

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: P198456

Luminaire Tested: **TT-C4-LED-E1-RW-SG-8030-UPL**

Issue Date: 3/3/2020

Test Information

Test Method: LM-79-08
Report Number: P198456
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-C4-LED-E1-RW-SG-8030-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
RECTANGULAR DISTRIBUTION WITH SOFTENING GLASS LENS
Light Source: (160) 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5123.6 lumens
Efficiency: N/A
Efficacy: 68.0 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type III - Short - Semi-Cutoff
BUG Rating: B2 - U4 - G2

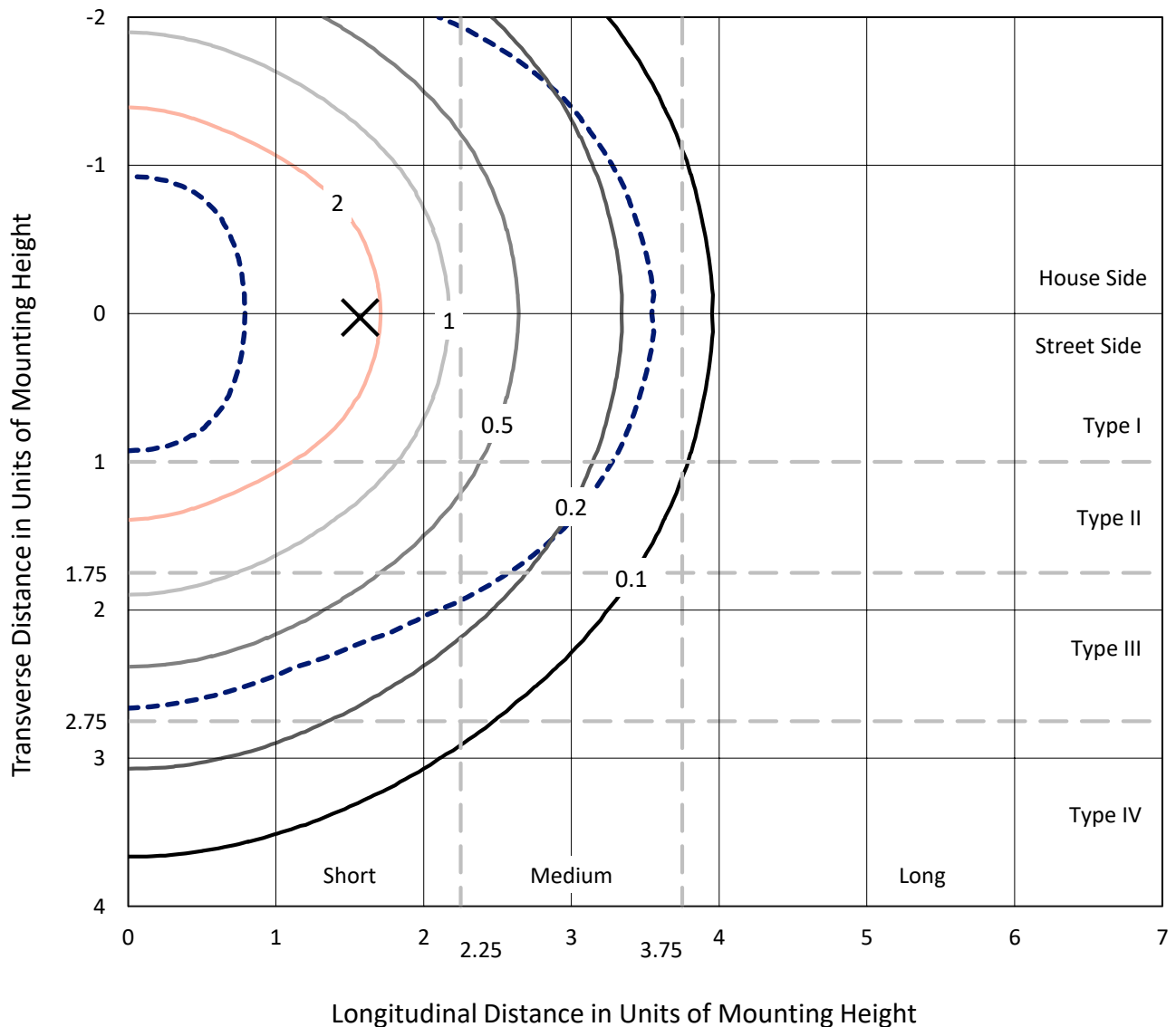
Input Watts (W): 75.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Iso-Footcandle Lines of Horizontal Illumination

