

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: P298905

Luminaire Tested: **GLNA-AF-09-LED-E1-SLL-8030**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P298905
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (P191289)
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: GLNA-AF-09-LED-E1-SLL-8030
Description: GALLEONNAIRE AREA AND ROADWAY LUMINAIRE
(9) 80 CRI, 3000K CCT 1050mA LIGHTSQUARE WITH 16 LEDS EACH AND 90° Spill
Light Eliminator Left OPTICS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 38038.7 lumens
Efficiency: N/A
Efficacy: 75.9 lumens/watt
Luminous Opening: Rectangular (W 2.5' x L: 1' x H: 0')
IES Classification: Type IV - Short - Non-Cutoff
BUG Rating: B3 - U0 - G5

Input Watts (W): 501
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

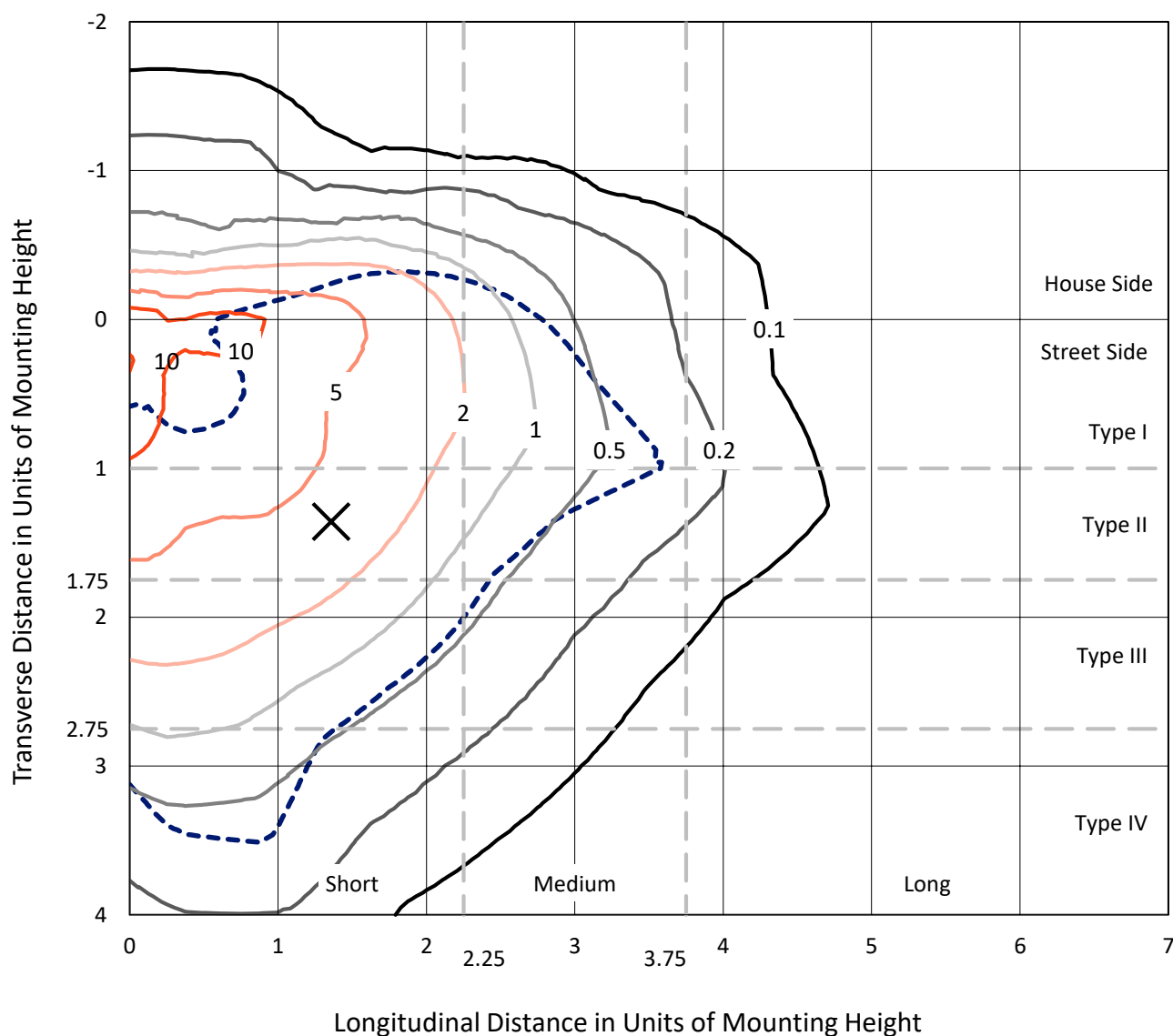


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

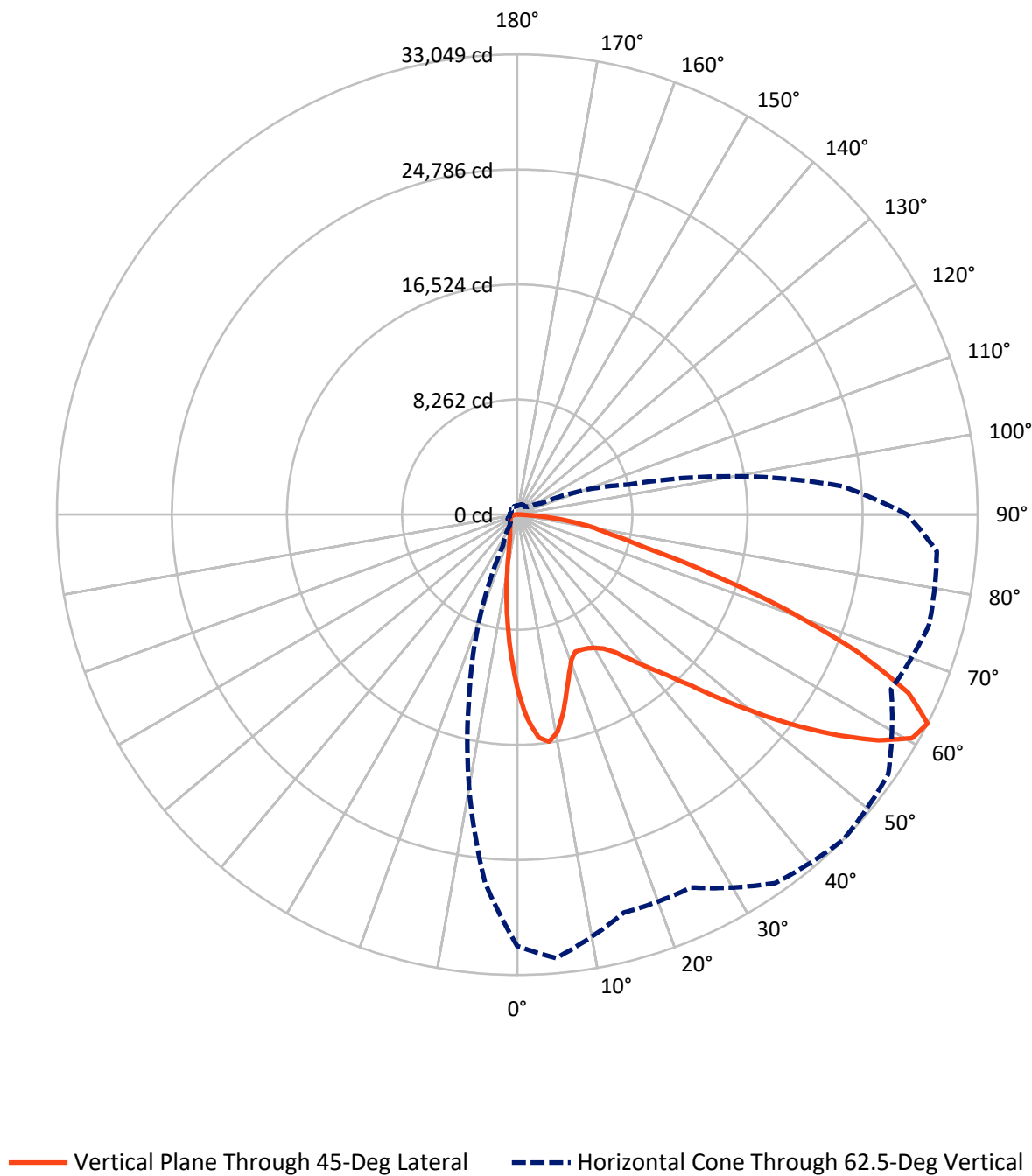


Based on 30 foot mounting height. Maximum calculated value = 16.8 fc
 Type IV - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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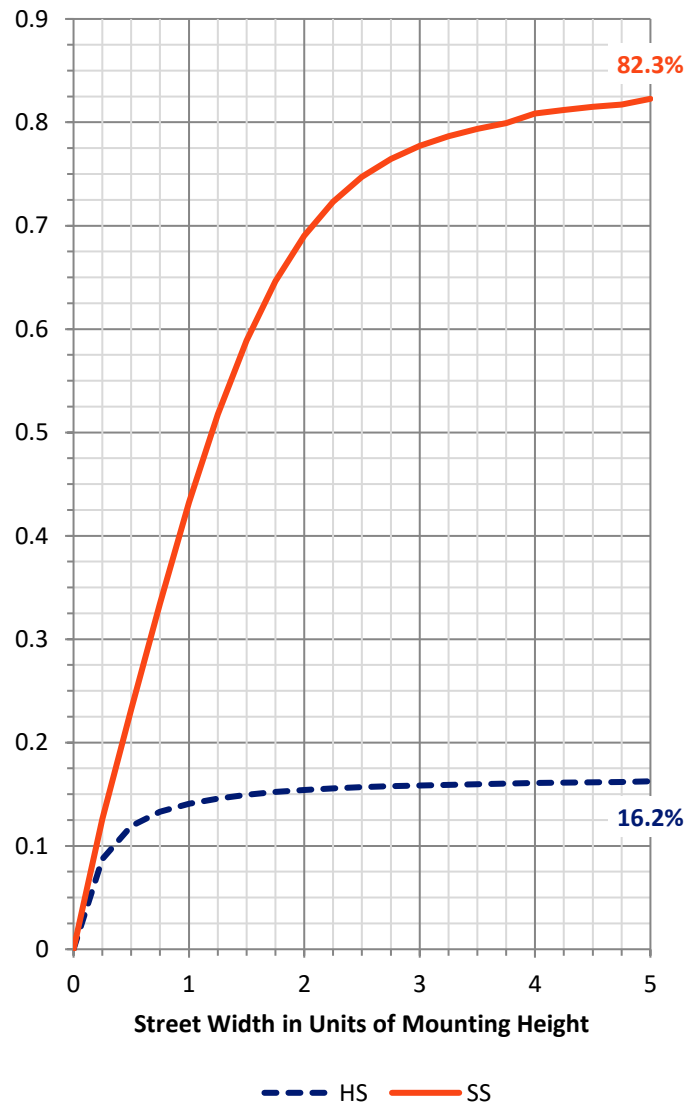
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	6294.9	0.0	6294.9
	% Fixture	16.5	0.0	16.5
Street Side	Lumens	31743.8	0.0	31743.8
	% Fixture	83.5	0.0	83.5
Total	Lumens	38038.7	0.0	38038.7
	% Fixture	100.0	0.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	935.5	2.5
10°-20°	1715.5	4.5
20°-30°	2501.2	6.6
30°-40°	3852.2	10.1
40°-50°	5669.5	14.9
50°-60°	8315.9	21.9
60°-70°	9296.0	24.4
70°-80°	4551.1	12.0
80°-90°	1201.6	3.2
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°	38038.7	100.0
0°-180°	38038.7	100.0

