

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: P198320

Luminaire Tested: **TT-C2-LED-E1-MQ-LWR-LW-8030-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198320
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (P27139) AND DOWNLIGHT
Test Lab: INNOVATION CENTER P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: McGRAW-EDISON
Catalog Number: TT-C2-LED-E1-MQ-LWR-LW-8030-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
MEDIUM DISTRIBUTION WITH LumaWatt WIRELESS SENSOR
Light Source: (168) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 4452.4 lumens
Efficiency: N/A
Efficacy: 86.6 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short - Non-Cutoff
BUG Rating: B2 - U4 - G1

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



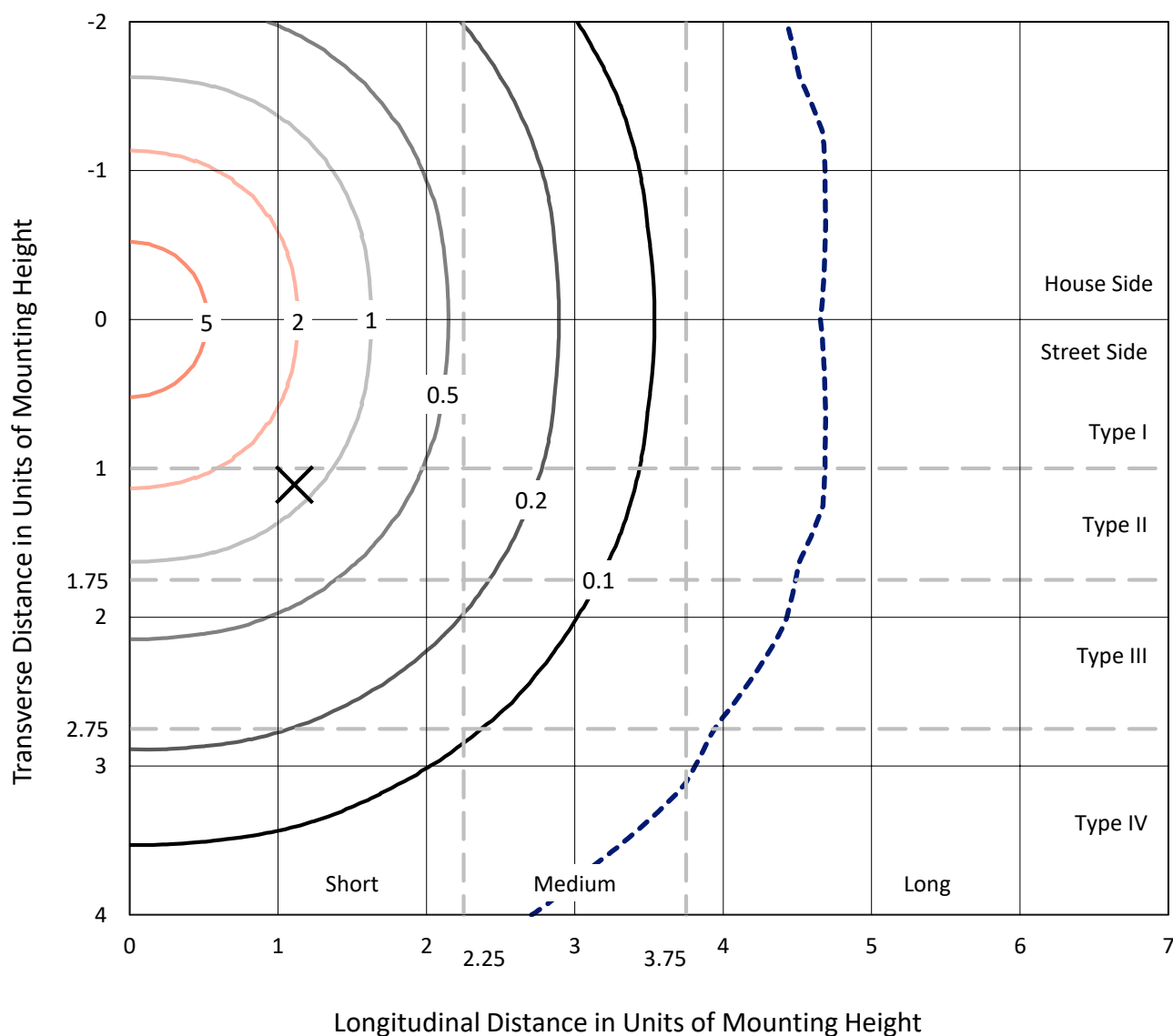
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Iso-Footcandle Lines of Horizontal Illumination