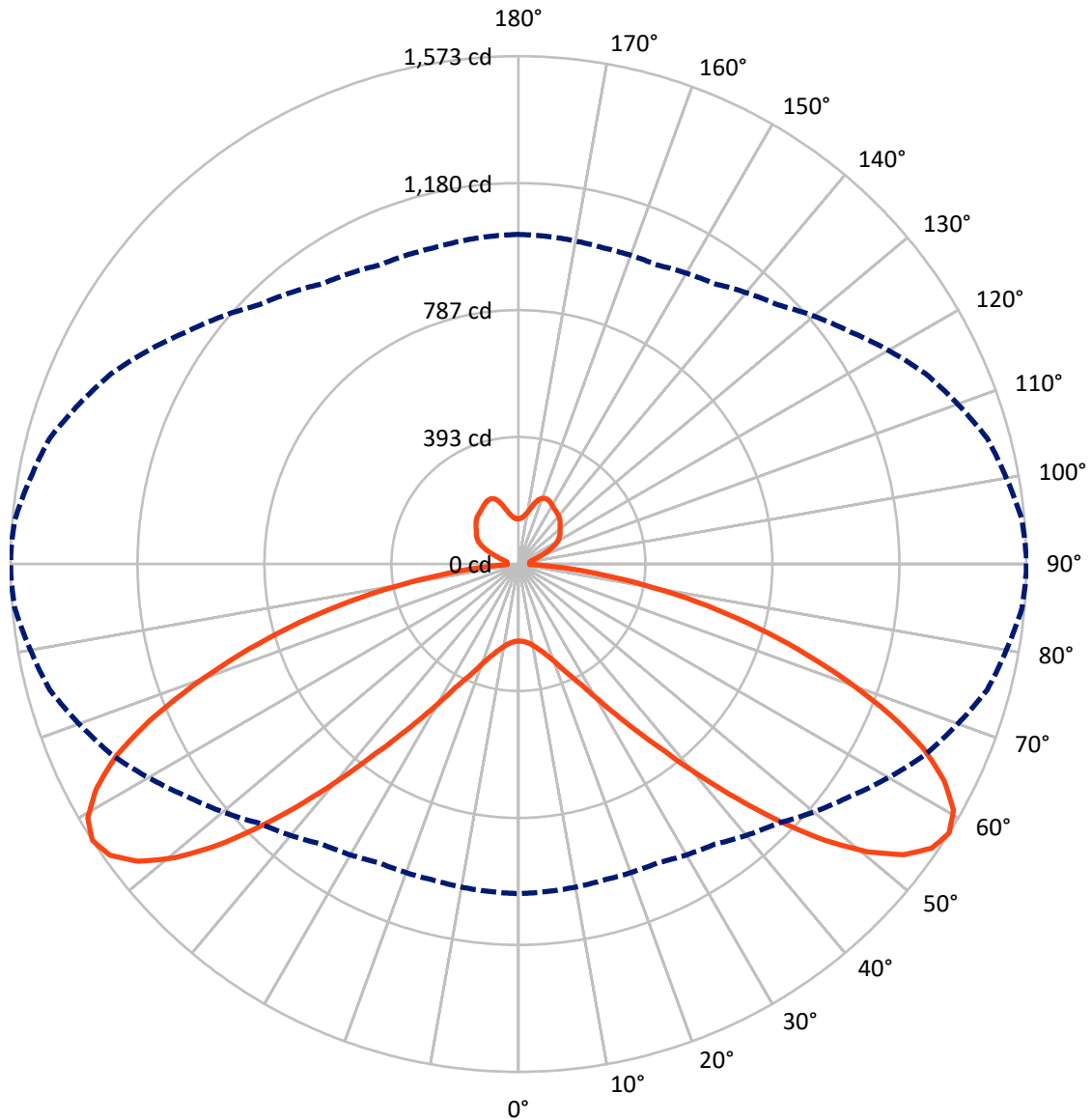
✕ Max cd
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 4 fc
 Type III - Short - Semi-Cutoff

