

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: P198231

Luminaire Tested: **TT-C1-LED-E1-CQ-LWR-LW-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198231
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P27139) AND SCALED
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TT-C1-LED-E1-CQ-LWR-LW-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
CONCENTRATED DISTRIBUTION WITH LumaWatt WIRELESS SENSOR
Light Source: (168) 4000K CCT, 70 CRI LEDs
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4474.4 lumens
Efficiency: N/A
Efficacy: 98.6 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short - Non-Cutoff
BUG Rating: B1 - U4 - G1

Input Watts (W): 45.4
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

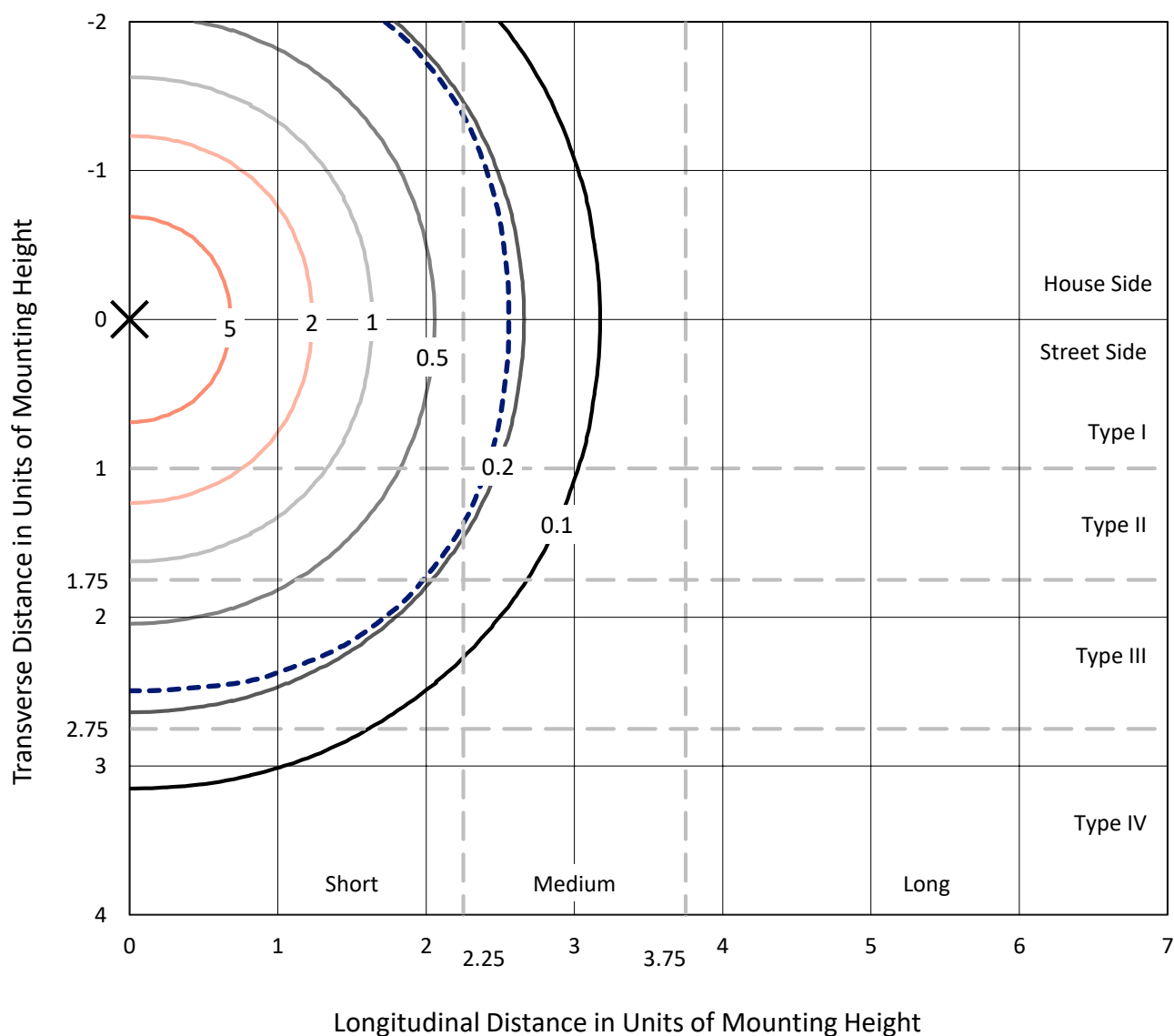


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Iso-Footcandle Lines of Horizontal Illumination

