

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: P198324

Luminaire Tested: **TT-C2-LED-E1-MQ-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198324
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P27139) AND DOWNLIGHT
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TT-C2-LED-E1-MQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
MEDIUM DISTRIBUTION
Light Source: (168) 4000K CCT, 70 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5589.6 lumens
Efficiency: N/A
Efficacy: 108.7 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short - Semi-Cutoff
BUG Rating: B2 - U4 - G2

Input Watts (W): 51.4
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



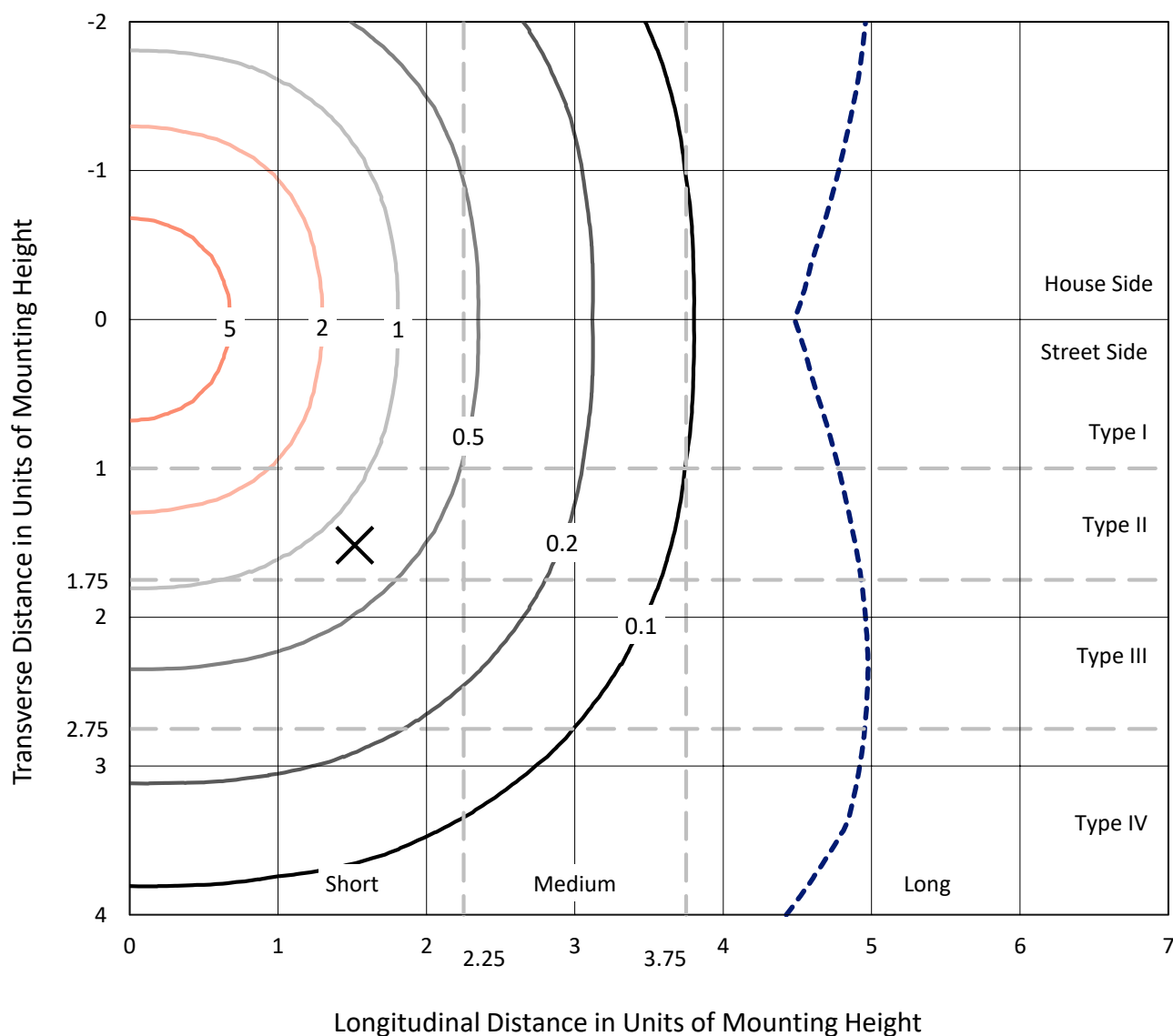
REPORT NUMBER: P198324

CATALOG NUMBER: TT-C2-LED-E1-MQ-UPL

Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

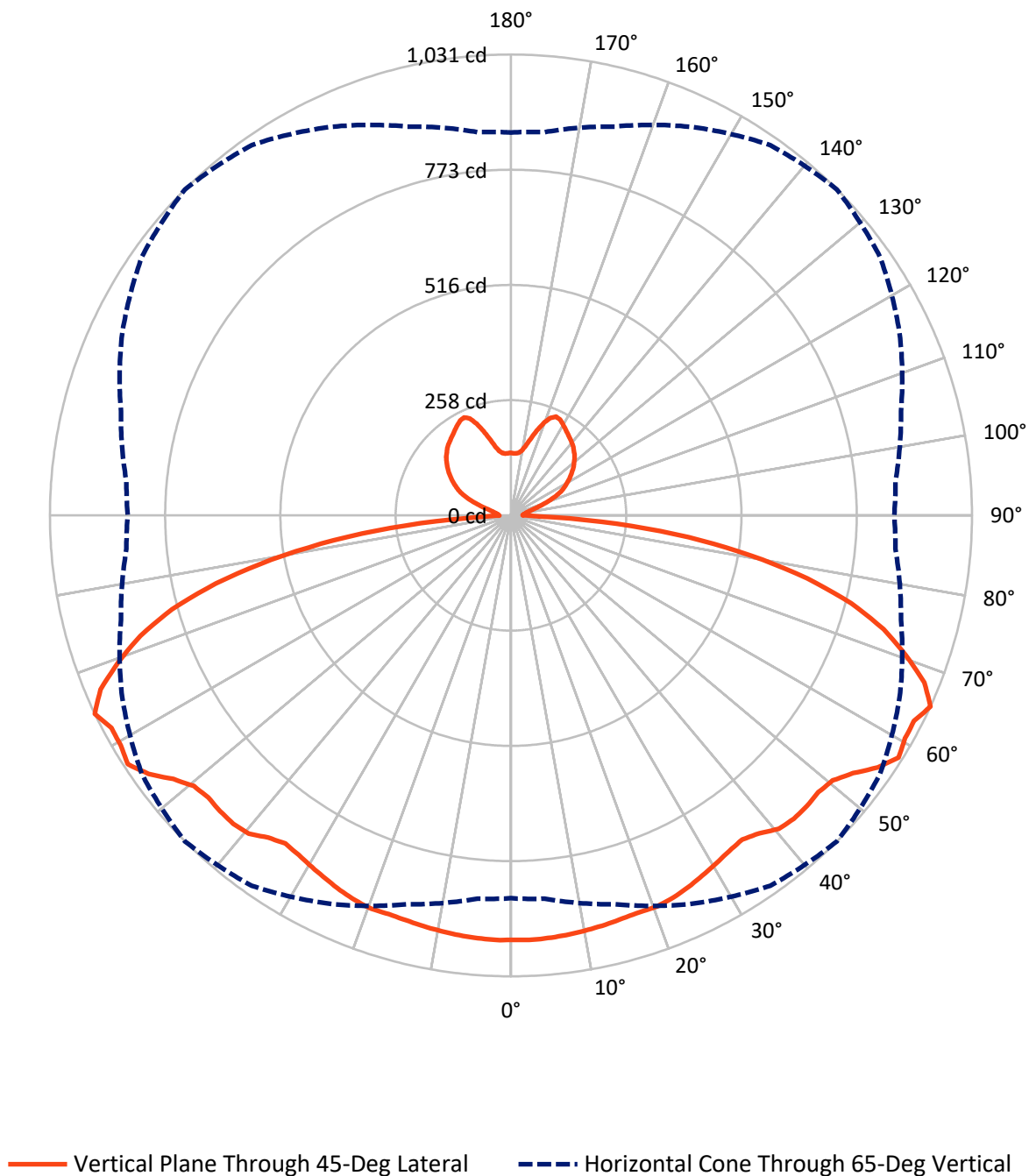


Based on 10 foot mounting height. Maximum calculated value = 9.5 fc
 Type V - Short - Semi-Cutoff