Coefficient of Utilization



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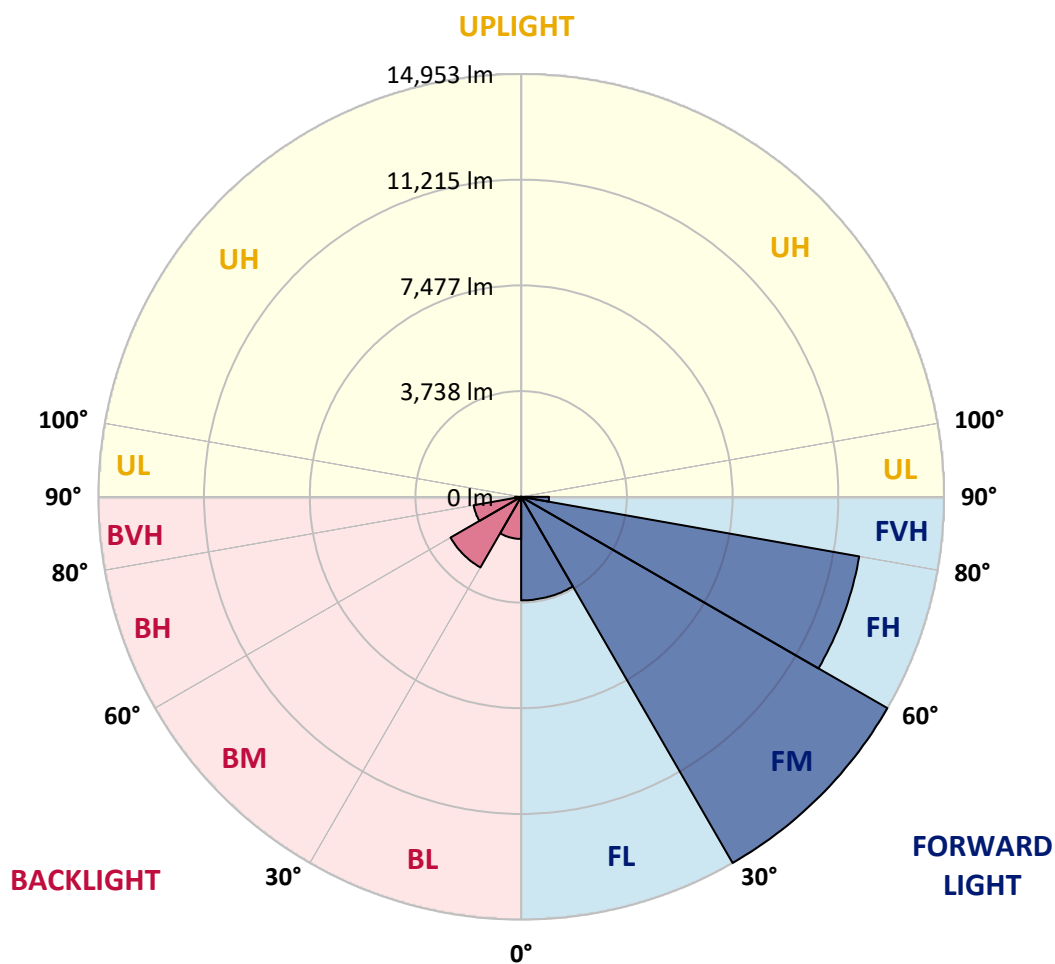
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	3663.0	9.6			
FM	(30°-60°)	14953.4	39.3			
FH	(60°-80°)	12140.6	31.9			G5
FVH	(80°-90°)	986.8	2.6			G5
BL	(0°-30°)	1489.3	3.9	B3/2500		
BM	(30°-60°)	2884.3	7.6	B3/5000		
BH	(60°-80°)	1706.5	4.5	B3/2500		G3/2500
BVH	(80°-90°)	214.8	0.6			G2/225
UL	(90°-100°)	0.0	0.0		U0/0	
UH	(100°-180°)	0.0	0.0		U0/0	

BUG Rating: B3-U0-G5

Type IV Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9
2.5°	13352.9	13566.7	13982.8	14293.7	14673.2	14760.7	14882.2	14762.8	14551.7	14271.3	14179.7
5°	12556.6	13012.8	14022.2	14911.4	15701.6	16069.5	16172.7	15868.6	15256.3	14451.2	13959.7
7.5°	11279.1	11927.4	13294.5	14603.9	15768.1	16456.4	16439.4	15734.8	14608.0	13296.5	12508.4
10°	10176.7	10917.3	12486.0	13949.6	15185.0	15852.3	15594.3	14694.2	13348.8	11839.1	10984.5
12.5°	9560.4	10286.0	11877.2	13346.8	14379.9	14610.0	14413.2	13530.7	12263.4	10737.4	9988.7
15°	9453.1	10250.7	11634.8	12830.9	13409.9	13209.7	12974.8	12579.7	11684.4	10381.7	9601.8
17.5°	9916.1	10793.8	11913.1	12471.1	12372.7	12023.1	11956.6	12000.7	11785.5	10776.8	9878.1
20°	10802.6	11856.1	12575.6	12302.1	11584.6	11103.3	11120.3	11791.6	12429.0	11778.7	10751.7
22.5°	12046.2	13249.0	13530.7	12391.7	11252.0	10681.1	10819.6	11907.0	13456.1	13242.9	11931.5
25°	13656.3	14752.6	14549.6	12717.5	11285.2	10733.4	10844.0	12304.1	14668.4	14706.4	13391.6
27.5°	15216.2	16233.1	15404.3	13150.6	11423.7	10856.9	11003.5	12928.6	15827.2	16295.5	15060.1
30°	16433.3	17140.7	15743.0	13545.7	11695.2	11097.2	11279.1	13522.6	16354.6	17368.1	16343.7