× Max cd

--- 1/2 Max cd

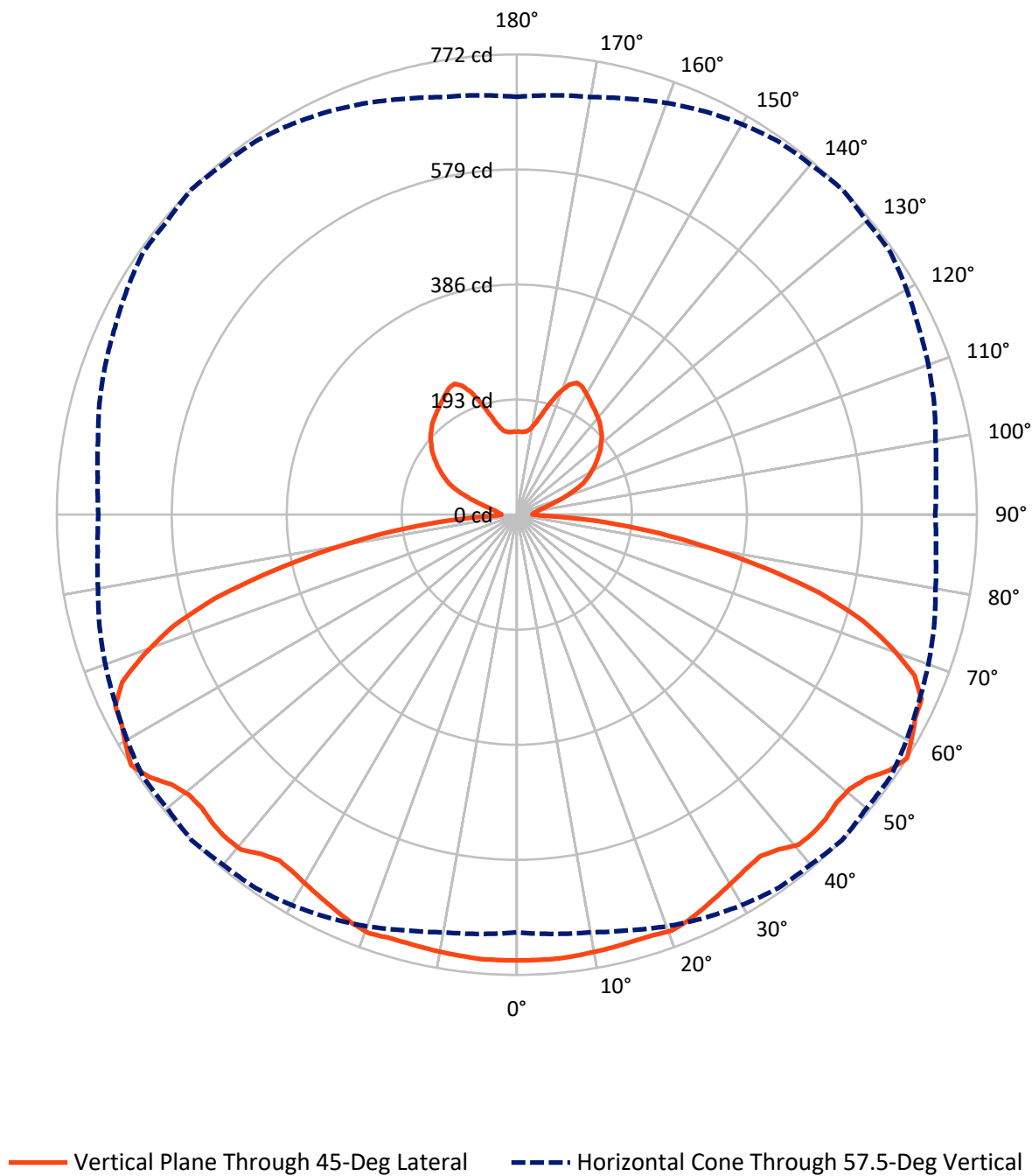


Based on 10 foot mounting height. Maximum calculated value = 7.5 fc
 Type V - Short - Non-Cutoff

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Luminous Intensity Polar Plot



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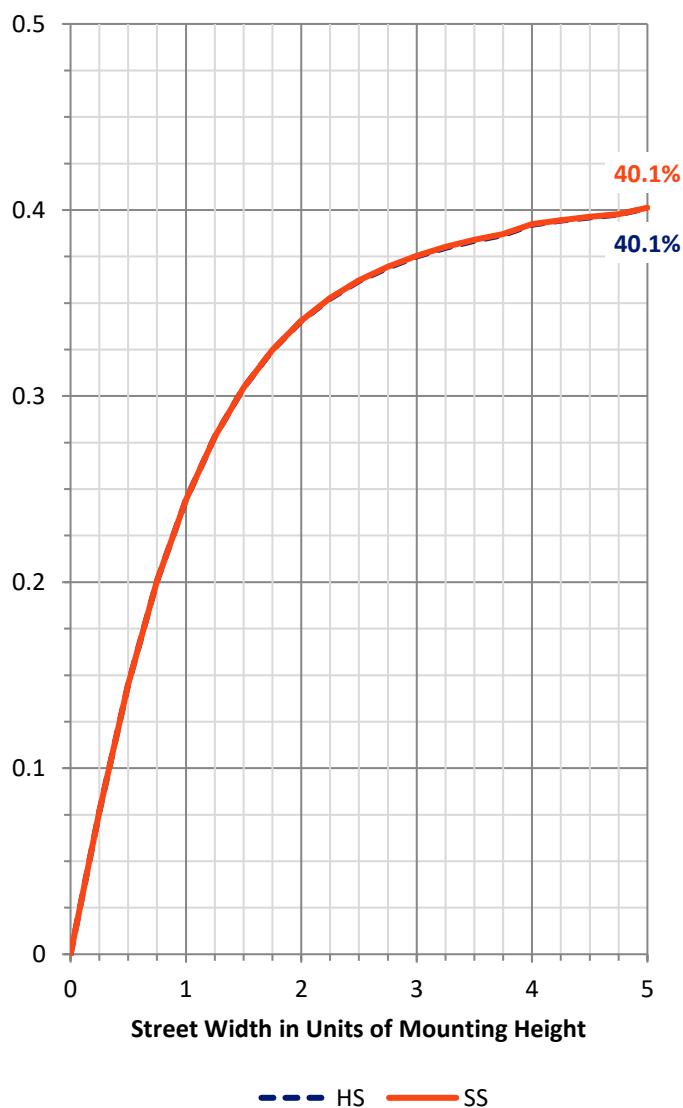
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	1814.2	412.0	2226.2
	% Fixture	40.7	9.3	50.0
Street Side	Lumens	1814.2	412.0	2226.2
	% Fixture	40.7	9.3	50.0
Total	Lumens	3628.5	824.0	4452.4
	% Fixture	81.5	18.5	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.2	1.6
10°-20°	210.1	4.7
20°-30°	336.6	7.6
30°-40°	443.0	9.9
40°-50°	551.8	12.4
50°-60°	650.0	14.6
60°-70°	691.0	15.5
70°-80°	518.2	11.6
80°-90°	156.6	3.5
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	3.1
150°-160°	103.7	2.3
160°-170°	51.8	1.2
170°-180°	13.6	0.3
0°-90°	3628.5	81.5
0°-180°	4452.4	100.0