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Luminous Intensity Polar Plot



— Vertical Plane Through 89-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

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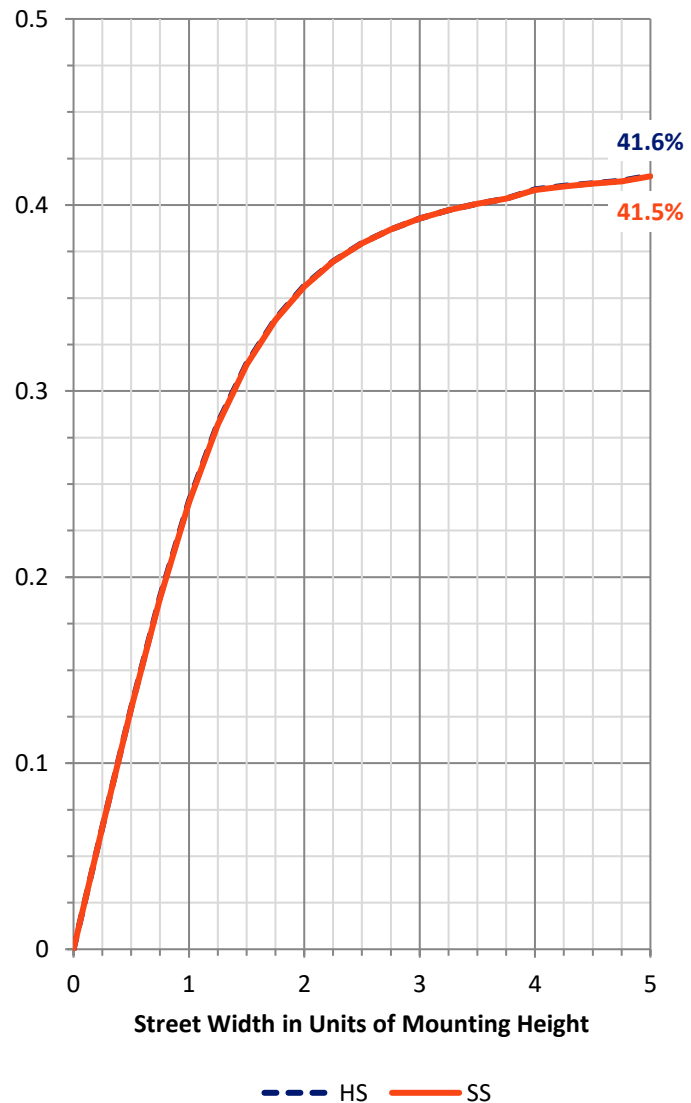
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2149.1	412.7	2561.8
	% Fixture	41.9	8.1	50.0
Street Side	Lumens	2149.1	412.7	2561.8
	% Fixture	41.9	8.1	50.0
Total	Lumens	4298.3	825.3	5123.6
	% Fixture	83.9	16.1	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	23.7	0.5
10°-20°	82.7	1.6
20°-30°	185.2	3.6
30°-40°	383.3	7.5
40°-50°	727.6	14.2
50°-60°	1064.6	20.8
60°-70°	1061.4	20.7
70°-80°	631.8	12.3
80°-90°	138.0	2.7
90°-100°	38.4	0.7
100°-110°	59.5	1.2
110°-120°	119.6	2.3
120°-130°	148.9	2.9
130°-140°	153.3	3.0
140°-150°	136.3	2.7
150°-160°	103.9	2.0
160°-170°	51.8	1.0
170°-180°	13.6	0.3
0°-90°	4298.3	83.9
0°-180°	5123.6	100.0



