

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: P833166

Luminaire Tested: **TTN-D1-735-U-DL-CG-UPL3**

Issue Date: 5/15/2024

Test Information

Test Method: LM-79-08
Report Number: P833166
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G3-2308-121-4) AND
Test Lab: INNOVATION CENTER
Issue Date: 5/15/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TTN-D1-735-U-DL-CG-UPL3
Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3500K, 70 CRI LEDS AND DRIVE LANE DISTRIBUTION WITH CLEAR GLASS
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3748.7 lumens
Efficiency: N/A
Efficacy: 112.2 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 0.71' x H: 0.1')
IES Classification: Type IV - Short
BUG Rating: B1 - U4 - G1

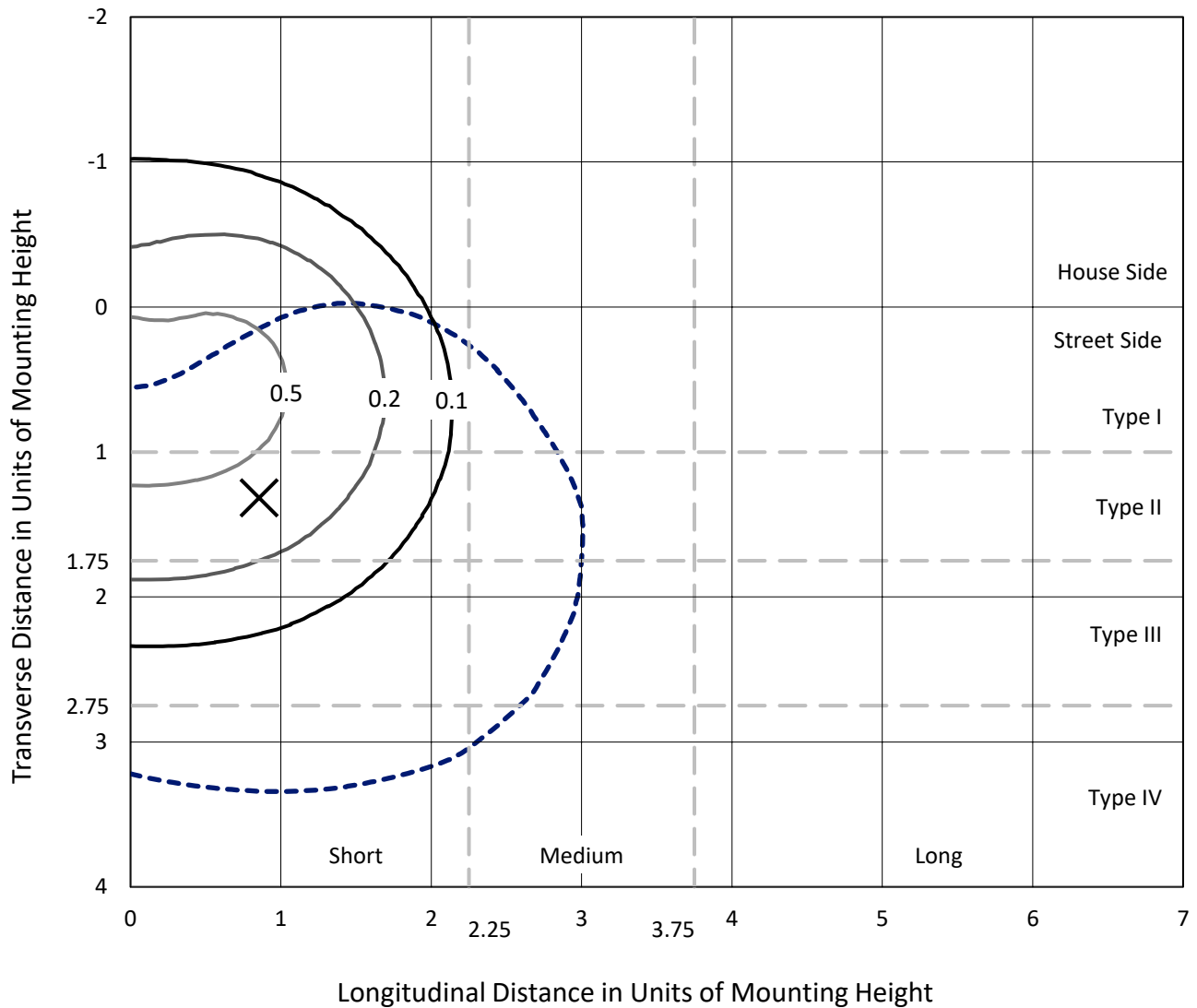
Input Watts (W): 33.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P833166
 CATALOG NUMBER: TTN-D1-735-U-DL-CG-UPL3

