

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: P237557

Luminaire Tested: **CTN-10-9-D-E1-T2-7030-HSS**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P237557
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-1707-171-25)
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-T2-7030-HSS
Description: CELESTEON HIGH MAST LUMINAIRE
(10) 70 CRI, 3000K LEDS AND TYPE II OPTICS WITH HOUSE SIDE SHIELD
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 81788 lumens
Efficiency: N/A
Efficacy: 107.6 lumens/watt
Luminous Opening: Circular (Dia: 2.08' x H: 0')
IES Classification: Type II - Short - Non-Cutoff
BUG Rating: B4 - U0 - G5

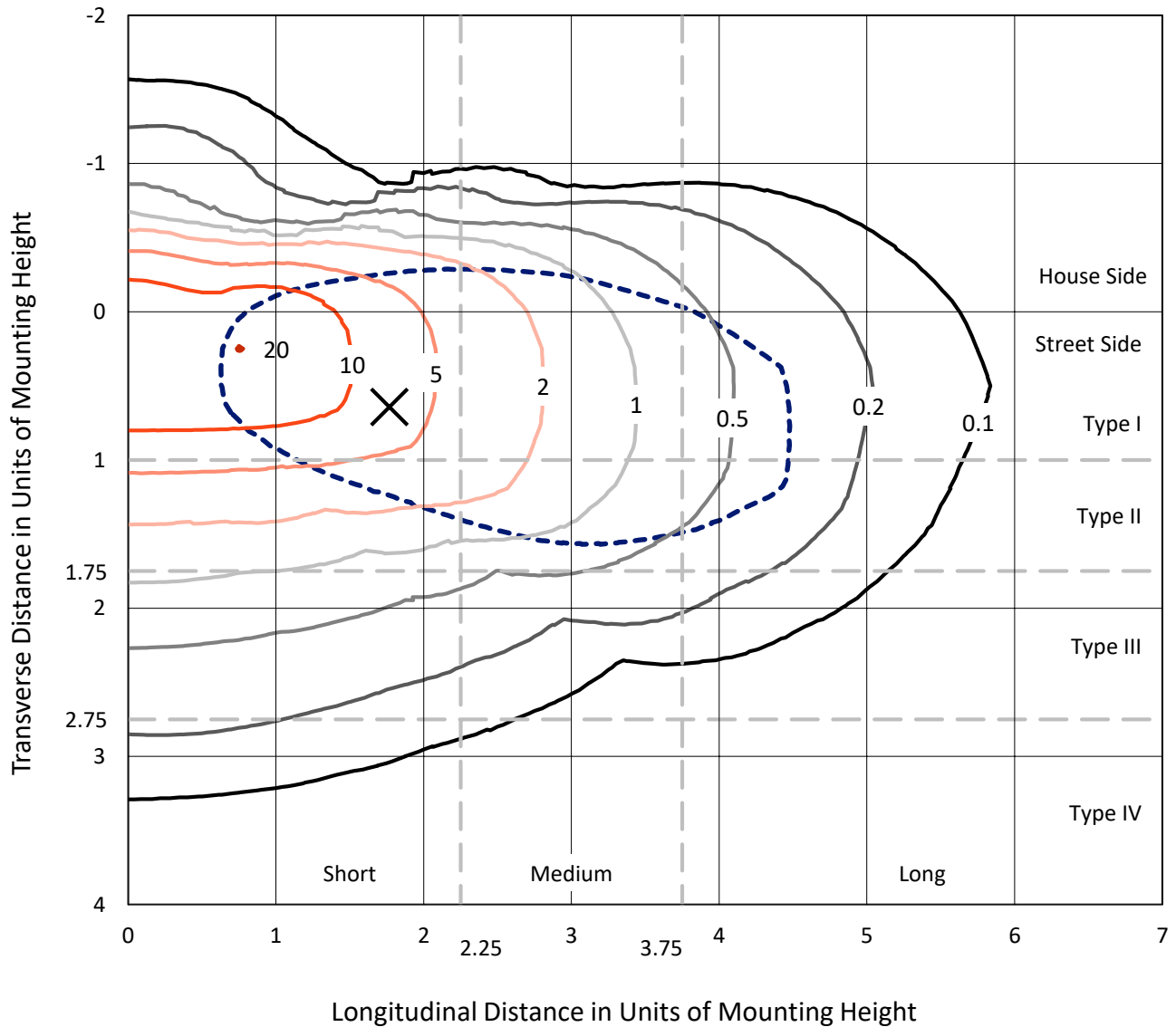
Input Watts (W): 760
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

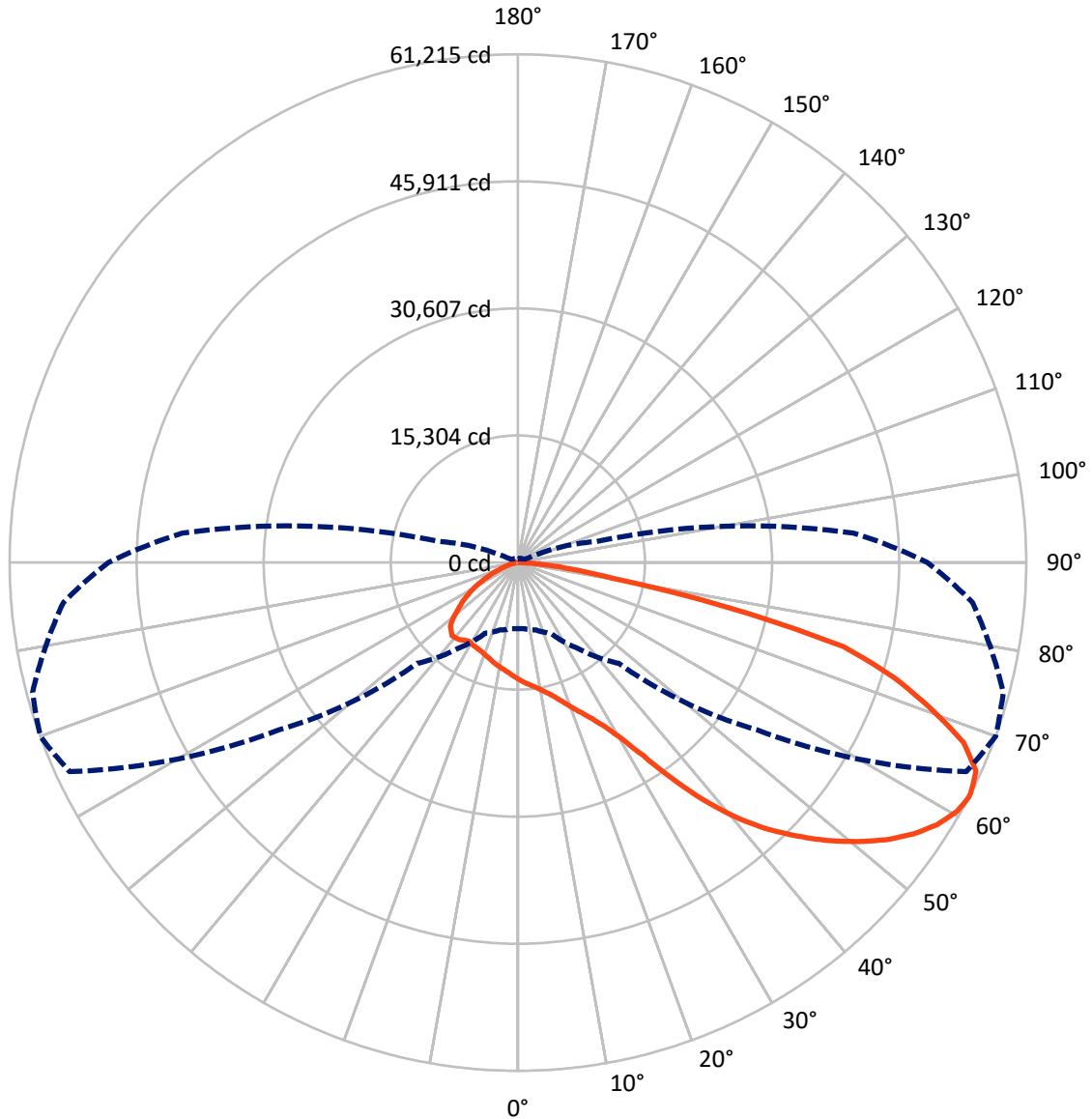
× Max cd
 - - - 1/2 Max cd



Based on 30 foot mounting height. Maximum calculated value = 20.2 fc
 Type II - Short - Non-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 70-Deg Lateral - - - Horizontal Cone Through 62-Deg Vertical

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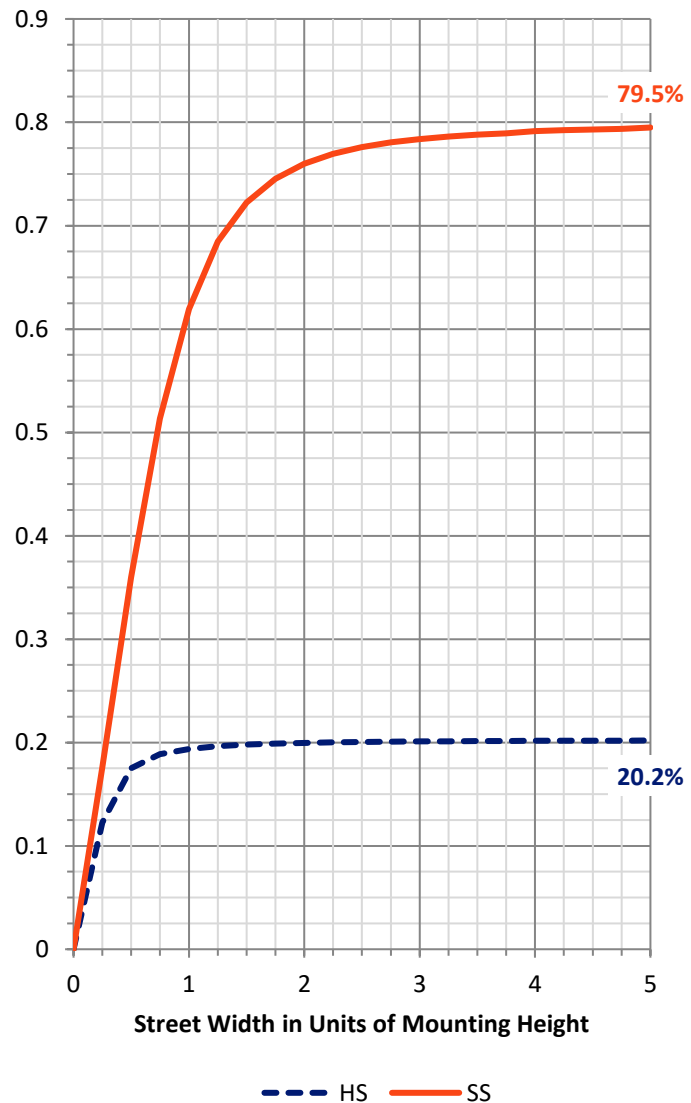
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	16730.5	0.0	16730.5
	% Fixture	20.5	0.0	20.5
Street Side	Lumens	65057.5	0.0	65057.5
	% Fixture	79.5	0.0	79.5
Total	Lumens	81788.0	0.0	81788.0
	% Fixture	100.0	0.0	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	1340.3	1.6
10°-20°	4077.8	5.0