REPORT NUMBER: P198324

CATALOG NUMBER: TT-C2-LED-E1-MQ-UPL

Luminous Intensity Polar Plot



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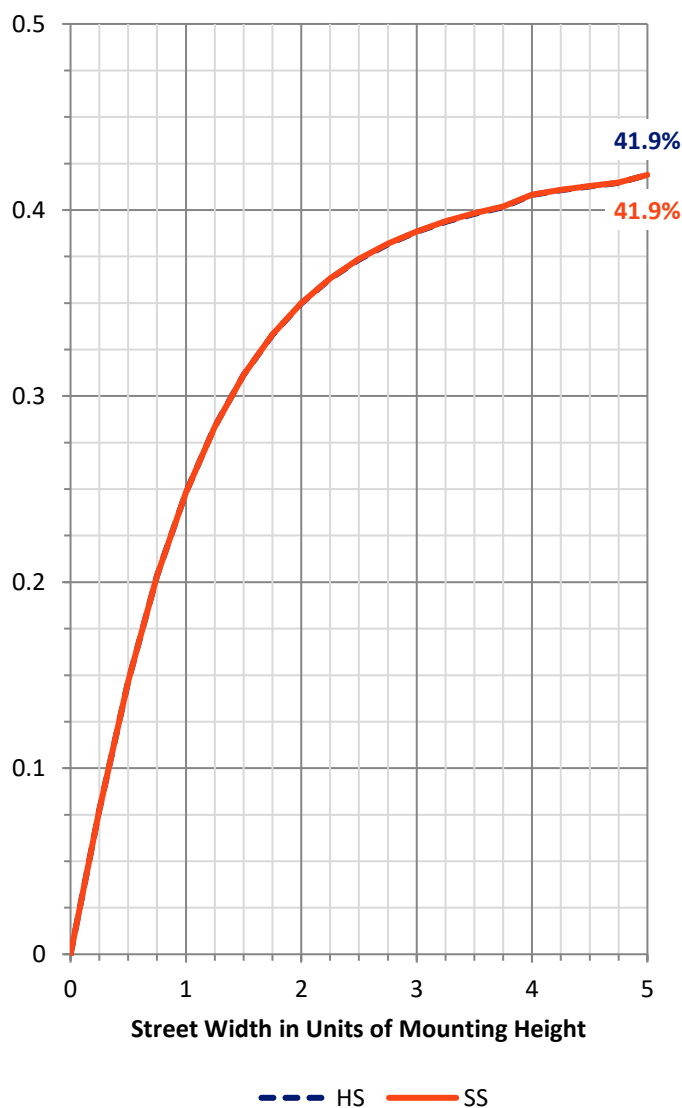
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2382.1	412.7	2794.8
	% Fixture	42.6	7.4	50.0
Street Side	Lumens	2382.1	412.7	2794.8
	% Fixture	42.6	7.4	50.0
Total	Lumens	4764.3	825.3	5589.6
	% Fixture	85.2	14.8	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	90.4	1.6
10°-20°	265.1	4.7
20°-30°	424.2	7.6
30°-40°	560.3	10.0
40°-50°	700.4	12.5
50°-60°	840.9	15.0
60°-70°	919.2	16.4
70°-80°	730.3	13.1
80°-90°	233.4	4.2
90°-100°	38.4	0.7
100°-110°	59.5	1.1
110°-120°	119.6	2.1
120°-130°	148.9	2.7
130°-140°	153.3	2.7
140°-150°	136.3	2.4
150°-160°	103.9	1.9
160°-170°	51.8	0.9
170°-180°	13.6	0.2
0°-90°	4764.3	85.2
0°-180°	5589.6	100.0