Iso-Footcandle Lines of Horizontal Illumination

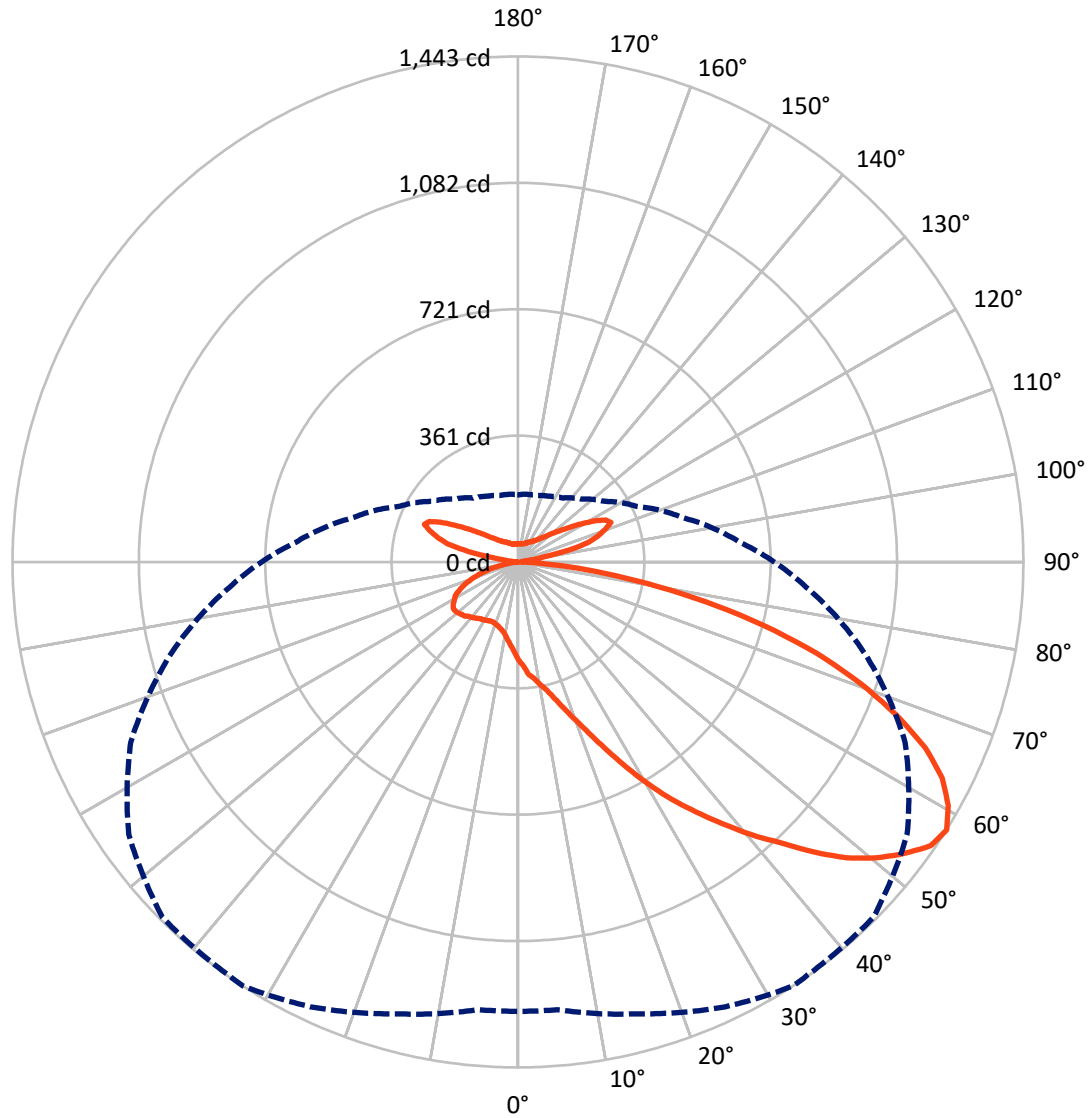
× Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.8 fc
 Type IV - Short - N/A