Coefficient of Utilization



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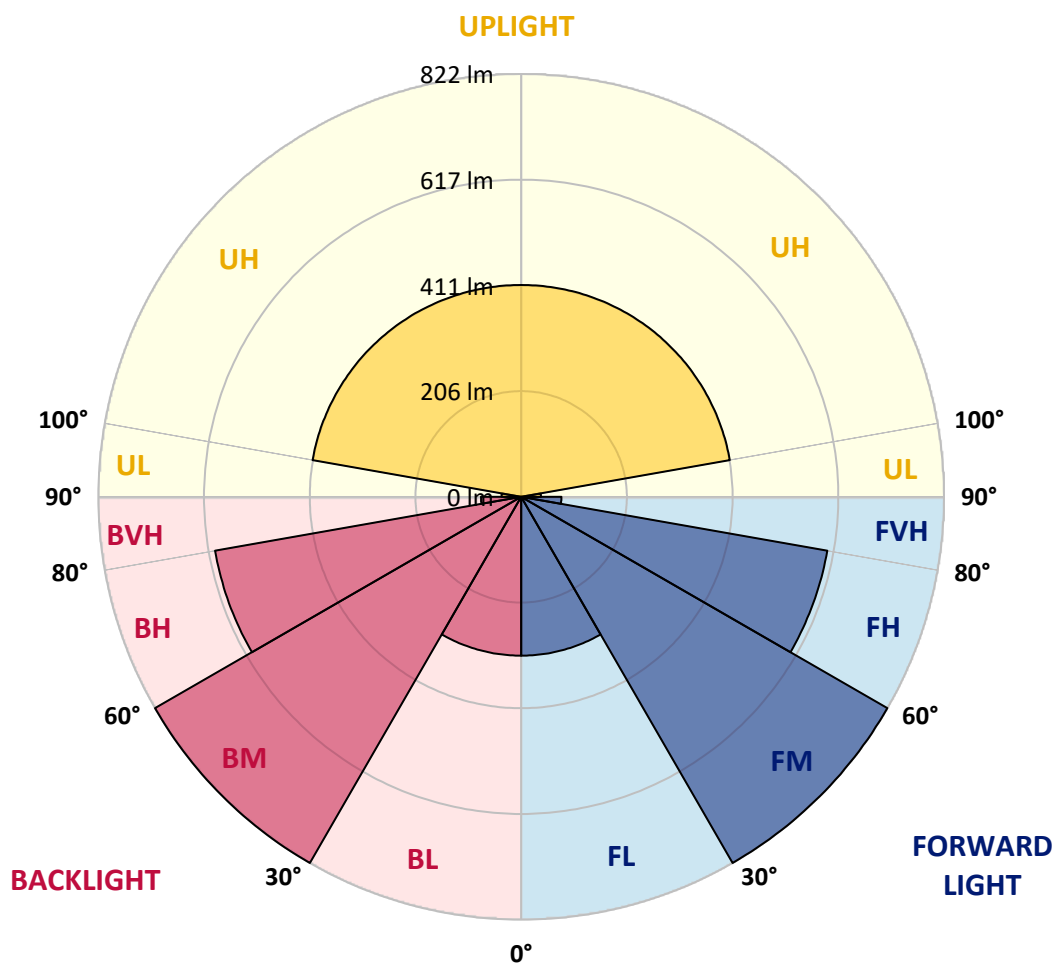
CATALOG NUMBER: TT-C2-LED-E1-MQ-LWR-LW-8030-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	308.9	6.9			
FM	(30°-60°)	822.4	18.5			
FH	(60°-80°)	604.6	13.6			G0/660
FVH	(80°-90°)	78.3	1.8			G1/100
BL	(0°-30°)	308.9	6.9	B1/500		
BM	(30°-60°)	822.4	18.5	B1/1000		
BH	(60°-80°)	604.6	13.6	B2/1000		G0/660
BVH	(80°-90°)	78.3	1.8			G1/100
UL	(90°-100°)	38.3	0.9		U2/50	
UH	(100°-180°)	412.0	9.3		U3/500	