32.5°	17441.4	17949.1	16282.6	14035.1	12194.8	11475.3	11795.7	14244.2	17113.5	18389.0	17600.2
35°	18729.1	18873.7	16954.0	14580.9	12966.6	12134.4	12531.5	14950.8	17837.1	19419.4	18838.4
37.5°	20239.4	20053.4	17587.3	15327.5	13964.5	13164.9	13493.4	15726.7	18432.4	20588.3	20103.0
40°	21732.1	21284.1	18382.9	16485.6	15419.9	14379.9	14768.9	16554.8	18989.1	21759.3	21339.1
42.5°	23001.5	22338.3	19166.2	17759.0	16774.1	15720.6	16184.9	17389.1	19519.9	22758.5	22411.6
45°	23940.3	23116.2	19912.9	18982.3	18641.5	17501.8	17721.7	18344.2	20094.8	23593.4	23294.1
47.5°	24778.6	23898.2	20757.4	20216.3	20274.7	19818.6	19464.9	19456.8	20773.0	24275.0	24128.3
50°	25901.4	24983.6	21664.9	21487.1	22725.2	22421.8	21641.8	20755.3	21629.6	25048.8	25031.8
52.5°	27449.1	26703.1	22773.4	22856.9	25013.5	25211.7	24245.1	22315.9	22971.6	26468.2	26368.4
55°	29279.1	28843.4	24283.8	24431.8	27819.0	27961.6	27001.1	24266.1	24946.3	28524.3	28246.0
57.5°	30706.7	30615.0	25939.4	26322.2	29914.5	30554.6	29672.2	26525.2	27170.8	30255.3	29556.8
60°	31275.5	31720.8	27702.3	28229.0	31853.2	32561.2	31788.0	28508.7	29142.7	30972.8	29467.2
62.5°	30968.7	31963.2	29579.9	29535.7	32285.6	33048.6	32504.9	29613.1	30604.9	30232.2	27976.5
65°	29548.6	31091.6	30669.4	29199.0	30805.1	30867.6	30691.8	29119.6	30949.7	27892.3	25094.3
67.5°	26455.3	28676.4	29234.3	26314.1	26811.0	26403.7	26108.4	26418.0	29150.9	24385.6	21090.0
70°	21548.2	24890.0	25156.7	21046.5	20820.5	20546.2	19959.1	21658.8	25602.7	19986.2	16734.7
72.5°	15844.1	19357.0	20178.3	15436.2	14390.8	14446.5	13982.8	16322.0	20816.4	14846.3	12494.2
75°	10839.9	14016.1	15787.8	10770.7	9516.9	9539.3	9480.3	11565.6	16580.0	10327.4	9349.3