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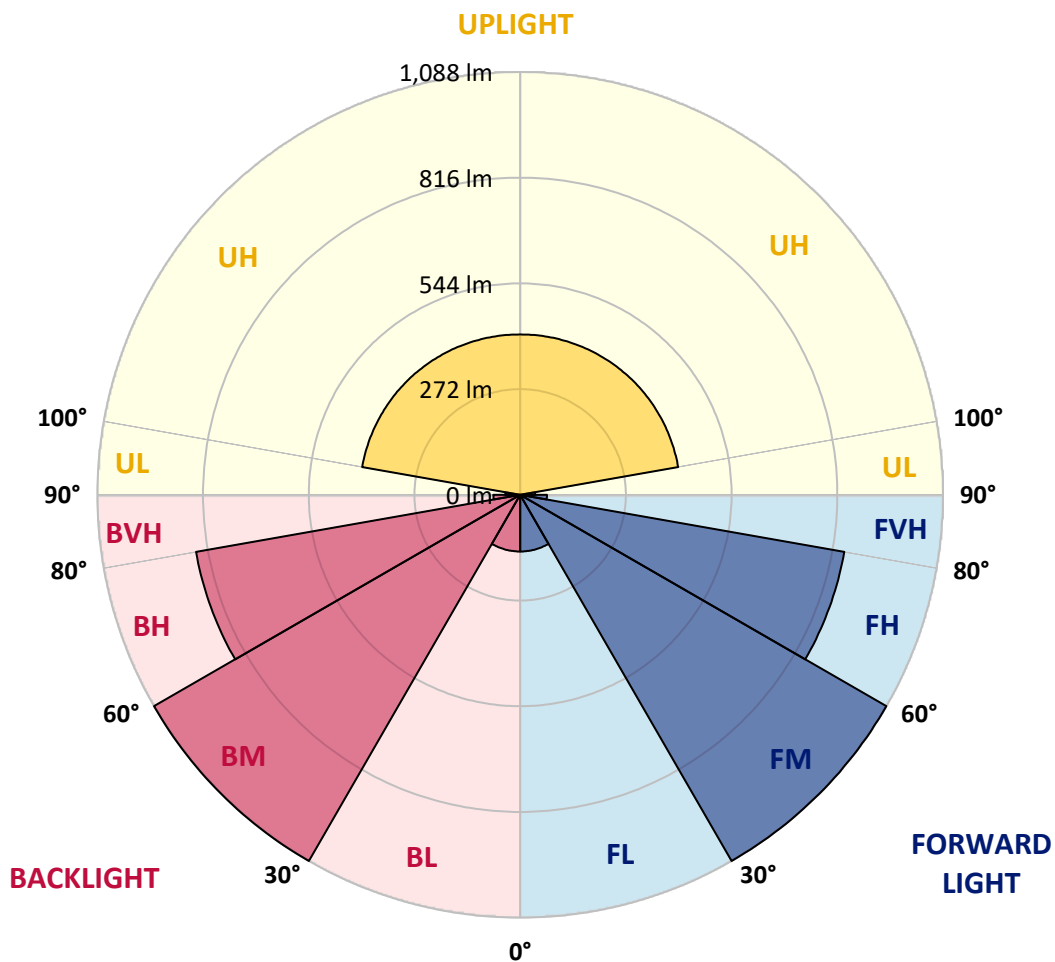
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	145.8	2.8			
FM	(30°-60°)	1087.8	21.2			
FH	(60°-80°)	846.6	16.5			G1/1800
FVH	(80°-90°)	69.0	1.3			G1/100
BL	(0°-30°)	145.8	2.8	B1/500		
BM	(30°-60°)	1087.8	21.2	B2/2500		
BH	(60°-80°)	846.6	16.5	B2/1000		G2/1000
BVH	(80°-90°)	69.0	1.3			G1/100
UL	(90°-100°)	38.4	0.7		U2/50	
UH	(100°-180°)	412.7	8.1		U3/500	