Coefficient of Utilization



REPORT NUMBER: P198324

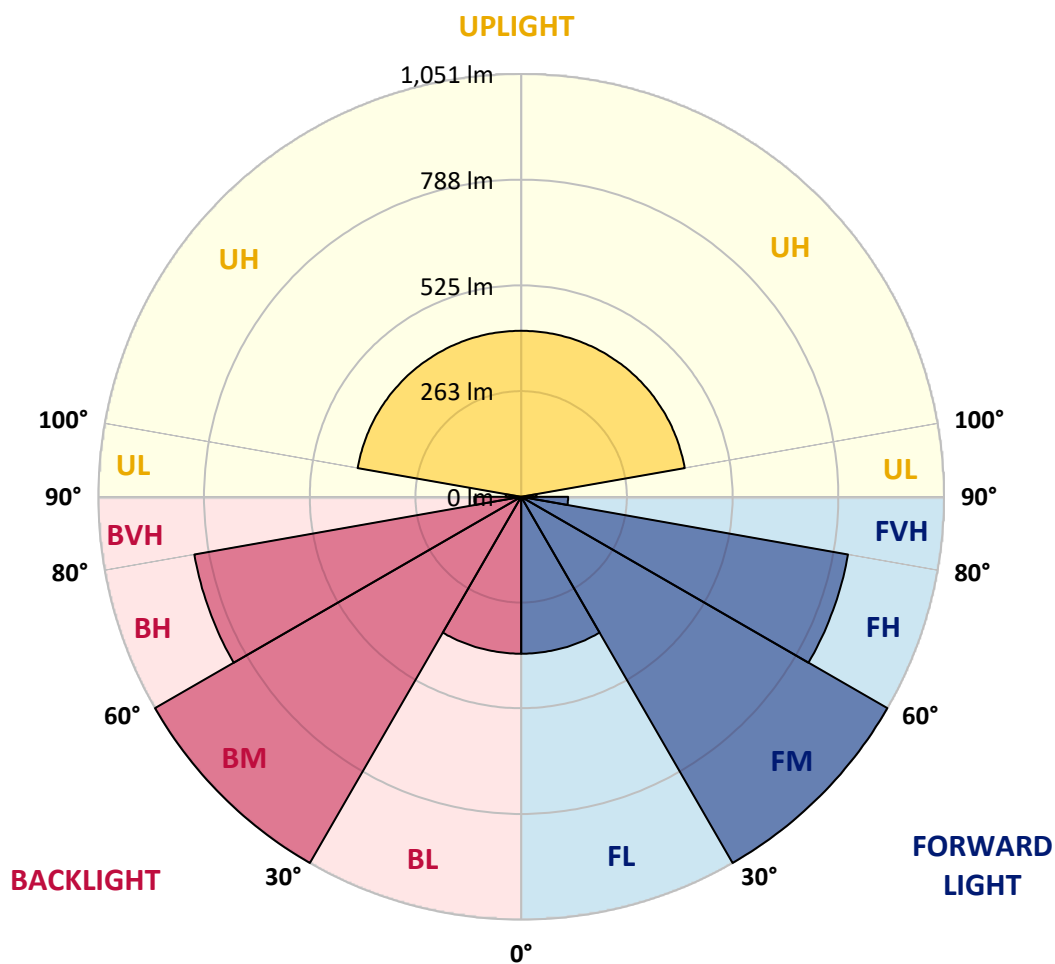
CATALOG NUMBER: TT-C2-LED-E1-MQ-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	389.9	7.0			
FM	(30°-60°)	1050.8	18.8			
FH	(60°-80°)	824.7	14.8			G1/1800
FVH	(80°-90°)	116.7	2.1			G2/225
BL	(0°-30°)	389.9	7.0	B1/500		
BM	(30°-60°)	1050.8	18.8	B2/2500		
BH	(60°-80°)	824.7	14.8	B2/1000		G1/1800
BVH	(80°-90°)	116.7	2.1			G2/225
UL	(90°-100°)	38.4	0.7		U2/50	
UH	(100°-180°)	412.7	7.4		U3/500	