20°-30°	6865.4	8.4
30°-40°	10366.5	12.7
40°-50°	14537.0	17.8
50°-60°	16990.3	20.8
60°-70°	16483.8	20.2
70°-80°	9636.3	11.8
80°-90°	1490.6	1.8
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°	81788.0	100.0
0°-180°	81788.0	100.0



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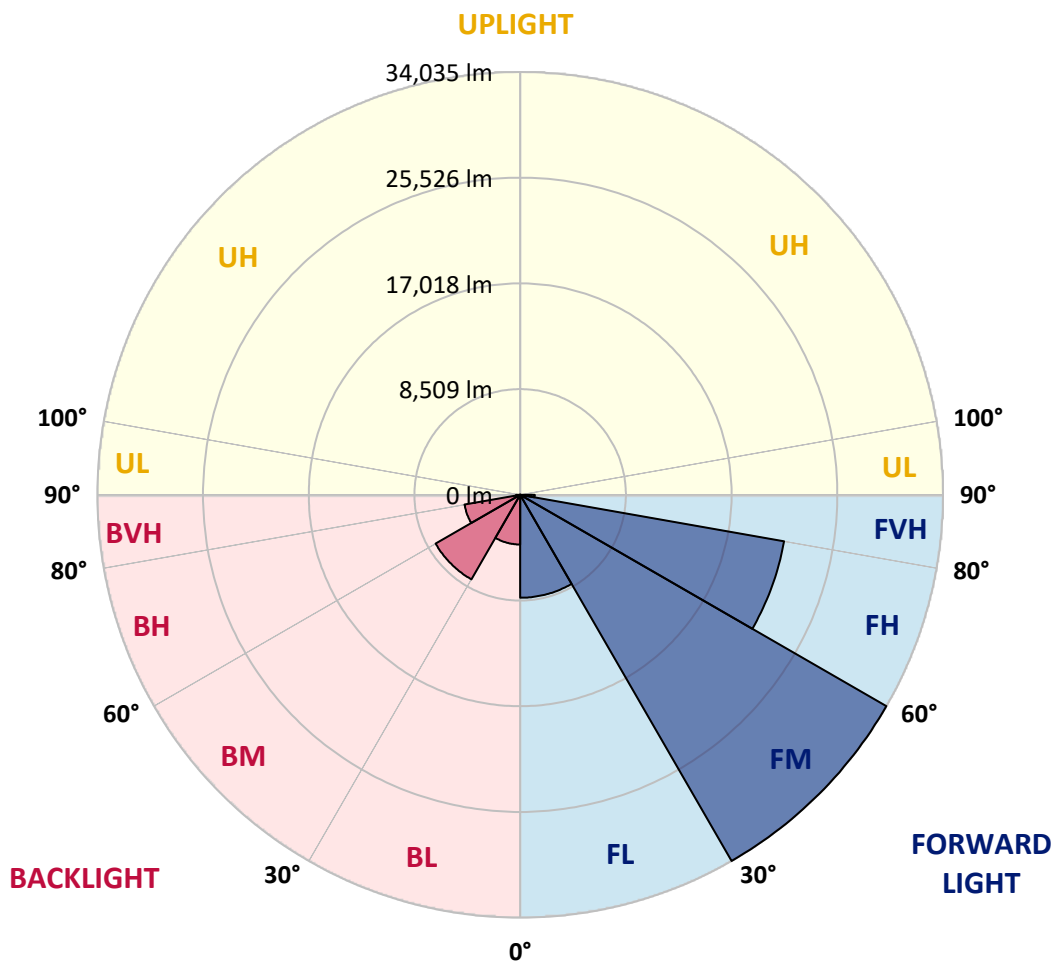
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	8283.3	10.1			
FM	(30°-60°)	34035.0	41.6			
FH	(60°-80°)	21571.1	26.4			G5
FVH	(80°-90°)	1168.1	1.4			G5
BL	(0°-30°)	4000.1	4.9	B4/5000		
BM	(30°-60°)	7858.8	9.6	B4/8500		
BH	(60°-80°)	4549.1	5.6	B4/5000		G4/5000
BVH	(80°-90°)	322.5	0.4			G3/500
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B4-U0-G5

Type II Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	70°	75°	85°
0°	14070.7	14070.7	14070.7	14070.7	14070.7	14070.7	14070.7	14070.7	14070.7	14070.7	14070.7
2.5°	15269.7	15168.6	15125.2	15188.8	14764.1	14772.8	14567.6	14535.8	14437.6	14298.9	14145.8
5°	16142.3	16023.8	15963.1	16000.7	15552.9	15474.8	15139.7	14975.0	14781.4	14608.1	14275.8
7.5°	16980.2	16858.8	16812.6	16792.3	16252.1	16133.6	15706.0	15414.2	15151.3	14928.8	14478.1
10°	17823.8	17699.6	17604.2	17630.2	17063.9	16853.0	16359.0	15957.4	15619.3	15330.4	14709.2
12.5°	18661.7	18511.5	18407.4	18407.4	17849.8	17644.7	17089.9	16575.7	16145.2	15781.1	15001.0
15°	19519.8	19323.3	19300.2	19300.2	18707.9	18459.4	17913.4	17344.2	16815.5	16347.4	15353.5