× Max cd
 --- 1/2 Max cd

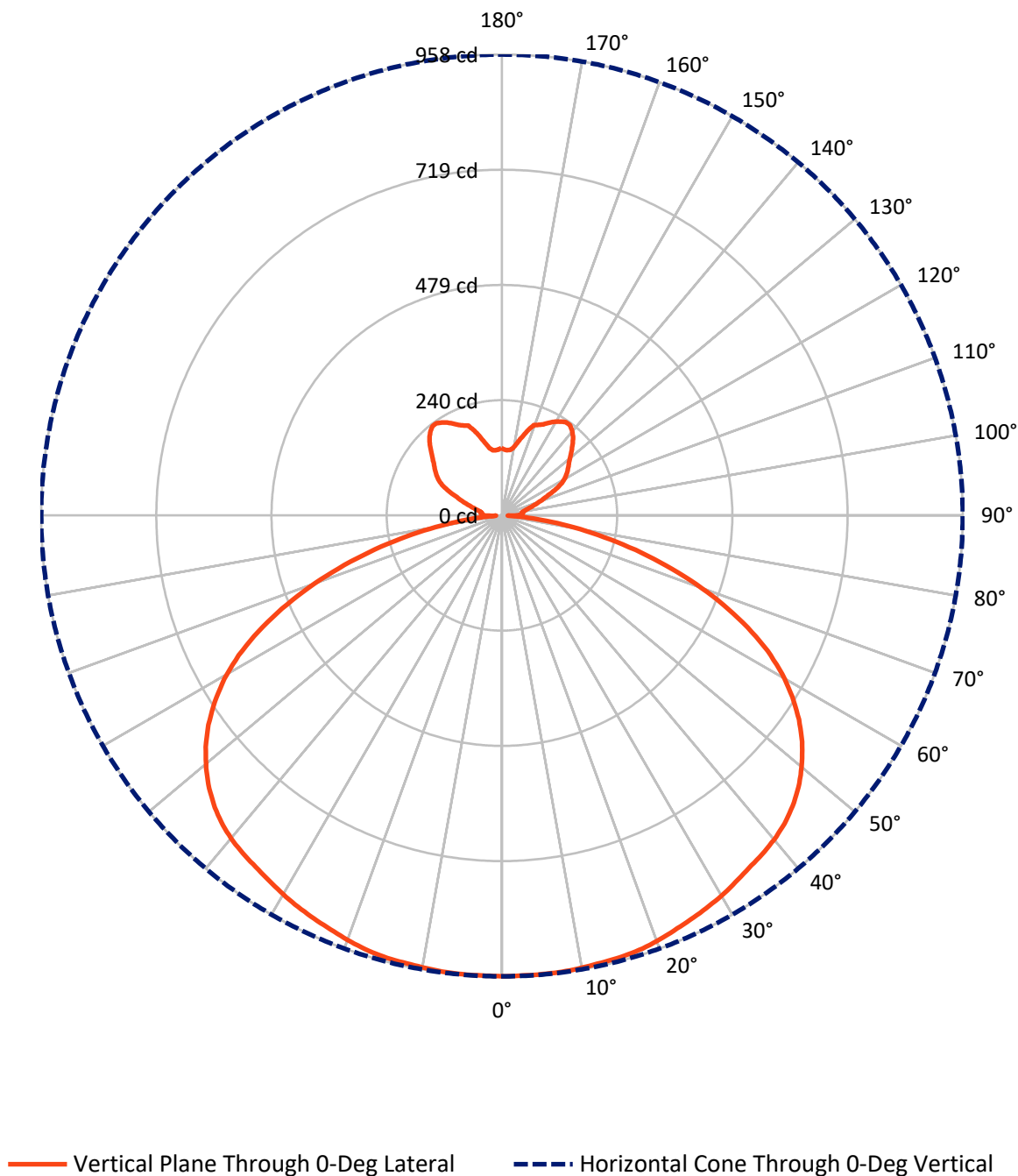


Based on 10 foot mounting height. Maximum calculated value = 9.6 fc
 Type V - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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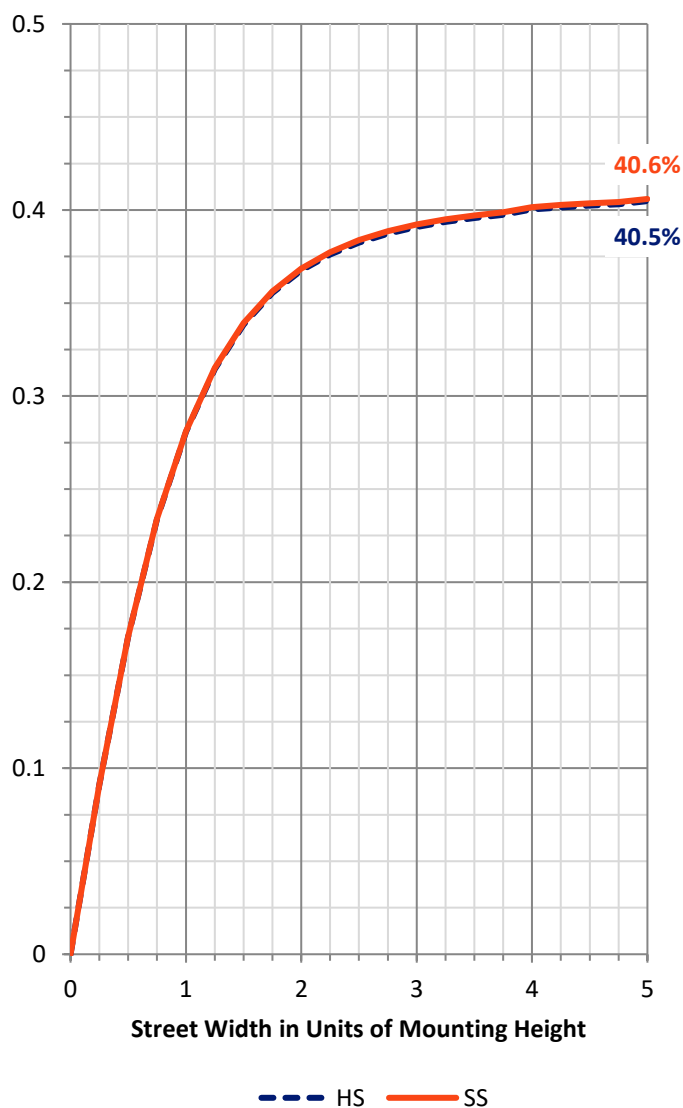
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1825.2	412.0	2237.2
	% Fixture	40.8	9.2	50.0
Street Side	Lumens	1825.2	412.0	2237.2
	% Fixture	40.8	9.2	50.0
Total	Lumens	3650.4	824.0	4474.4
	% Fixture	81.6	18.4	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	91.3	2.0
10°-20°	268.9	6.0
20°-30°	428.2	9.6
30°-40°	561.4	12.5
40°-50°	662.2	14.8
50°-60°	685.8	15.3
60°-70°	573.5	12.8
70°-80°	312.6	7.0
80°-90°	66.4	1.5
90°-100°	38.3	0.9
100°-110°	59.4	1.3
110°-120°	119.3	2.7
120°-130°	148.7	3.3
130°-140°	153.2	3.4
140°-150°	136.0	3.0
150°-160°	103.7	2.3
160°-170°	51.8	1.2
170°-180°	13.6	0.3
0°-90°	3650.4	81.6
0°-180°	4474.4	100.0