REPORT NUMBER: P833166
CATALOG NUMBER: TTN-D1-735-U-DL-CG-UPL3

Luminous Intensity Polar Plot



— Vertical Plane Through 33-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

REPORT NUMBER: P833166
 CATALOG NUMBER: TTN-D1-735-U-DL-CG-UPL3

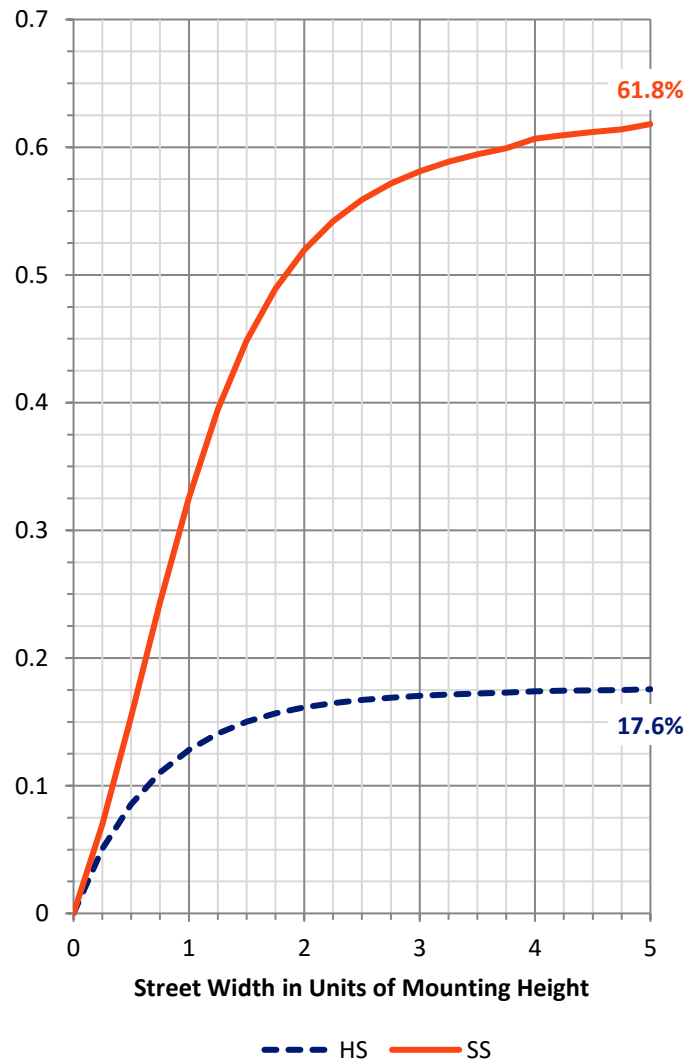
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	661.4	376.3	1037.7
	% Fixture	17.6	10.0	27.7
Street Side	Lumens	2334.6	376.3	2710.9
	% Fixture	62.3	10.0	72.3
Total	Lumens	2996.0	752.7	3748.7
	% Fixture	79.9	20.1	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	26.9	0.7
10°-20°	87.1	2.3
20°-30°	183.7	4.9
30°-40°	333.5	8.9
40°-50°	527.0	14.1
50°-60°	699.9	18.7
60°-70°	673.6	18.0
70°-80°	395.4	10.5
80°-90°	68.9	1.8
90°-100°	16.8	0.4
100°-110°	170.7	4.6
110°-120°	249.6	6.7
120°-130°	144.9	3.9
130°-140°	76.7	2.0
140°-150°	45.6	1.2
150°-160°	28.1	0.7
160°-170°	15.3	0.4
170°-180°	5.0	0.1
0°-90°	2996.0	79.9
0°-180°	3748.7	100.0