77.5°	7919.0	10013.8	11907.0	7240.9	7029.8	6900.1	6868.9	8092.1	12711.4	7498.8	7259.9
80°	6354.3	7398.4	7997.7	5018.4	5396.5	5386.4	5212.6	5564.2	8301.2	5484.8	5429.8
82.5°	4408.2	5685.7	6479.9	3933.0	3642.5	3581.4	3624.2	4144.1	5867.6	3749.1	3565.1
85°	2325.6	3776.2	6417.5	3485.7	2162.0	1724.9	2145.7	3393.4	5083.6	1986.9	1739.1
87.5°	297.3	1091.5	4248.7	1390.9	853.3	459.6	1018.9	1910.9	3264.4	405.3	353.7
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):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°	185°
0°	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9
2.5°	13943.5	13665.1	13301.3	12963.9	12615.0	12267.5	11814.0	11529.6	11333.4	11295.4	11212.6
5°	13604.7	12680.2	11981.7	11377.5	10829.7	10055.2	9626.9	9271.2	9081.1	9062.8	9016.6
7.5°	12042.1	10766.6	9823.8	8968.4	8192.6	7567.4	6877.0	6556.0	6423.6	6454.8	6486.0
10°	10417.0	8991.5	7908.1	7033.8	6350.3	5823.5	5269.6	4895.6	4635.6	4583.3	4573.1
12.5°	9229.8	7665.8	6614.3	5996.6	5468.5	4972.3	4385.1	3943.2	3607.2	3491.8	3415.1
15°	8727.5	7017.5	5915.8	5250.6	4666.8	4037.6	3491.8	3029.5	2720.7	2620.2	2563.9
17.5°	8834.7	6837.7	5434.6	4583.3	3837.3	3180.2	2492.6	2096.8	1910.9	1863.3	1863.3
20°	9395.4	6804.4	5036.8	3969.0	3037.7	2276.7	1712.6	1486.6	1426.2	1420.1	1436.4
22.5°	10181.5	6921.8	4740.8	3436.1	2360.9	1662.4	1333.9	1250.4	1223.2	1230.0	1248.3
25°	11352.4	7316.9	4525.6	2961.0	1852.5	1361.0	1189.3	1139.7	1126.8	1143.8	1166.9
27.5°	12740.6	7712.0	4391.2	2603.2	1564.0	1244.3	1130.9	1079.3	1087.5	1108.5	1128.9
30°	13959.7	8036.4	4180.1	2348.7	1474.4	1250.4	1130.9	1060.3	1052.2	1056.2	1062.3
32.5°	15054.0	8255.7	3933.0	2105.7	1271.4	1110.5	1056.2	1046.0	999.2	982.2	985.0