BUG Rating: B2-U4-G2

Type V Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7	949.7
2.5°	950.5	950.5	950.5	950.5	949.7	950.5	949.7	949.7	950.5	950.5	950.5
5°	948.8	948.8	948.8	948.8	948.8	948.8	948.8	948.8	948.8	948.8	948.8
7.5°	946.3	946.3	946.3	946.3	946.3	946.3	946.3	946.3	946.3	946.3	946.3
10°	943.0	943.8	943.8	943.8	943.0	943.0	943.0	943.8	943.8	943.0	943.0
12.5°	939.7	939.7	940.5	939.7	939.7	939.7	939.7	939.7	939.7	939.7	938.8
15°	934.7	934.7	935.5	935.5	935.5	935.5	935.5	934.7	934.7	933.9	933.9
17.5°	930.5	930.5	932.2	932.2	933.0	933.0	933.0	931.4	931.4	929.7	929.7
20°	929.7	929.7	930.5	932.2	933.0	933.9	933.0	931.4	929.7	928.0	928.0
22.5°	923.9	924.7	926.4	927.2	928.9	928.9	928.9	926.4	925.5	923.9	923.9
25°	916.4	915.6	918.1	919.7	921.4	921.4	920.6	918.9	918.1	915.6	915.6
27.5°	904.8	905.6	907.2	909.7	912.2	912.2	911.4	909.7	908.1	906.4	905.6
30°	894.8	895.6	897.3	899.8	901.4	903.9	901.4	899.8	897.3	896.4	895.6
32.5°	884.0	884.8	887.3	891.4	893.9	895.6	893.9	892.3	888.1	885.6	884.8
35°	876.5	877.3	879.8	885.6	890.6	890.6	890.6	886.5	881.5	877.3	876.5
37.5°	877.3	879.0	884.8	893.1	901.4	902.3	901.4	893.1	885.6	879.0	878.1
40°	884.0	885.6	895.6	908.1	918.9	922.2	919.7	908.1	896.4	887.3	884.8
42.5°	883.1	885.6	896.4	912.2	923.0	928.0	923.0	912.2	898.1	888.1	884.8
45°	879.8	881.5	893.1	909.7	923.0	928.0	923.9	911.4	895.6	884.0	881.5
47.5°	874.8	876.5	885.6	905.6	920.6	925.5	921.4	908.1	888.1	879.0	877.3
50°	868.2	873.2	888.1	908.9	928.9	932.2	929.7	910.6	889.8	876.5	869.8
52.5°	874.8	874.0	891.4	928.9	947.2	958.0	949.7	927.2	895.6	878.1	876.5
55°	889.8	896.4	915.6	950.5	980.4	995.4	983.8	953.0	917.2	895.6	891.4
57.5°	889.0	897.3	931.4	966.3	1012.0	1022.0	1008.7	970.4	929.7	901.4	890.6
60°	884.0	887.3	913.1	975.4	1001.2	1012.9	1001.2	971.3	919.7	888.1	888.1
62.5°	867.3	873.2	913.9	957.1	993.7	1012.0	997.9	960.5	913.1	879.0	868.2
65°	856.5	860.7	900.6	958.8	1011.2	1031.2	1007.9	959.6	903.1	863.2	857.4
67.5°	822.4	829.9	867.3	930.5	981.3	997.1	987.9	928.9	867.3	830.7	821.6
70°	764.2	768.4	819.9	879.8	926.4	937.2	923.9	885.6	814.9	774.2	761.7
72.5°	692.7	698.5	745.9	812.4	857.4	871.5	855.7	814.9	741.8	705.2	693.5
75°	620.4	626.2	656.9	729.3	766.7	786.7	768.4	724.3	658.6	622.8	617.9
77.5°	516.4	525.6	573.0	621.2	656.9	677.7	661.9	621.2	569.6	527.2	511.4
80°	405.8	412.5	456.5	498.9	531.4	544.7	537.2	498.9	457.4	414.1	406.6
82.5°	284.4	288.6	326.8	360.9	400.8	400.8	392.5	367.6	326.0	288.6	290.2
85°	152.2	157.2	186.3	212.9	237.8	237.8	230.3	214.5	185.4	156.3	153.0
87.5°	30.8	34.1	44.9	49.1	58.2	62.4	56.5	51.6	44.9	35.8	35.8
90°	36.0	36.0	36.0	34.0	29.0	26.0	28.0	32.0	34.0	34.0	34.0
92.5°	40.0	39.0	38.0	34.0	29.0	27.0	28.0	32.0	35.0	36.0	36.0
95°	44.0	43.0	41.0	36.0	32.0	30.0	30.0	34.0	37.0	39.0	38.0
97.5°	42.0	42.0	40.0	37.0	35.0	33.0	33.0	34.0	36.0	36.0	36.0
100°	45.0	45.0	44.0	40.0	38.0	36.0	36.0	38.0	38.0	37.0	37.0
102.5°	51.0	51.0	49.0	46.0	44.0	42.0	43.0	44.0	42.0	41.0	41.0
105°	60.0	60.0	57.0	54.0	53.0	52.0	54.0	53.0	49.0	48.0	49.0
107.5°	72.0	72.0	70.0	67.0	66.0	68.0	68.0	66.0	60.0	59.0	60.0
110°	86.0	86.0	89.0	85.0	86.0	87.0	84.0	84.0	78.0	74.0	75.0