REPORT NUMBER: P833166

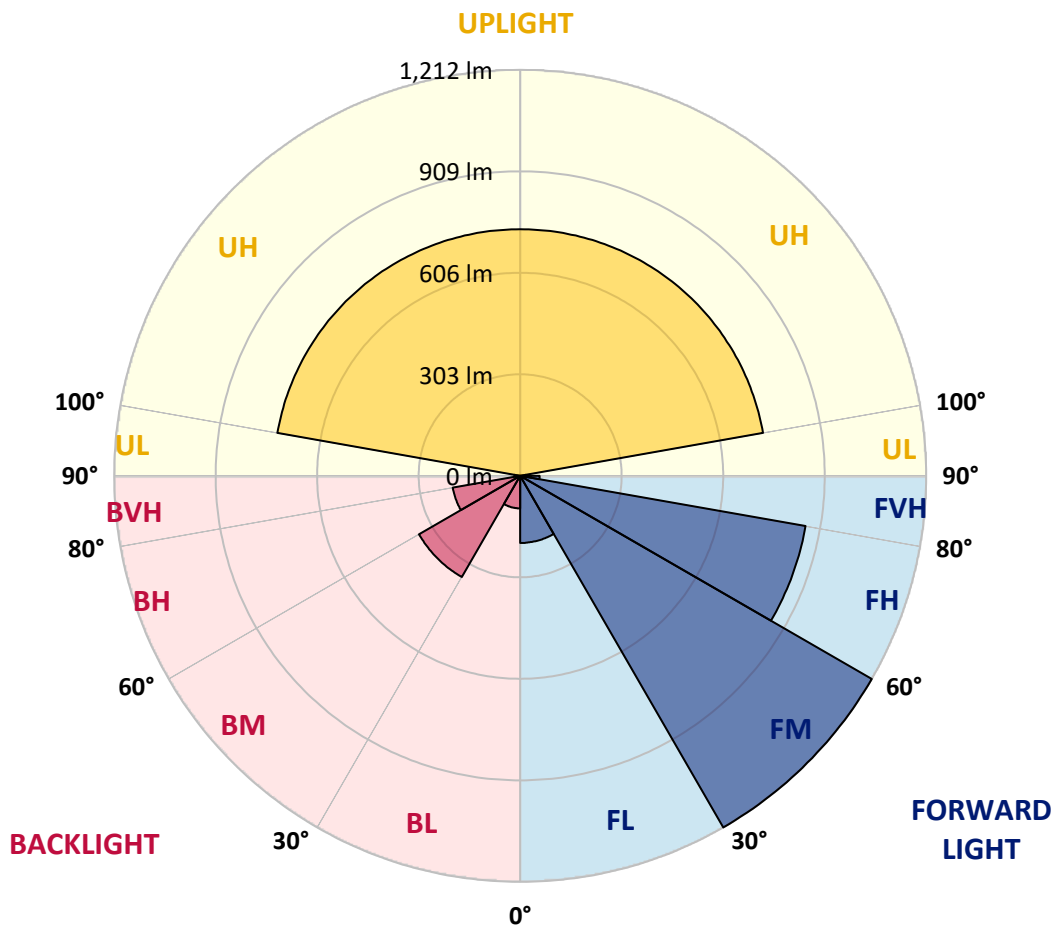
CATALOG NUMBER: TTN-D1-735-U-DL-CG-UPL3

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	200.4	5.3			
FM (30°-60°)	1211.7	32.3			
FH (60°-80°)	864.7	23.1			G1/1800
FVH (80°-90°)	57.8	1.5			G1/100
BL (0°-30°)	97.2	2.6	B0/110		
BM (30°-60°)	348.7	9.3	B1/1000		
BH (60°-80°)	204.4	5.5	B1/500		G1/500
BVH (80°-90°)	11.1	0.3			G1/100
UL (90°-100°)	16.8	0.4		U2/50	
UH (100°-180°)	735.8	19.6		U4/1000	