17.5°	20406.8	20158.3	20152.6	20190.1	19646.9	19366.7	18852.4	18320.8	17647.6	17055.3	15784.0
20°	20990.4	20768.0	20716.0	20828.6	20401.0	20219.0	19667.2	19294.4	18647.3	17942.3	16338.7
22.5°	21435.4	21299.6	21348.7	21533.6	21325.6	21169.6	20588.8	20253.7	19670.0	18947.7	17087.1
25°	21883.2	21793.6	21906.3	22232.8	22250.2	22293.5	21808.1	21380.5	20837.3	20193.0	18060.7
27.5°	21744.5	21718.5	22059.5	22732.7	23102.5	23299.0	23027.4	22877.1	22380.2	21701.2	19285.8
30°	21845.7	21782.1	22192.4	23044.7	23868.1	24437.3	24437.3	24778.2	24561.6	23879.7	21155.1
32.5°	21545.2	21426.7	21897.7	23119.8	24535.6	25642.1	26133.3	27341.0	27719.5	27473.9	24862.0
35°	20161.2	20250.8	21172.5	22819.3	24994.9	26821.0	28121.1	30709.9	31874.3	32151.6	29129.5
37.5°	19297.3	19334.9	20273.9	22328.2	25156.7	27979.5	30296.7	34598.8	36248.6	36419.1	32873.9
40°	18107.0	18248.5	19300.2	21669.4	25064.3	28959.0	32639.9	38432.9	40267.5	40126.0	36150.4
42.5°	17168.0	17208.4	18127.2	20623.5	24659.8	29739.1	35003.3	41914.4	43835.8	43439.9	39389.2
45°	15997.8	16072.9	16942.6	19323.3	23940.4	30134.9	37043.1	45179.3	46938.8	46444.8	42194.7
47.5°	14582.1	14911.4	15821.6	17922.0	22721.1	30094.5	38770.9	48005.0	50013.0	49253.1	44818.1
50°	11744.8	12146.4	13966.7	16659.4	21123.3	29528.2	40146.2	51116.7	52835.8	52070.1	47213.3
52.5°	10259.7	10337.8	11265.2	15240.8	19251.1	28262.7	41082.3	53688.1	55479.5	54673.4	49516.0
55°	9589.4	9670.3	10138.4	12943.9	17532.0	26020.6	41426.1	56141.1	57730.2	56805.6	51414.3