BUG Rating: B2-U4-G2

Type III Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	89°
0°	238.5	238.5	238.5	238.5	238.5	238.5	238.5	238.5	238.5	238.5	238.5
2.5°	240.3	240.3	240.3	240.3	239.4	239.4	239.4	239.4	239.4	239.4	239.4
5°	243.9	243.9	243.0	243.9	243.0	243.0	243.0	243.0	243.0	243.0	243.0
7.5°	249.2	249.2	249.2	249.2	249.2	249.2	248.3	249.2	248.3	248.3	248.3
10°	259.0	258.2	259.0	258.2	258.2	257.3	257.3	257.3	257.3	257.3	257.3
12.5°	271.6	271.6	271.6	270.7	269.8	269.8	268.9	268.9	268.9	268.0	268.9
15°	288.5	289.4	286.7	285.8	285.8	284.1	283.2	284.1	283.2	282.3	283.2
17.5°	309.1	310.0	308.2	306.4	304.6	303.7	302.8	301.9	301.9	301.9	301.0
20°	335.9	335.9	334.1	330.5	327.8	326.0	326.0	325.1	325.1	326.0	323.4
22.5°	366.2	365.3	363.6	361.8	358.2	354.6	352.8	351.9	351.9	353.7	354.6
25°	403.8	404.6	399.3	395.7	392.1	385.9	385.0	385.9	386.8	386.8	388.6
27.5°	442.2	443.9	439.5	434.1	428.8	426.1	424.3	426.1	427.9	430.5	429.7
30°	487.7	486.8	485.9	477.9	471.6	469.0	470.7	476.1	480.6	486.8	487.7
32.5°	536.8	538.6	532.4	526.1	523.4	520.8	523.4	535.1	547.6	551.1	555.6
35°	594.9	591.3	587.8	583.3	578.8	578.8	592.2	605.6	625.3	638.7	638.7
37.5°	653.9	651.2	644.9	638.7	638.7	647.6	661.0	694.1	722.6	742.3	734.3
40°	714.6	711.0	709.2	702.1	703.0	724.4	753.0	794.1	835.2	862.9	857.5
42.5°	776.2	777.1	770.9	768.2	776.2	800.4	850.4	905.8	957.6	992.4	993.3
45°	839.7	839.7	835.2	833.4	848.6	885.2	947.7	1023.7	1093.3	1133.5	1138.0
47.5°	897.7	896.8	893.3	892.4	918.3	962.0	1040.6	1138.0	1223.8	1268.4	1280.0
50°	947.7	948.6	943.3	947.7	971.0	1029.0	1123.7	1241.6	1339.9	1396.2	1401.5
52.5°	987.0	987.9	981.7	985.3	1016.5	1083.5	1188.9	1321.1	1428.3	1488.2	1495.3
55°	1013.8	1010.3	1005.8	1011.2	1046.9	1121.0	1236.3	1373.8	1485.5	1548.0	1553.4
57.5°	1021.0	1018.3	1013.8	1021.0	1059.4	1135.3	1254.1	1392.6	1503.4	1565.9	1573.0
60°	1010.3	1010.3	1004.9	1013.0	1051.4	1125.5	1241.6	1375.6	1481.0	1538.2	1548.0
62.5°	982.6	982.6	976.3	982.6	1019.2	1088.0	1198.8	1322.9	1418.5	1468.5	1480.1
65°	930.8	929.9	926.3	928.1	958.5	1023.7	1124.6	1237.2	1320.2	1364.9	1380.1
67.5°	855.7	853.1	849.5	853.1	875.4	933.5	1026.4	1124.6	1193.4	1236.3	1239.8
70°	760.2	757.5	753.0	751.2	774.5	820.9	895.9	982.6	1039.8	1071.0	1074.6
72.5°	646.7	650.3	646.7	641.4	656.5	697.6	760.2	826.3	873.6	902.2	906.7
75°	535.1	536.0	527.0	525.2	536.8	562.8	613.7	664.6	705.7	729.8	736.9
77.5°	414.5	414.5	406.4	402.0	408.2	430.5	465.4	506.5	540.4	555.6	568.1
80°	298.3	298.3	291.2	280.5	286.7	298.3	329.6	351.9	378.7	395.7	397.5
82.5°	186.7	184.0	185.8	177.8	179.5	183.1	202.8	218.0	234.0	243.0	243.9
85°	97.4	93.8	92.0	87.5	84.9	91.1	100.0	110.8	114.3	122.4	119.7
87.5°	30.4	28.6	27.7	27.7	25.0	26.8	27.7	29.5	33.9	33.9	35.7
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	38.2
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	48.8
107.5°	72.0	72.0	70.0	67.0	66.0	68.0	68.0	66.0	60.0	59.0	59.8
110°	86.0	86.0	89.0	85.0	86.0	87.0	84.0	84.0	78.0	74.0	74.8