BUG Rating: B2-U4-G1

Type V Short



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CANDELA DISTRIBUTION (FULL):

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	747.6	747.6	747.6	747.6	747.6	747.6	747.6	747.6	747.6	747.6	747.6
2.5°	746.8	746.8	746.8	747.6	747.6	747.6	747.6	747.6	747.6	747.6	747.6
5°	746.8	746.8	746.8	746.8	746.8	746.8	747.6	747.6	747.6	747.6	747.6
7.5°	745.3	745.3	745.3	745.3	745.3	746.0	746.0	746.0	746.0	746.0	746.0
10°	743.8	743.8	743.8	743.8	744.5	744.5	744.5	744.5	744.5	744.5	744.5
12.5°	742.2	742.2	741.5	742.2	742.2	742.2	743.0	743.0	743.0	743.0	743.0
15°	739.2	739.2	740.0	740.0	740.7	740.7	740.7	740.7	741.5	741.5	741.5
17.5°	737.7	737.7	738.5	739.2	739.2	740.0	740.7	740.7	741.5	741.5	741.5
20°	740.0	740.0	740.0	740.7	741.5	742.2	743.0	743.8	743.8	744.5	743.8
22.5°	735.4	735.4	735.4	736.2	736.2	736.2	736.9	737.7	737.7	738.5	737.7
25°	727.1	727.1	727.8	727.8	728.6	728.6	729.3	729.3	729.3	730.1	730.1
27.5°	718.7	718.0	719.5	719.5	720.2	720.2	721.0	721.8	721.8	721.8	722.5
30°	709.6	709.6	710.4	710.4	711.1	711.9	712.6	713.4	713.4	714.2	714.2
32.5°	699.7	700.5	701.3	702.0	702.8	704.3	705.1	705.8	706.6	707.3	706.6
35°	692.9	693.7	694.4	696.0	698.2	699.7	701.3	702.8	703.5	703.5	703.5
37.5°	694.4	695.2	696.7	699.7	703.5	705.8	708.9	711.1	711.9	712.6	712.6
40°	702.8	704.3	706.6	710.4	714.9	718.7	723.3	725.5	727.1	727.8	727.1
42.5°	702.0	704.3	706.6	711.1	716.4	720.2	724.8	727.1	728.6	729.3	728.6
45°	699.7	701.3	703.5	708.1	711.9	717.2	721.8	724.0	726.3	727.1	726.3
47.5°	694.4	694.4	695.2	699.7	705.1	711.9	715.7	719.5	721.8	721.8	721.8
50°	687.6	690.6	692.2	698.2	703.5	709.6	716.4	721.8	722.5	723.3	722.5
52.5°	687.6	688.4	693.7	697.5	708.1	717.2	724.0	729.3	733.9	734.7	734.7
55°	699.7	701.3	704.3	713.4	721.8	735.4	746.8	751.4	754.4	757.4	754.4
57.5°	700.5	705.8	711.1	721.8	734.7	746.0	755.9	764.3	766.5	771.8	765.8
60°	691.4	692.9	698.2	711.1	727.8	740.0	749.1	756.7	764.3	761.2	764.3
62.5°	677.0	680.8	688.4	698.2	711.9	726.3	740.0	742.2	753.6	750.6	755.1
65°	665.6	668.6	676.2	690.6	707.3	716.4	731.6	740.7	740.0	746.0	739.2
67.5°	637.5	639.8	646.6	661.0	677.0	690.6	695.2	709.6	711.1	719.5	711.9
70°	591.2	596.5	606.4	620.1	633.0	644.3	652.7	660.3	664.8	666.4	664.8
72.5°	533.5	541.9	549.5	562.4	575.3	582.9	588.2	598.8	601.8	606.4	604.9
75°	474.3	474.3	481.9	491.8	501.7	506.2	509.3	516.1	519.9	525.2	520.6