57.5°	9002.9	9028.9	9580.8	10947.4	15893.8	23067.8	40700.9	58186.7	59547.5	58290.7	52731.8
60°	8332.6	8436.6	8979.8	9993.9	14047.6	19638.3	38216.2	59495.5	60781.3	59663.1	54098.4
62°	7957.0	7983.0	8407.7	9401.6	12617.4	17159.3	35121.8	59570.7	61214.6	60506.8	54939.2
62.5°	7847.2	7864.6	8266.2	9251.4	12322.7	16668.1	34278.1	59510.0	61188.6	60654.1	55124.1
65°	7217.4	7257.8	7619.0	8540.6	11031.2	14752.5	30325.6	58519.0	60631.0	60405.6	55106.8
67.5°	6451.7	6463.3	6847.5	7676.7	9699.2	12952.5	25471.7	56623.6	57900.7	57608.9	52694.2
70°	5275.8	5486.7	5905.6	6636.6	8023.5	10745.1	19375.3	50720.9	52815.6	53104.5	48371.9
72.5°	4010.3	3995.8	4143.2	4651.7	5845.0	8254.6	13079.7	42498.0	47352.0	48915.1	43601.7
75°	2476.1	2571.4	3189.7	3597.1	4189.4	5821.8	8199.7	29583.1	40490.0	43191.5	38539.8
77.5°	1924.2	1941.6	2262.3	2967.3	3432.4	4125.9	5114.0	16119.2	25382.1	32099.6	30016.5
80°	1464.9	1496.6	1707.5	1860.7	2415.4	2513.7	3412.2	8338.4	11559.9	16191.4	20164.1
82.5°	884.1	933.2	1129.7	1219.3	1331.9	1259.7	1834.7	4498.6	6408.4	8286.4	10268.4
85°	444.9	534.5	751.2	710.8	603.9	557.6	785.9	2175.6	3062.6	4053.6	4712.4
87.5°	112.7	135.8	176.2	210.9	179.1	147.4	213.8	589.4	606.7	580.7	1626.7
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°	14070.7	14070.7	14070.7	14070.7	14070.7	14070.7	14070.7	14070.7	14070.7	14070.7	14070.7
2.5°	14093.8	13975.3	13758.6	13634.4	13325.2	13206.8	12984.3	13065.2	13016.1	12967.0	12969.9