BUG Rating: B1-U4-G1

Type IV Short





REPORT NUMBER: P833166

CATALOG NUMBER: TTN-D1-735-U-DL-CG-UPL3

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
0°	280.7	280.7	280.7	280.7	280.7	280.7	280.7	280.7	280.7	280.7	280.7
2.5°	299.1	301.7	299.1	299.1	296.4	296.4	293.8	291.2	288.6	286.0	280.7
5°	333.2	333.2	330.5	325.3	322.7	320.1	314.8	306.9	301.7	293.8	286.0
7.5°	348.9	348.9	346.3	341.0	335.8	333.2	325.3	314.8	306.9	296.4	286.0
10°	369.9	372.5	367.3	362.0	356.8	354.2	343.7	330.5	317.4	304.3	288.6
12.5°	393.5	396.1	393.5	385.6	377.8	375.1	364.7	348.9	333.2	314.8	296.4
15°	425.0	430.2	422.4	417.1	409.3	406.6	393.5	375.1	356.8	333.2	309.6
17.5°	461.7	464.3	459.1	451.2	446.0	443.4	430.2	409.3	383.0	356.8	327.9
20°	503.7	506.3	503.7	493.2	488.0	485.3	472.2	448.6	417.1	388.3	351.5
22.5°	553.5	558.8	550.9	543.0	537.8	537.8	522.1	495.8	459.1	422.4	380.4
25°	611.3	619.1	608.6	603.4	598.1	595.5	582.4	550.9	508.9	464.3	411.9
27.5°	682.1	687.3	679.5	676.8	666.3	666.3	645.4	608.6	564.0	511.6	451.2
30°	745.0	750.3	745.0	745.0	737.2	734.6	713.6	676.8	621.7	558.8	485.3
32.5°	805.4	810.6	808.0	810.6	808.0	805.4	779.2	739.8	684.7	603.4	519.4
35°	865.7	873.6	871.0	878.8	876.2	873.6	852.6	805.4	739.8	658.5	556.2
37.5°	928.7	936.6	936.6	944.4	947.0	947.0	923.4	873.6	800.1	708.3	598.1
40°	996.9	1004.8	1004.8	1017.9	1023.1	1023.1	996.9	947.0	865.7	763.4	642.7
42.5°	1062.5	1070.3	1073.0	1086.1	1094.0	1096.6	1075.6	1017.9	923.4	818.5	684.7
45°	1125.4	1133.3	1141.2	1167.4	1180.5	1177.9	1162.2	1101.8	996.9	876.2	729.3
47.5°	1185.8	1196.3	1209.4	1243.5	1261.9	1259.2	1248.7	1180.5	1065.1	931.3	768.7
50°	1233.0	1240.9	1267.1	1303.8	1327.4	1330.1	1314.3	1248.7	1122.8	973.3	797.5
52.5°	1269.7	1280.2	1311.7	1364.2	1382.5	1390.4	1372.0	1306.5	1180.5	1010.0	821.1
55°	1296.0	1296.0	1343.2	1403.5	1429.8	1435.0	1435.0	1353.7	1214.6	1033.6	834.2
57.5°	1282.8	1282.8	1335.3	1400.9	1442.9	1440.2	1435.0	1356.3	1219.9	1028.4	826.4
60°	1246.1	1254.0	1303.8	1369.4	1411.4	1408.8	1393.0	1322.2	1193.6	1007.4	810.6
62.5°	1196.3	1209.4	1261.9	1311.7	1358.9	1366.8	1345.8	1282.8	1149.1	975.9	781.8
65°	1101.8	1120.2	1185.8	1240.9	1277.6	1293.3	1267.1	1209.4	1088.7	915.6	721.4
67.5°	996.9	1010.0	1065.1	1143.8	1164.8	1180.5	1167.4	1107.1	1004.8	818.5	653.2
70°	876.2	897.2	933.9	1012.6	1036.2	1052.0	1052.0	991.6	894.6	718.8	571.9
72.5°	734.6	758.2	802.8	860.5	892.0	902.5	899.8	850.0	763.4	608.6	482.7
75°	579.8	598.1	650.6	692.6	726.7	734.6	731.9	690.0	611.3	490.6	383.0
77.5°	427.6	446.0	485.3	516.8	548.3	543.0	543.0	511.6	461.7	364.7	291.2
80°	280.7	296.4	330.5	341.0	375.1	372.5	372.5	348.9	314.8	244.0	194.1
82.5°	154.8	167.9	191.5	202.0	223.0	217.7	220.4	204.6	183.6	136.4	110.2
85°	55.1	65.6	78.7	86.6	97.1	97.1	97.1	83.9	78.7	52.5	44.6
87.5°	2.6	5.2	10.5	10.5	15.7	15.7	15.7	10.5	10.5	2.6	2.6
90°	6.4	6.4	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	6.4
92.5°	6.4	6.4	6.4	9.0	10.0	10.3	9.0	10.3	7.7	7.7	6.4
95°	7.7	7.7	9.0	11.6	13.7	14.2	15.5	15.5	9.0	9.0	7.7
97.5°	10.3	11.6	11.6	14.2	21.4	23.2	42.5	25.8	12.9	12.9	11.6
100°	16.7	18.0	18.0	32.2	61.0	68.2	91.4	65.7	33.5	24.5	18.0
102.5°	54.1	56.7	69.5	104.3	144.5	154.5	140.4	118.5	112.0	77.3	61.8
105°	137.8	136.5	146.8	173.8	207.8	216.3	212.5	195.7	177.7	153.2	141.6
107.5°	181.6	181.6	190.6	213.8	239.5	245.9	287.1	291.0	230.5	202.2	189.3
110°	204.7	204.7	212.5	231.8	265.8	274.3	332.2	329.6	284.6	249.8	233.1