Coefficient of Utilization



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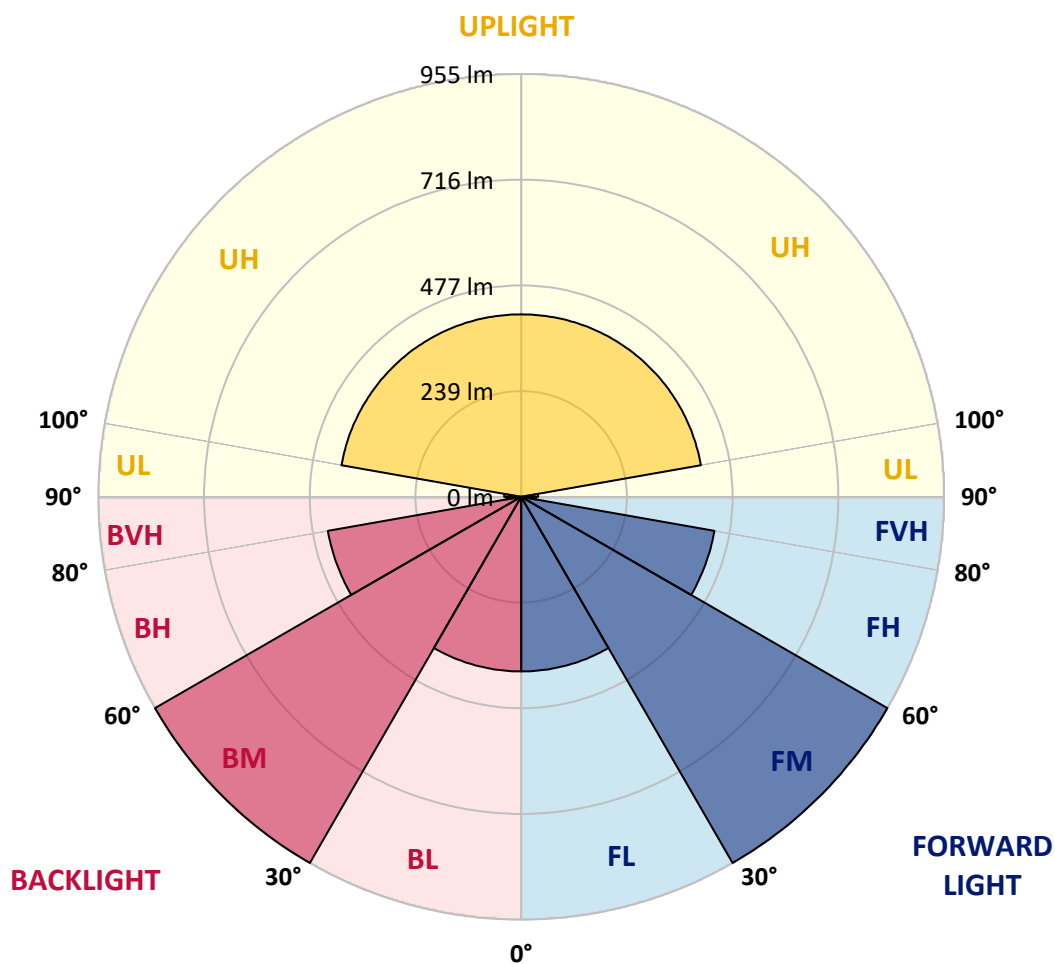
CATALOG NUMBER: TT-C1-LED-E1-CQ-LWR-LW-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	394.2	8.8			
FM	(30°-60°)	954.7	21.3			
FH	(60°-80°)	443.1	9.9			G0/660
FVH	(80°-90°)	33.2	0.7			G1/100
BL	(0°-30°)	394.2	8.8	B1/500		
BM	(30°-60°)	954.7	21.3	B1/1000		
BH	(60°-80°)	443.1	9.9	B1/500		G0/660
BVH	(80°-90°)	33.2	0.7			G1/100
UL	(90°-100°)	38.3	0.9		U2/50	
UH	(100°-180°)	412.0	9.2		U3/500	