5°	14116.9	13903.1	13489.9	13192.3	12744.5	12516.3	12224.4	12178.2	12051.1	11973.1	11981.7
7.5°	14166.0	13859.8	13276.1	12802.3	12172.4	11814.2	11424.1	11357.7	11167.0	11080.3	11091.8
10°	14290.3	13929.1	13137.4	12441.1	11730.4	11233.4	10776.9	10629.6	10447.5	10349.3	10343.5
12.5°	14480.9	14033.1	12941.0	12166.7	11302.8	10658.5	10132.6	9895.7	9635.7	9549.0	9557.7
15°	14784.3	14166.0	12776.3	11788.2	10785.6	10115.3	9465.2	9179.2	8904.7	8803.6	8794.9
17.5°	15154.1	14287.4	12660.7	11343.2	10337.8	9534.5	8962.5	8572.4	8110.1	8043.7	7971.5
20°	15521.1	14530.1	12556.7	11019.6	9806.1	8950.9	8202.6	7803.9	7142.2	6893.8	6804.2
22.5°	16055.6	14914.3	12542.3	10635.3	9271.6	8312.4	7304.0	6659.7	5931.6	5509.8	5417.4
25°	16769.2	15336.2	12579.8	10343.5	8673.5	7500.5	6139.7	5209.3	4515.9	4039.2	3940.9
27.5°	17696.7	15911.1	12692.5	10022.8	8130.4	6526.8	4833.7	3877.4	3290.9	2892.1	2799.7
30°	19063.3	16876.1	12868.7	9725.2	7338.7	5258.4	3553.8	2793.9	2337.4	2091.8	2088.9
32.5°	22253.0	19031.5	12969.9	9355.4	6601.9	3975.6	2557.0	2022.5	1658.4	1566.0	1644.0
35°	25910.8	22085.5	13750.0	8956.7	5449.1	2923.9	1826.0	1438.8	1288.6	1311.7	1355.1
37.5°	29285.5	25020.9	14940.3	8309.5	4362.8	2060.0	1311.7	1144.1	1112.4	1196.2	1274.2
40°	32273.0	27557.7	15960.2	7598.7	3085.7	1438.8	1051.7	1057.5	1025.7	1063.2	1089.2
42.5°	35202.7	29909.6	17037.9	6642.4	2057.1	1063.2	950.6	1002.6	965.0	970.8	933.2
45°	38115.0	32391.4	17503.1	5460.7	1378.2	921.7	889.9	950.6	947.7	924.6	869.7