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	89°
112.5°	101.0	102.0	108.0	107.0	110.0	107.0	102.0	105.0	100.0	95.0	94.2
115°	121.0	122.0	128.0	128.0	129.0	124.0	121.0	125.0	123.0	116.0	113.6
117.5°	140.0	141.0	144.0	141.0	141.0	136.0	138.0	141.0	139.0	133.0	129.8
120°	152.0	153.0	155.0	149.0	149.0	147.0	150.0	153.0	148.0	145.0	142.6
122.5°	161.0	162.0	164.0	154.0	155.0	158.0	159.0	162.0	155.0	153.0	150.6
125°	169.0	169.0	172.0	163.0	165.0	168.0	167.0	168.0	163.0	160.0	158.4
127.5°	177.0	177.0	181.0	171.0	176.0	178.0	176.0	175.0	173.0	166.0	163.6
130°	187.0	188.0	191.0	179.0	186.0	186.0	183.0	183.0	184.0	171.0	169.4
132.5°	198.0	199.0	201.0	186.0	193.0	195.0	190.0	192.0	192.0	179.0	176.6
135°	210.0	210.0	209.0	192.0	199.0	201.0	196.0	201.0	199.0	185.0	184.2
137.5°	221.0	219.0	213.0	197.0	205.0	208.0	203.0	210.0	204.0	191.0	190.2
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	201.8
147.5°	230.0	227.0	219.0	207.0	216.0	229.0	239.0	229.0	212.0	204.0	205.6
150°	224.0	221.0	220.0	214.0	222.0	235.0	242.0	232.0	214.0	210.0	210.8
152.5°	216.0	214.0	221.0	220.0	230.0	241.0	242.0	235.0	219.0	215.0	215.8
155°	208.0	207.0	219.0	224.0	237.0	243.0	238.0	234.0	224.0	220.0	219.2
157.5°	203.0	203.0	216.0	224.0	234.0	235.0	228.0	229.0	226.0	222.0	219.6
160°	199.0	198.0	210.0	213.0	219.0	219.0	215.0	219.0	221.0	218.0	215.6
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	191.6
167.5°	154.0	152.0	156.0	155.0	159.0	159.0	160.0	165.0	168.0	172.0	173.6
170°	142.0	141.0	145.0	144.0	147.0	147.0	148.0	152.0	155.0	159.0	159.8
172.5°	137.0	135.0	139.0	138.0	141.0	141.0	141.0	145.0	146.0	149.0	150.6
175°	136.0	134.0	137.0	137.0	139.0	139.0	138.0	141.0	141.0	143.0	143.8
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



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CANDELA DISTRIBUTION (continued):

	90°
0°	238.5
2.5°	239.4
5°	243.0
7.5°	248.3
10°	257.3
12.5°	268.0
15°	283.2
17.5°	301.9
20°	323.4
22.5°	351.9
25°	386.8
27.5°	427.9
30°	486.8
32.5°	552.9
35°	633.3
37.5°	743.2
40°	856.6
42.5°	999.6
45°	1138.0
47.5°	1280.0
50°	1398.8
52.5°	1492.6
55°	1556.1
57.5°	1573.0
60°	1545.3
62.5°	1477.4
65°	1378.3
67.5°	1239.8
70°	1079.9
72.5°	904.0
75°	728.9
77.5°	564.5
80°	397.5
82.5°	251.0
85°	119.7
87.5°	38.4
90°	34.0
92.5°	36.0
95°	38.0
97.5°	36.0
100°	37.0
102.5°	41.0
105°	49.0
107.5°	60.0
110°	75.0



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CANDELA DISTRIBUTION (continued):

	90°
112.5°	94.0
115°	113.0
117.5°	129.0
120°	142.0
122.5°	150.0
125°	158.0
127.5°	163.0
130°	169.0
132.5°	176.0
135°	184.0
137.5°	190.0
140°	195.0
142.5°	198.0
145°	202.0
147.5°	206.0
150°	211.0
152.5°	216.0
155°	219.0
157.5°	219.0
160°	215.0
162.5°	207.0
165°	192.0
167.5°	174.0
170°	160.0
172.5°	151.0
175°	144.0
177.5°	141.0
180°	140.0

(END OF REPORT)