35°	15996.9	8255.7	3785.0	1963.8	1139.7	985.0	897.4	845.1	821.4	823.4	847.2
37.5°	16906.5	8090.1	3711.7	1883.7	1068.4	936.8	859.4	813.2	782.0	775.9	780.0
40°	17708.8	7849.8	3628.2	1850.4	1014.1	907.6	834.9	796.2	763.0	752.8	754.8
42.5°	18353.0	7654.9	3535.9	1807.0	980.2	886.5	817.3	784.0	746.7	735.8	733.8
45°	19049.5	7590.5	3415.1	1718.7	997.2	888.6	813.2	777.9	739.9	727.7	723.6
47.5°	19967.2	7793.4	3289.5	1614.2	1033.2	899.4	819.3	777.9	737.9	727.7	723.6
50°	21123.2	8270.0	3130.0	1461.5	997.2	928.6	817.3	771.1	737.9	727.7	719.5
52.5°	22608.5	8914.1	2921.6	1286.3	976.1	999.2	813.2	758.9	727.7	713.4	698.5
55°	24412.8	9440.9	2671.8	1141.8	928.6	980.2	807.1	744.7	711.4	690.4	677.5
57.5°	25734.4	9631.0	2352.8	1048.1	861.4	949.0	798.3	725.6	690.4	673.4	657.1
60°	25473.1	9263.1	2082.6	989.0	821.4	857.3	792.2	708.7	671.3	659.1	643.5
62.5°	23380.3	8301.2	1908.8	961.9	796.2	782.0	798.3	692.4	655.1	641.5	637.4
65°	20241.5	6881.1	1840.3	955.8	775.9	737.9	742.6	673.4	635.4	625.2	621.1
67.5°	16696.7	5554.0	1779.8	976.1	748.7	706.6	686.3	648.3	616.4	606.2	598.0
70°	13166.9	4619.3	1752.0	963.9	715.5	675.4	653.0	621.1	594.0	583.1	577.0
72.5°	10603.0	3901.8	1737.1	951.0	671.3	633.3	612.3	585.1	555.9	551.9	545.8
75°	8973.2	3067.5	1591.8	911.6	621.1	583.1	568.8	543.7	514.5	514.5	510.5
77.5°	6921.8	2218.4	1323.7	807.1	568.8	526.8	514.5	495.5	462.3	468.4	466.3
80°	5112.8	1447.2	1035.2	669.3	504.4	464.3	457.5	439.2	403.2	412.0	412.0
82.5°	3502.7	949.0	744.7	547.8	430.4	393.0	393.0	374.0	334.7	338.7	351.6
85°	1758.8	653.0	555.9	424.3	334.7	315.6	315.6	301.4	261.3	263.4	280.3
87.5°	535.6	393.0	367.9	303.4	240.3	236.2	225.4	215.2	190.1	188.0	198.9
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):