BUG Rating: B1-U4-G1

Type V Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	958.2	958.2	958.2	958.2	958.2	958.2	958.2	958.2	958.2	958.2	958.2
2.5°	957.4	958.2	958.2	958.2	958.2	958.2	958.2	958.2	957.4	958.2	958.2
5°	957.4	957.4	957.4	957.4	958.2	957.4	957.4	957.4	957.4	957.4	957.4
7.5°	956.7	955.9	955.9	955.9	955.9	955.9	956.7	956.7	956.7	956.7	956.7
10°	954.4	954.4	954.4	954.4	954.4	954.4	954.4	954.4	954.4	954.4	954.4
12.5°	952.1	952.1	952.1	952.1	952.8	952.8	952.8	952.8	952.8	952.8	952.1
15°	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5	950.5
17.5°	946.7	946.7	946.7	946.7	947.5	947.5	947.5	947.5	947.5	947.5	947.5
20°	940.5	940.5	940.5	940.5	940.5	941.3	942.1	942.1	942.1	942.1	942.1
22.5°	932.9	932.9	933.6	933.6	934.4	934.4	935.2	935.2	935.2	935.2	935.2
25°	926.0	926.0	926.0	926.7	926.7	926.7	927.5	928.3	928.3	928.3	927.5
27.5°	919.1	919.1	919.1	919.8	919.8	919.8	920.6	920.6	921.4	920.6	920.6
30°	911.4	910.6	910.6	911.4	912.2	912.2	912.9	912.9	912.9	912.9	912.2
32.5°	902.2	902.2	903.0	903.7	903.7	904.5	905.3	905.3	905.3	906.0	904.5
35°	893.7	894.5	894.5	895.3	896.8	897.6	898.4	899.1	899.1	899.1	897.6
37.5°	886.8	887.6	888.4	889.9	891.4	893.0	894.5	896.1	895.3	895.3	893.0
40°	878.4	879.2	880.7	882.2	885.3	886.8	889.1	890.7	891.4	890.7	888.4
42.5°	866.9	867.7	869.2	871.5	875.3	878.4	880.7	883.0	883.8	883.0	880.7
45°	851.6	852.3	853.9	856.9	861.5	864.6	868.4	870.7	872.3	872.3	870.0
47.5°	832.4	833.1	835.4	838.5	843.1	847.0	851.6	854.6	856.2	857.7	855.4
50°	808.6	809.4	812.4	816.3	820.1	825.5	830.8	835.4	837.7	838.5	837.7
52.5°	781.7	782.5	785.6	789.4	794.8	800.9	807.1	812.4	815.5	817.0	815.5
55°	749.5	751.1	753.4	758.7	764.9	770.2	777.9	784.0	787.9	788.6	787.9
57.5°	711.9	714.2	716.5	722.7	728.8	736.5	742.6	748.8	753.4	754.1	754.1
60°	669.7	671.3	673.6	679.7	686.6	692.0	700.4	706.6	710.4	710.4	711.2
62.5°	619.9	621.4	625.2	629.8	637.5	642.9	649.8	655.9	659.8	661.3	660.5
65°	561.6	563.1	565.4	571.5	577.7	583.8	590.7	596.1	599.9	600.7	599.9
67.5°	497.1	498.7	500.2	507.9	514.0	516.3	524.7	529.3	531.6	532.4	532.4
70°	428.8	429.6	431.9	435.8	442.7	445.0	450.3	454.2	455.7	458.8	456.5
72.5°	357.5	359.0	364.4	365.2	370.5	373.6	375.1	375.1	379.0	379.0	379.7
75°	286.9	287.7	290.0	290.8	294.6	294.6	293.8	295.4	298.4	298.4	299.2
77.5°	217.1	217.1	220.9	217.9	219.4	216.3	217.9	216.3	218.6	217.9	218.6
80°	151.9	151.9	154.2	151.1	151.9	148.8	149.6	148.8	148.8	149.6	149.6
82.5°	93.6	94.4	95.9	93.6	93.6	91.3	92.1	92.8	92.8	92.1	91.3