REPORT NUMBER: P833166
 CATALOG NUMBER: TTN-D1-735-U-DL-CG-UPL3

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	33°	35°	45°	55°	65°	75°	85°
112.5°	209.9	211.2	221.5	251.1	288.2	297.5	323.2	311.6	293.6	278.1	265.3
115°	217.6	217.6	229.2	257.5	278.1	283.3	293.6	280.7	266.5	256.2	251.1
117.5°	215.0	218.9	221.5	236.9	250.3	253.7	261.4	255.0	235.6	227.9	225.3
120°	199.6	199.6	202.2	209.9	217.1	218.9	222.8	220.2	207.3	200.9	199.6
122.5°	177.7	179.0	177.7	181.6	186.7	188.0	191.9	189.3	179.0	176.4	176.4
125°	155.8	155.8	154.5	157.1	160.2	161.0	159.7	161.0	155.8	154.5	154.5
127.5°	140.4	139.1	136.5	137.8	138.8	139.1	139.1	140.4	135.2	136.5	137.8
130°	124.9	124.9	122.3	122.3	122.3	122.3	119.8	122.3	119.8	121.0	122.3
132.5°	110.7	110.7	106.9	105.6	105.6	105.6	105.6	106.9	105.6	108.2	110.7
135°	99.2	99.2	95.3	96.6	96.6	96.6	95.3	96.6	95.3	97.9	99.2
137.5°	90.1	90.1	87.6	87.6	87.6	87.6	86.3	87.6	87.6	88.8	91.4
140°	82.4	82.4	81.1	81.1	80.1	79.8	81.1	81.1	81.1	82.4	83.7
142.5°	78.5	77.3	76.0	74.7	75.7	76.0	76.0	76.0	74.7	76.0	78.5
145°	72.1	72.1	70.8	70.8	70.8	70.8	72.1	70.8	70.8	72.1	72.1
147.5°	68.2	68.2	67.0	68.2	68.2	68.2	68.2	68.2	67.0	68.2	68.2
150°	67.0	65.7	64.4	65.7	65.7	65.7	64.4	64.4	64.4	64.4	65.7
152.5°	63.1	63.1	61.8	63.1	62.1	61.8	61.8	61.8	61.8	61.8	63.1
155°	60.5	60.5	59.2	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5
157.5°	57.9	59.2	57.9	57.9	57.9	57.9	57.9	57.9	57.9	57.9	59.2
160°	56.7	56.7	56.7	56.7	55.7	55.4	55.4	55.4	56.7	56.7	56.7
162.5°	55.4	55.4	55.4	55.4	54.4	54.1	54.1	54.1	54.1	55.4	55.4
165°	55.4	54.1	54.1	54.1	53.1	52.8	52.8	52.8	52.8	54.1	55.4
167.5°	52.8	52.8	52.8	52.8	52.8	52.8	51.5	51.5	52.8	52.8	52.8
170°	52.8	52.8	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5
172.5°	52.8	52.8	52.8	52.8	51.8	51.5	51.5	51.5	51.5	51.5	52.8
175°	52.8	52.8	52.8	52.8	51.8	51.5	51.5	51.5	52.8	52.8	52.8
177.5°	52.8	52.8	52.8	52.8	51.8	51.5	52.8	52.8	52.8	52.8	52.8
180°	52.8	52.8	52.8	52.8	52.8	52.8	52.8	52.8	52.8	52.8	52.8