	195°	205°	215°	225°	235°	245°	255°	265°	270°	275°	285°
0°	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9
2.5°	11084.3	10964.8	10821.6	10503.2	10396.7	10389.9	10486.9	10385.8	10578.6	10497.1	10586.7
5°	8938.6	8822.5	8660.9	8255.7	8008.6	7840.9	7762.2	7528.0	7697.0	7573.5	7676.7
7.5°	6574.3	6601.4	6494.9	6256.6	5719.0	5449.5	5290.7	5148.1	5271.6	5258.7	5455.6
10°	4621.3	4694.0	4619.3	4379.0	3943.2	3795.2	3824.4	3880.8	4042.3	4125.1	4428.6
12.5°	3326.9	3322.8	3274.6	3059.4	2772.9	2789.2	2908.7	3006.5	3155.1	3243.4	3552.2
15°	2483.8	2446.4	2425.4	2249.6	2086.7	2122.6	2181.0	2191.2	2285.6	2337.8	2589.0
17.5°	1877.6	1896.6	1919.0	1794.1	1670.6	1647.5	1602.0	1545.0	1572.8	1583.0	1707.9
20°	1490.7	1566.0	1623.0	1534.8	1409.9	1342.0	1283.6	1246.3	1246.3	1244.3	1279.6
22.5°	1302.6	1356.9	1418.0	1356.9	1244.3	1185.2	1151.9	1122.8	1118.7	1118.7	1151.9
25°	1200.8	1240.2	1298.6	1257.2	1173.0	1128.9	1097.6	1060.3	1046.0	1041.3	1064.4
27.5°	1149.9	1166.9	1196.1	1158.1	1087.5	1066.4	1058.3	1025.0	1005.3	995.1	1018.9
30°	1064.4	1060.3	1062.3	1025.0	968.0	965.9	980.2	987.0	980.2	978.2	1014.1
32.5°	985.0	976.1	974.1	940.8	888.6	876.3	888.6	901.5	915.7	936.8	978.2
35°	884.5	905.5	917.8	888.6	825.4	788.1	773.8	750.8	737.9	737.9	786.1
37.5°	805.1	853.3	872.3	845.1	775.9	723.6	698.5	694.4	696.5	704.6	750.8
40°	777.9	813.2	829.5	803.0	733.8	686.3	671.3	667.3	671.3	684.2	729.7
42.5°	760.9	786.1	784.0	750.8	694.4	661.2	653.0	648.3	653.0	665.2	715.5
45°	746.7	763.0	746.7	706.6	655.1	637.4	639.4	637.4	641.5	655.1	702.6
47.5°	733.8	739.9	719.5	679.5	625.2	621.1	629.3	635.4	639.4	651.0	700.5
50°	715.5	715.5	696.5	655.1	600.1	602.1	612.3	627.2	629.3	641.5	682.2