85°	46.0	46.0	47.6	46.8	46.0	44.5	45.3	46.0	46.0	45.3	45.3
87.5°	12.3	12.3	13.0	13.0	12.3	11.5	12.3	13.0	13.0	13.0	12.3
90°	36.0	36.0	36.0	36.0	35.0	34.0	31.0	29.0	27.0	26.0	26.0
92.5°	40.0	39.0	39.0	38.0	36.0	34.0	32.0	29.0	27.0	27.0	27.0
95°	44.0	43.0	42.0	41.0	38.0	36.0	34.0	32.0	31.0	30.0	30.0
97.5°	42.0	42.0	41.0	40.0	38.0	37.0	36.0	35.0	34.0	33.0	32.0
100°	45.0	45.0	45.0	44.0	42.0	40.0	39.0	38.0	36.0	36.0	35.0
102.5°	51.0	51.0	50.0	49.0	47.0	46.0	45.0	44.0	42.0	42.0	42.0
105°	60.0	60.0	59.0	57.0	55.0	54.0	53.0	53.0	51.0	52.0	52.0
107.5°	72.0	72.0	72.0	70.0	68.0	67.0	66.0	66.0	66.0	68.0	68.0
110°	86.0	86.0	87.0	89.0	86.0	85.0	85.0	86.0	86.0	87.0	86.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	101.0	102.0	104.0	108.0	106.0	107.0	107.0	110.0	108.0	107.0	103.0
115°	121.0	122.0	123.0	128.0	126.0	128.0	127.0	129.0	126.0	124.0	120.0
117.5°	140.0	141.0	141.0	144.0	141.0	141.0	140.0	141.0	138.0	136.0	135.0
120°	152.0	153.0	154.0	155.0	151.0	149.0	147.0	149.0	147.0	147.0	148.0
122.5°	161.0	162.0	163.0	164.0	159.0	154.0	153.0	155.0	156.0	158.0	158.0
125°	169.0	169.0	170.0	172.0	168.0	163.0	160.0	165.0	166.0	168.0	167.0
127.5°	177.0	177.0	179.0	181.0	177.0	171.0	170.0	176.0	177.0	178.0	175.0
130°	187.0	188.0	190.0	191.0	185.0	179.0	179.0	186.0	187.0	186.0	183.0
132.5°	198.0	199.0	200.0	201.0	193.0	186.0	187.0	193.0	195.0	195.0	191.0
135°	210.0	210.0	211.0	209.0	199.0	192.0	193.0	199.0	202.0	201.0	197.0
137.5°	221.0	219.0	217.0	213.0	203.0	197.0	198.0	205.0	207.0	208.0	203.0
140°	229.0	226.0	222.0	216.0	205.0	200.0	201.0	207.0	210.0	213.0	212.0
142.5°	235.0	231.0	225.0	218.0	206.0	201.0	202.0	208.0	212.0	218.0	218.0
145°	235.0	230.0	225.0	218.0	207.0	202.0	204.0	211.0	215.0	223.0	225.0
147.5°	230.0	227.0	223.0	219.0	210.0	207.0	209.0	216.0	220.0	229.0	233.0
150°	224.0	221.0	219.0	220.0	215.0	214.0	216.0	222.0	227.0	235.0	239.0
152.5°	216.0	214.0	216.0	221.0	220.0	220.0	224.0	230.0	234.0	241.0	241.0
155°	208.0	207.0	211.0	219.0	222.0	224.0	229.0	237.0	239.0	243.0	239.0
157.5°	203.0	203.0	207.0	216.0	220.0	224.0	229.0	234.0	232.0	235.0	230.0
160°	199.0	198.0	203.0	210.0	212.0	213.0	216.0	219.0	216.0	219.0	216.0
162.5°	185.0	184.0	188.0	193.0	194.0	193.0	196.0	198.0	195.0	198.0	196.0
165°	169.0	167.0	169.0	173.0	173.0	173.0	175.0	176.0	174.0	177.0	175.0
167.5°	154.0	152.0	153.0	156.0	156.0	155.0	157.0	159.0	157.0	159.0	158.0
170°	142.0	141.0	142.0	145.0	144.0	144.0	146.0	147.0	146.0	147.0	147.0
172.5°	137.0	135.0	136.0	139.0	139.0	138.0	140.0	141.0	140.0	141.0	140.0