REPORT NUMBER: P833166

CATALOG NUMBER: TTN-D1-735-U-DL-CG-UPL3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	280.7	280.7	280.7	280.7	280.7	280.7	280.7	280.7	280.7	280.7	280.7
2.5°	278.1	275.5	272.8	267.6	265.0	262.3	259.7	257.1	257.1	257.1	257.1
5°	280.7	278.1	270.2	262.3	254.5	246.6	241.4	238.7	236.1	233.5	233.5
7.5°	280.7	275.5	265.0	254.5	246.6	236.1	228.2	220.4	215.1	212.5	212.5
10°	283.3	275.5	262.3	251.8	238.7	225.6	215.1	204.6	199.4	194.1	194.1
12.5°	288.6	280.7	262.3	249.2	233.5	217.7	204.6	194.1	186.3	181.0	181.0
15°	299.1	288.6	267.6	249.2	230.9	212.5	199.4	186.3	178.4	173.1	173.1
17.5°	314.8	301.7	275.5	249.2	228.2	209.9	194.1	181.0	170.5	165.3	165.3
20°	333.2	317.4	286.0	254.5	228.2	207.2	191.5	175.8	165.3	160.0	160.0
22.5°	359.4	335.8	299.1	262.3	233.5	209.9	188.9	173.1	162.7	157.4	157.4
25°	388.3	362.0	314.8	272.8	238.7	209.9	188.9	173.1	162.7	157.4	154.8
27.5°	419.7	390.9	333.2	283.3	244.0	215.1	191.5	173.1	162.7	157.4	157.4
30°	448.6	414.5	351.5	296.4	251.8	217.7	194.1	175.8	162.7	157.4	157.4
32.5°	480.1	440.7	369.9	309.6	259.7	223.0	196.8	178.4	165.3	160.0	157.4
35°	511.6	467.0	388.3	320.1	267.6	228.2	199.4	181.0	167.9	162.7	162.7
37.5°	545.7	495.8	406.6	333.2	275.5	233.5	204.6	183.6	170.5	165.3	165.3
40°	582.4	524.7	425.0	343.7	283.3	238.7	209.9	188.9	175.8	170.5	170.5
42.5°	619.1	556.2	446.0	356.8	291.2	244.0	212.5	194.1	181.0	175.8	175.8
45°	655.9	582.4	464.3	369.9	299.1	251.8	220.4	199.4	186.3	181.0	181.0
47.5°	690.0	611.3	480.1	377.8	306.9	257.1	223.0	204.6	191.5	188.9	186.3
50°	713.6	629.6	490.6	385.6	309.6	259.7	228.2	207.2	196.8	191.5	191.5
52.5°	731.9	648.0	498.4	390.9	312.2	262.3	230.9	212.5	202.0	196.8	194.1
55°	742.4	650.6	498.4	385.6	309.6	262.3	230.9	212.5	202.0	196.8	196.8
57.5°	731.9	637.5	488.0	375.1	301.7	254.5	223.0	207.2	196.8	194.1	191.5
60°	710.9	616.5	467.0	359.4	288.6	241.4	212.5	199.4	191.5	188.9	186.3
62.5°	682.1	590.3	446.0	338.4	270.2	225.6	204.6	188.9	183.6	181.0	178.4
65°	624.4	540.4	411.9	312.2	246.6	207.2	186.3	175.8	170.5	165.3	162.7
67.5°	561.4	485.3	364.7	280.7	217.7	186.3	167.9	157.4	149.5	149.5	146.9
70°	493.2	427.6	314.8	238.7	188.9	162.7	144.3	136.4	131.2	131.2	128.5
72.5°	411.9	359.4	262.3	194.1	154.8	133.8	120.7	112.8	110.2	110.2	107.6
75°	330.5	283.3	207.2	152.2	120.7	104.9	94.4	89.2	86.6	86.6	83.9
77.5°	244.0	207.2	149.5	110.2	86.6	76.1	68.2	65.6	63.0	63.0	60.3
80°	162.7	136.4	97.1	70.8	52.5	47.2	42.0	42.0	39.4	42.0	39.4
82.5°	89.2	73.5	52.5	36.7	26.2	23.6	21.0	21.0	23.6	23.6	21.0
85°	34.1	26.2	18.4	10.5	7.9	7.9	7.9	7.9	7.9	7.9	5.2
87.5°	2.6	2.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
90°	6.4	6.4	7.7	7.7	7.7	7.7	7.7	7.7	7.7	6.4	6.4
92.5°	6.4	6.4	7.7	7.7	10.3	9.0	10.3	9.0	6.4	6.4	6.4
95°	7.7	7.7	9.0	9.0	15.5	15.5	14.2	11.6	9.0	7.7	7.7
97.5°	10.3	11.6	12.9	12.9	25.8	42.5	23.2	14.2	11.6	11.6	10.3
100°	18.0	18.0	24.5	33.5	65.7	91.4	68.2	32.2	18.0	18.0	16.7
102.5°	59.2	61.8	77.3	112.0	118.5	140.4	154.5	104.3	69.5	56.7	54.1
105°	141.6	141.6	153.2	177.7	195.7	212.5	216.3	173.8	146.8	136.5	137.8
107.5°	188.0	189.3	202.2	230.5	291.0	287.1	245.9	213.8	190.6	181.6	181.6
110°	230.5	233.1	249.8	284.6	329.6	332.2	274.3	231.8	212.5	204.7	204.7