52.5°	692.4	690.4	677.5	637.4	579.0	585.1	585.1	602.1	606.2	621.1	663.2
55°	673.4	669.3	663.2	625.2	560.7	570.9	564.8	570.9	581.1	596.0	641.5
57.5°	657.1	648.3	648.3	614.3	545.8	549.8	535.6	543.7	555.9	568.8	616.4
60°	639.4	631.3	635.4	600.1	522.7	518.6	512.5	528.8	533.5	547.8	596.0
62.5°	621.1	614.3	616.4	583.1	506.4	495.5	495.5	510.5	512.5	533.5	579.0
65°	606.2	598.0	596.0	566.8	487.4	475.2	481.3	487.4	491.5	512.5	555.9
67.5°	591.9	575.0	575.0	551.9	466.3	453.4	466.3	464.3	471.1	489.4	524.7
70°	572.9	549.8	551.9	541.7	445.3	430.4	441.2	439.2	443.3	455.5	491.5
72.5°	543.7	524.7	528.8	524.7	424.3	403.2	407.3	407.3	407.3	418.1	455.5
75°	506.4	491.5	504.4	514.5	399.1	370.0	374.0	374.0	367.9	374.0	420.2
77.5°	459.6	451.4	493.5	479.2	370.0	334.7	334.7	330.6	318.4	326.5	376.1
80°	410.0	403.2	455.5	401.2	336.7	291.2	286.5	275.6	263.4	269.5	320.4
82.5°	357.7	351.6	382.8	307.5	291.2	240.3	230.1	211.1	198.9	205.0	250.5
85°	293.2	293.2	295.3	232.2	221.3	184.0	171.7	146.6	131.7	135.8	179.9
87.5°	209.1	215.2	198.9	158.8	131.7	102.5	94.4	79.4	66.5	77.4	94.4
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):

	295°	305°	315°	325°	335°	345°	355°	360°
0°	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9	12851.9
2.5°	11047.0	11277.1	11538.4	11872.4	12159.5	12629.3	13081.4	13352.9
5°	8259.8	8642.6	9118.5	9732.1	10303.0	11159.6	12010.9	12556.6
7.5°	5911.1	6321.1	6835.6	7600.6	8408.4	9501.3	10626.8	11279.1
10°	4891.5	5311.7	5744.1	6260.7	6921.8	8111.1	9440.9	10176.7
12.5°	4046.4	4495.8	4962.1	5505.8	6118.1	7180.5	8713.2	9560.4
15°	3096.7	3598.4	4148.2	4836.5	5603.6	6831.6	8533.3	9453.1
17.5°	2122.6	2683.3	3358.1	4207.3	5146.1	6718.2	8855.8	9916.1
20°	1461.5	1869.4	2591.0	3586.2	4715.7	6703.9	9474.2	10802.6