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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	101.0	102.0	108.0	107.0	110.0	107.0	102.0	105.0	100.0	95.0	94.0
115°	121.0	122.0	128.0	128.0	129.0	124.0	121.0	125.0	123.0	116.0	113.0
117.5°	140.0	141.0	144.0	141.0	141.0	136.0	138.0	141.0	139.0	133.0	129.0
120°	152.0	153.0	155.0	149.0	149.0	147.0	150.0	153.0	148.0	145.0	142.0
122.5°	161.0	162.0	164.0	154.0	155.0	158.0	159.0	162.0	155.0	153.0	150.0
125°	169.0	169.0	172.0	163.0	165.0	168.0	167.0	168.0	163.0	160.0	158.0
127.5°	177.0	177.0	181.0	171.0	176.0	178.0	176.0	175.0	173.0	166.0	163.0
130°	187.0	188.0	191.0	179.0	186.0	186.0	183.0	183.0	184.0	171.0	169.0
132.5°	198.0	199.0	201.0	186.0	193.0	195.0	190.0	192.0	192.0	179.0	176.0
135°	210.0	210.0	209.0	192.0	199.0	201.0	196.0	201.0	199.0	185.0	184.0
137.5°	221.0	219.0	213.0	197.0	205.0	208.0	203.0	210.0	204.0	191.0	190.0
140°	229.0	226.0	216.0	200.0	207.0	213.0	212.0	217.0	209.0	195.0	195.0
142.5°	235.0	231.0	218.0	201.0	208.0	218.0	220.0	223.0	211.0	198.0	198.0
145°	235.0	230.0	218.0	202.0	211.0	223.0	230.0	227.0	211.0	201.0	202.0
147.5°	230.0	227.0	219.0	207.0	216.0	229.0	239.0	229.0	212.0	204.0	206.0
150°	224.0	221.0	220.0	214.0	222.0	235.0	242.0	232.0	214.0	210.0	211.0
152.5°	216.0	214.0	221.0	220.0	230.0	241.0	242.0	235.0	219.0	215.0	216.0
155°	208.0	207.0	219.0	224.0	237.0	243.0	238.0	234.0	224.0	220.0	219.0
157.5°	203.0	203.0	216.0	224.0	234.0	235.0	228.0	229.0	226.0	222.0	219.0
160°	199.0	198.0	210.0	213.0	219.0	219.0	215.0	219.0	221.0	218.0	215.0
162.5°	185.0	184.0	193.0	193.0	198.0	198.0	196.0	200.0	204.0	207.0	207.0
165°	169.0	167.0	173.0	173.0	176.0	177.0	176.0	181.0	185.0	190.0	192.0
167.5°	154.0	152.0	156.0	155.0	159.0	159.0	160.0	165.0	168.0	172.0	174.0
170°	142.0	141.0	145.0	144.0	147.0	147.0	148.0	152.0	155.0	159.0	160.0
172.5°	137.0	135.0	139.0	138.0	141.0	141.0	141.0	145.0	146.0	149.0	151.0
175°	136.0	134.0	137.0	137.0	139.0	139.0	138.0	141.0	141.0	143.0	144.0
177.5°	137.0	136.0	139.0	138.0	140.0	139.0	138.0	140.0	140.0	141.0	141.0
180°	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0	140.0

(END OF REPORT)