.5°	18022.7	18167.2	19686.9	23168.3	29625.7	38157.4	43308.8	48281.1	48315.8	45573.9	38212.3
65°	15942.5	16095.6	17456.4	21018.8	27409.7	37495.8	44169.8	50216.8	50112.8	46703.6	38093.8
67.5°	13561.8	13706.3	14818.6	18346.3	24367.3	35640.9	43875.1	50988.3	51057.6	47524.1	36958.4
69°	11909.2	12099.9	13148.7	16315.2	22217.8	33742.7	43381.0	51589.2	51751.0	47449.0	35643.8
70°	10496.4	10742.0	11738.7	14521.0	20397.6	32017.9	42427.6	51248.3	51259.8	46689.2	34433.3
72.5°	6856.0	7006.3	7179.6	9421.6	14674.1	25372.8	37544.9	45449.7	45750.2	41662.0	30105.3
75°	3391.9	3524.8	4172.0	4983.8	7546.5	16997.0	29767.2	37235.8	37804.9	35380.9	24664.9
77.5°	1872.2	1898.2	2126.4	3264.8	3912.0	7685.2	20345.6	29683.4	30680.2	28834.0	17713.6
80°	1167.2	1161.5	1213.5	1519.7	2192.9	3643.3	8592.4	16659.0	18450.3	15055.5	7000.5
82.5°	910.1	892.8	895.6	982.3	927.4	1716.2	3576.8	4850.9	4894.3	4345.3	2724.5
85°	465.2	525.8	624.1	653.0	548.9	933.2	1646.8	1915.5	1961.8	1719.1	1418.6
87.5°	156.0	158.9	167.6	164.7	147.3	320.7	609.6	710.7	632.7	358.3	485.4
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):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	12128.8	12128.8	12128.8	12128.8	12128.8	12128.8	12128.8	12128.8	12128.8	12128.8	12128.8
2.5°	12287.7	12261.7	12313.7	12432.1	12333.9	12423.5	12333.9	12634.4	12599.7	12579.5	12637.3
5°	12458.1	12455.3	12539.0	12729.7	12721.1	12880.0	12793.3	13090.9	13047.5	13041.8	13093.8
7.5°	12689.3	12744.2	12833.7	13030.2	13033.1	13163.1	13064.9	13298.9	13203.6	13180.4	13252.7
10°	13041.8	13056.2	13125.5	13261.3	13070.7	13128.4	12966.6	13151.6	13018.6	13004.2	13111.1
12.5°	13379.8	13400.0	13296.0	13252.7	13007.1	12932.0	12648.8	12747.1	12593.9	12579.5	12631.5
15°	13740.9	13605.2	13356.7	13215.1	12790.4	12518.8	12201.0	12007.4	11744.5	11623.2	11669.4
17.5°	14116.5	13853.6	13388.5	13044.7	12475.5	12079.7	11446.9	11117.6	10727.5	10528.2	10490.6
20°	14526.8	14157.0	13466.5	12958.0	12157.7	11377.6	10606.2	9852.1	9407.2	9202.0	9147.1
22.5°	14989.1	14538.4	13576.3	12669.1	11660.7	10713.1	9410.1	8459.5	7812.3	7613.0	7558.1
25°	15566.9	14966.0	13726.5	12596.8	11184.0	9626.7	8005.9	6928.3	6174.2	5870.8	5807.3
27.5°	16269.0	15555.3	13972.1	12253.0	10346.2	8416.2	6610.4	5371.0	4588.0	4229.8	4151.8
30°	17291.7	16309.4	14136.8	12050.8	9600.7	7159.4	5137.0	3753.0	3010.5	2747.6	2678.3
32.5°	19308.4	17603.8	14471.9	11585.6	8500.0	5697.5	3536.4	2302.7	1782.6	1632.4	1574.6
35°	22304.5	20042.2	14954.4	11033.8	7263.4	4053.5	2100.4	1334.8	1071.9	1017.0	999.7
37.5°	25034.8	22448.9	15887.6	10184.4	5639.7	2493.4	1216.3	855.2	788.7	797.4	797.4
40°	27094.7	24237.3	16976.8	9063.4	3825.3	1398.4	835.0	710.7	725.2	728.1	725.2
42.5°	29024.7	25875.5	17502.7	7826.8	2216.0	927.4	725.2	661.6	673.2	664.5	658.7
45°	30541.5	27048.5	17658.7	6162.6	1213.5	829.2	681.8	615.4	609.6	615.4	621.2
47.5°	31526.7	27765.0	17303.3	4718.0	915.9	771.4	655.8	583.6	569.2	609.6	606.7
50°	32257.7	28256.2	15925.2	3588.4	892.8	722.3	624.1	546.1	551.8	600.9	595.2
52.5°	32789.3	28383.3	14414.1	2877.6	852.3	687.6	595.2	528.7	522.9	560.5	563.4
55°	33211.1	28042.4	13472.2	2265.1	817.6	653.0	572.1	511.4	482.5	494.0	491.2
57.5°	33474.0	27652.3	12397.5	1889.5	785.9	615.4	540.3	465.2	421.8	424.7	421.8
60°	33416.3	27392.3	11163.8	1548.6	745.4	580.7	496.9	416.0	372.7	361.1	361.1
62.5°	33300.7	26857.8	9889.7	1349.2	710.7	569.2	444.9	378.5	346.7	335.1	335.1
65°	32514.8	25583.7	8185.0	1155.7	676.1	537.4	416.0	364.0	326.5	314.9	314.9
67.5°	30564.6	23477.5	6338.9	1005.4	650.1	485.4	407.4	355.4	314.9	300.5	300.5
69°	28917.8	21605.3	5206.3	924.5	624.1	462.3	407.4	358.3	309.1	291.8	291.8
70°	27632.1	20134.7	4307.8	875.4	598.1	447.8	407.4	361.1	306.3	286.0	283.1
72.5°	23711.5	15720.0	2392.2	742.5	496.9	407.4	398.7	364.0	291.8	262.9	260.0
75°	18193.2	11051.1	1424.4	627.0	418.9	372.7	378.5	349.6	268.7	236.9	236.9
77.5°	11368.9	5076.3	1060.3	491.2	340.9	323.6	329.4	309.1	242.7	216.7	216.7
80°	3883.1	2291.1	800.3	378.5	245.6	251.4	271.6	260.0	216.7	196.5	193.6
82.5°	2126.4	1490.8	566.3	262.9	170.5	208.0	208.0	210.9	187.8	173.4	170.5
85°	1155.7	777.2	349.6	158.9	121.3	153.1	147.3	158.9	153.1	141.6	138.7
87.5°	401.6	265.8	115.6	57.8	49.1	52.0	60.7	80.9	78.0	80.9	83.8
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)