22.5°	1223.2	1405.1	1931.9	3015.3	4391.2	6883.8	10434.7	12046.2
25°	1130.9	1240.2	1542.9	2519.7	4155.0	7297.9	11756.3	13656.3
27.5°	1077.3	1175.0	1401.1	2196.0	3969.0	7778.5	13042.0	15216.2
30°	1097.6	1198.1	1361.0	2030.3	3715.8	8179.7	14183.8	16433.3
32.5°	989.0	1033.2	1166.9	1883.7	3533.9	8516.4	15183.0	17441.4
35°	843.1	919.8	1041.3	1815.1	3538.0	8742.4	16272.5	18729.1
37.5°	803.0	880.4	968.0	1790.0	3586.2	8983.4	17522.8	20239.4
40°	777.9	849.2	924.5	1775.8	3632.3	9202.6	18748.8	21732.1
42.5°	760.9	825.4	919.8	1724.9	3655.4	9399.5	19756.1	23001.5
45°	758.9	825.4	936.8	1674.6	3690.7	9610.6	20601.2	23940.3
47.5°	760.9	853.3	905.5	1614.2	3690.7	9963.6	21592.3	24778.6
50°	752.8	899.4	872.3	1528.7	3605.2	10632.9	22951.3	25901.4
52.5°	748.7	893.3	807.1	1397.0	3456.5	11695.2	24693.1	27449.1
55°	737.9	861.4	760.9	1200.8	3283.4	12854.0	26558.5	29279.1
57.5°	727.7	763.0	735.8	1029.1	3015.3	13669.2	27842.1	30706.7
60°	815.3	667.3	715.5	944.9	2657.5	13892.5	27792.6	31275.5
62.5°	754.8	625.2	688.3	926.6	2407.1	13265.3	26508.2	30968.7
65°	591.9	598.0	661.2	980.2	2339.9	11603.6	24232.9	29548.6
67.5°	541.7	570.9	633.3	1050.1	2346.6	9290.2	20833.4	26455.3
70°	510.5	541.7	602.1	1085.4	2362.9	6925.9	16470.7	21548.2
72.5°	475.2	502.3	566.8	1091.5	2253.7	5030.7	12695.1	15844.1
75°	432.4	457.5	516.6	951.0	1867.4	3489.8	9711.1	10839.9
77.5°	384.9	403.2	453.4	733.8	1386.8	2233.3	7289.1	7919.0
80°	328.5	338.7	380.8	537.6	949.0	1397.0	5767.2	6354.3
82.5°	263.4	267.5	295.3	403.2	616.4	897.4	3862.4	4408.2
85°	186.0	186.0	203.0	293.2	420.2	568.8	2096.8	2325.6
87.5°	87.6	89.6	89.6	160.9	219.3	289.2	483.3	297.3
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)