77.5°	393.1	397.7	404.5	412.9	411.3	413.6	413.6	417.4	415.9	419.7	422.7
80°	308.1	312.7	318.8	324.8	324.1	318.8	322.6	318.0	316.5	317.2	319.5
82.5°	220.1	223.1	228.4	232.2	232.2	228.4	230.0	225.4	226.9	223.1	226.2
85°	126.0	129.8	133.6	137.4	137.4	135.1	137.4	131.3	132.1	132.1	132.1
87.5°	31.1	34.2	35.7	37.9	36.4	40.2	42.5	38.7	39.5	37.9	40.2
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°	747.6	747.6	747.6	747.6	747.6	747.6	747.6	747.6
2.5°	747.6	746.8	747.6	747.6	747.6	747.6	746.8	746.8
5°	747.6	747.6	747.6	746.8	746.8	746.8	746.8	746.8
7.5°	746.0	746.0	746.0	745.3	745.3	745.3	745.3	745.3
10°	744.5	744.5	743.8	743.8	743.8	743.8	743.8	743.8
12.5°	743.0	743.0	742.2	742.2	742.2	742.2	742.2	741.5
15°	741.5	741.5	740.7	740.7	740.0	740.0	739.2	739.2
17.5°	741.5	740.7	740.0	739.2	739.2	738.5	737.7	737.7
20°	743.8	743.0	742.2	741.5	740.7	740.0	740.0	739.2
22.5°	737.7	736.9	736.2	736.2	735.4	735.4	735.4	734.7
25°	730.1	729.3	729.3	727.8	727.8	727.1	727.1	726.3
27.5°	721.8	721.0	721.0	720.2	719.5	718.7	718.0	718.0
30°	713.4	712.6	712.6	711.9	710.4	710.4	709.6	708.9
32.5°	705.8	705.8	705.1	703.5	702.0	701.3	699.7	699.7
35°	703.5	702.0	700.5	698.2	696.0	694.4	693.7	692.9
37.5°	711.9	709.6	705.8	703.5	700.5	697.5	696.0	694.4
40°	726.3	722.5	718.7	714.9	710.4	706.6	703.5	702.8
42.5°	727.1	724.8	721.0	716.4	711.1	706.6	703.5	702.8
45°	724.8	721.8	717.2	711.9	708.1	702.8	700.5	699.7
47.5°	719.5	716.4	711.9	704.3	699.0	695.2	694.4	694.4
50°	722.5	716.4	708.9	704.3	699.0	692.9	690.6	689.1
52.5°	729.3	723.3	718.7	708.9	697.5	692.2	689.1	686.8
55°	751.4	748.3	734.7	721.0	712.6	705.8	702.8	701.3
57.5°	765.8	755.1	743.8	734.7	724.8	713.4	705.8	702.0
60°	758.2	746.8	741.5	729.3	708.9	696.7	692.2	689.9
62.5°	741.5	741.5	727.1	708.1	700.5	689.9	681.5	678.5
65°	740.7	730.9	716.4	709.6	691.4	675.5	667.1	665.6
67.5°	708.9	695.2	691.4	676.2	661.0	646.6	640.5	637.5
70°	660.3	655.7	644.3	634.5	620.8	605.6	597.3	594.3
72.5°	598.8	591.2	585.9	577.6	564.7	545.7	538.8	535.1
75°	515.3	511.5	511.5	502.4	490.3	478.9	478.1	476.6
77.5°	414.4	415.9	419.7	409.8	413.6	407.6	402.2	398.4
80°	315.0	321.8	322.6	324.8	327.1	318.8	315.0	310.4
82.5°	223.9	227.7	232.2	233.0	234.5	228.4	225.4	220.9
85°	132.1	134.3	138.1	138.1	138.1	132.8	131.3	127.5
87.5°	38.7	38.7	41.0	38.7	38.7	38.7	34.9	37.2
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)