175°	136.0	134.0	135.0	137.0	137.0	137.0	138.0	139.0	138.0	139.0	138.0
177.5°	137.0	136.0	136.0	139.0	138.0	138.0	139.0	140.0	139.0	139.0	138.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
0°	958.2	958.2	958.2	958.2	958.2	958.2	958.2	958.2
2.5°	957.4	957.4	958.2	957.4	958.2	957.4	958.2	958.2
5°	957.4	957.4	957.4	957.4	957.4	957.4	957.4	957.4
7.5°	955.9	956.7	955.9	955.9	955.9	956.7	955.9	956.7
10°	954.4	954.4	954.4	954.4	954.4	954.4	954.4	954.4
12.5°	952.1	952.1	952.1	952.1	952.1	952.1	952.1	951.3
15°	950.5	949.8	949.8	949.8	949.0	949.0	949.0	949.0
17.5°	947.5	946.7	945.9	945.9	945.9	945.9	945.2	945.2
20°	942.1	941.3	940.5	940.5	939.8	939.8	939.0	939.0
22.5°	934.4	934.4	933.6	932.9	932.9	932.1	932.1	931.3
25°	927.5	926.7	926.0	925.2	924.4	924.4	923.7	922.9
27.5°	919.8	918.3	917.5	916.8	916.0	915.2	914.5	913.7
30°	911.4	909.9	908.3	907.6	906.0	904.5	903.7	903.0
32.5°	903.0	901.4	899.1	896.8	895.3	893.7	892.2	891.4
35°	896.1	893.0	890.7	887.6	885.3	883.0	882.2	881.5
37.5°	890.7	887.6	883.8	880.7	878.4	875.3	873.8	872.3
40°	885.3	881.5	876.9	873.0	870.0	866.1	864.6	863.1
42.5°	877.6	873.0	868.4	863.8	859.2	855.4	853.1	851.6
45°	866.9	862.3	856.9	850.8	846.2	841.6	839.3	837.7
47.5°	852.3	847.7	841.6	836.2	830.8	826.2	823.2	821.6
50°	834.7	830.1	823.9	817.8	812.4	807.1	804.8	802.5
52.5°	812.4	808.6	801.7	797.1	790.9	785.6	783.3	781.7
55°	784.8	781.0	774.1	769.5	763.3	758.7	755.7	753.4
57.5°	751.1	748.0	740.3	735.7	729.6	725.0	722.7	721.1
60°	709.6	706.6	698.9	694.3	688.9	683.5	682.0	680.5
62.5°	658.2	656.7	650.6	645.2	639.8	634.4	632.9	632.1
65°	598.4	596.9	591.5	586.9	582.3	577.7	576.1	574.6
67.5°	530.1	529.3	524.7	520.9	517.8	513.2	512.5	510.9
70°	457.2	455.7	451.9	448.8	446.5	442.7	441.9	440.4
72.5°	381.3	380.5	378.2	374.4	374.4	369.0	368.2	367.5
75°	297.7	301.5	298.4	296.9	296.9	293.8	293.8	293.1
77.5°	217.9	221.7	224.0	220.9	224.0	220.9	220.9	220.2
80°	148.8	151.9	154.2	151.9	155.7	153.4	153.4	156.5
82.5°	90.5	93.6	95.1	94.4	96.7	95.9	95.1	97.4
85°	44.5	46.0	46.8	46.8	47.6	46.0	47.6	48.3
87.5°	11.5	12.3	13.0	12.3	13.0	13.0	13.0	13.8
90°	28.0	30.0	32.0	33.0	34.0	34.0	34.0	34.0
92.5°	28.0	30.0	32.0	33.0	35.0	36.0	36.0	36.0
95°	30.0	32.0	34.0	35.0	37.0	38.0	39.0	38.0
97.5°	33.0	34.0	34.0	35.0	36.0	36.0	36.0	36.0
100°	36.0	37.0	38.0	38.0	38.0	38.0	37.0	37.0
102.5°	43.0	44.0	44.0	42.0	42.0	41.0	41.0	41.0
105°	54.0	54.0	53.0	51.0	49.0	48.0	48.0	49.0
107.5°	68.0	68.0	66.0	63.0	60.0	59.0	59.0	60.0
110°	84.0	83.0	84.0	81.0	78.0	76.0	74.0	75.0