47.5°	40628.7	34101.9	18092.5	4120.1	1025.7	837.9	846.6	889.9	918.8	878.3	852.3
50°	42789.9	35916.3	17638.9	2727.5	915.9	783.0	814.8	814.8	861.0	791.7	759.9
52.5°	44855.7	37722.1	16474.5	1797.1	840.8	745.4	777.2	757.0	777.2	707.9	699.2
55°	46095.2	38655.3	15067.5	1401.3	794.5	713.6	728.1	722.3	705.0	632.7	647.2
57.5°	47458.9	39730.1	13316.6	1175.9	774.3	676.1	679.0	670.3	618.3	569.2	572.1
60°	48548.1	40533.4	11444.3	1037.2	751.2	655.9	615.4	601.0	528.7	499.8	502.7
62°	49310.9	40570.9	9811.9	965.0	722.3	641.4	577.9	546.1	465.2	442.1	439.2
62.5°	49394.7	40429.3	9413.2	947.7	710.8	635.6	575.0	528.7	447.8	430.5	424.7
65°	49082.7	38854.7	7509.2	852.3	661.6	601.0	534.5	459.4	384.3	361.2	352.5
67.5°	46759.7	36034.8	5735.2	774.3	601.0	577.9	494.1	404.5	340.9	312.0	306.3
70°	42229.3	32218.1	4094.1	676.1	540.3	525.8	497.0	369.8	314.9	274.5	268.7
72.5°	37196.3	28155.8	2785.2	601.0	479.6	433.4	366.9	349.6	294.7	242.7	236.9
75°	31654.7	22423.5	1982.0	517.2	413.2	366.9	309.2	323.6	277.4	216.7	210.9
77.5°	24287.1	16491.9	1470.6	424.7	320.7	297.6	260.0	286.0	251.4	196.5	193.6
80°	16584.3	11389.4	1045.9	320.7	210.9	210.9	219.6	245.6	222.5	176.2	173.4
82.5°	9323.6	5995.2	618.3	231.1	144.5	144.5	170.5	199.4	184.9	153.1	150.2
85°	3862.9	2169.8	326.5	144.5	95.3	98.2	121.3	147.4	144.5	121.3	118.5
87.5°	1343.5	546.1	95.3	49.1	40.4	43.3	49.1	69.3	69.3	60.7	63.6
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)