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CANDELA DISTRIBUTION (continued):

	55°	60°	65°	70°	75°	80°	85°	90°
112.5°	102.0	102.0	105.0	103.0	100.0	98.0	95.0	94.0
115°	121.0	123.0	125.0	124.0	123.0	121.0	116.0	113.0
117.5°	138.0	140.0	141.0	139.0	139.0	139.0	133.0	129.0
120°	150.0	151.0	153.0	148.0	148.0	148.0	145.0	142.0
122.5°	159.0	160.0	162.0	156.0	155.0	156.0	153.0	150.0
125°	167.0	167.0	168.0	164.0	163.0	164.0	160.0	158.0
127.5°	176.0	175.0	175.0	173.0	173.0	173.0	166.0	163.0
130°	183.0	182.0	183.0	181.0	184.0	181.0	171.0	169.0
132.5°	190.0	189.0	192.0	189.0	192.0	190.0	179.0	176.0
135°	196.0	197.0	201.0	199.0	199.0	195.0	185.0	184.0
137.5°	203.0	205.0	210.0	207.0	204.0	198.0	191.0	190.0
140°	212.0	214.0	217.0	214.0	209.0	202.0	195.0	195.0
142.5°	220.0	222.0	223.0	217.0	211.0	204.0	198.0	198.0
145°	230.0	230.0	227.0	217.0	211.0	205.0	201.0	202.0
147.5°	239.0	236.0	229.0	218.0	212.0	207.0	204.0	206.0
150°	242.0	240.0	232.0	220.0	214.0	211.0	210.0	211.0
152.5°	242.0	241.0	235.0	223.0	219.0	217.0	215.0	216.0
155°	238.0	237.0	234.0	227.0	224.0	223.0	220.0	219.0
157.5°	228.0	229.0	229.0	226.0	226.0	225.0	222.0	219.0
160°	215.0	217.0	219.0	219.0	221.0	222.0	218.0	215.0
162.5°	196.0	199.0	200.0	201.0	204.0	208.0	207.0	207.0
165°	176.0	179.0	181.0	181.0	185.0	189.0	190.0	192.0
167.5°	160.0	163.0	165.0	164.0	168.0	171.0	172.0	174.0
170°	148.0	150.0	152.0	152.0	155.0	158.0	159.0	160.0
172.5°	141.0	144.0	145.0	144.0	146.0	149.0	149.0	151.0
175°	138.0	140.0	141.0	140.0	141.0	143.0	143.0	144.0
177.5°	138.0	140.0	140.0	138.0	140.0	141.0	141.0	141.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

(END OF REPORT)