REPORT NUMBER: P833166
 CATALOG NUMBER: TTN-D1-735-U-DL-CG-UPL3

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	262.7	265.3	278.1	293.6	311.6	323.2	297.5	251.1	221.5	211.2	209.9
115°	253.7	251.1	256.2	266.5	280.7	293.6	283.3	257.5	229.2	217.6	217.6
117.5°	221.5	225.3	227.9	235.6	255.0	261.4	253.7	236.9	221.5	218.9	215.0
120°	197.0	199.6	200.9	207.3	220.2	222.8	218.9	209.9	202.2	199.6	199.6
122.5°	173.8	176.4	176.4	179.0	189.3	191.9	188.0	181.6	177.7	179.0	177.7
125°	153.2	154.5	154.5	155.8	161.0	159.7	161.0	157.1	154.5	155.8	155.8
127.5°	136.5	137.8	136.5	135.2	140.4	139.1	139.1	137.8	136.5	139.1	140.4
130°	123.6	122.3	121.0	119.8	122.3	119.8	122.3	122.3	122.3	124.9	124.9
132.5°	110.7	110.7	108.2	105.6	106.9	105.6	105.6	105.6	106.9	110.7	110.7
135°	99.2	99.2	97.9	95.3	96.6	95.3	96.6	96.6	95.3	99.2	99.2
137.5°	92.7	91.4	88.8	87.6	87.6	86.3	87.6	87.6	87.6	90.1	90.1
140°	83.7	83.7	82.4	81.1	81.1	81.1	79.8	81.1	81.1	82.4	82.4
142.5°	78.5	78.5	76.0	74.7	76.0	76.0	76.0	74.7	76.0	77.3	78.5
145°	73.4	72.1	72.1	70.8	70.8	72.1	70.8	70.8	70.8	72.1	72.1
147.5°	69.5	68.2	68.2	67.0	68.2	68.2	68.2	68.2	67.0	68.2	68.2
150°	65.7	65.7	64.4	64.4	64.4	64.4	65.7	65.7	64.4	65.7	67.0
152.5°	64.4	63.1	61.8	61.8	61.8	61.8	61.8	63.1	61.8	63.1	63.1
155°	60.5	60.5	60.5	60.5	60.5	60.5	60.5	60.5	59.2	60.5	60.5
157.5°	59.2	59.2	57.9	57.9	57.9	57.9	57.9	57.9	57.9	59.2	57.9
160°	57.9	56.7	56.7	56.7	55.4	55.4	55.4	56.7	56.7	56.7	56.7
162.5°	56.7	55.4	55.4	54.1	54.1	54.1	54.1	55.4	55.4	55.4	55.4
165°	54.1	55.4	54.1	52.8	52.8	52.8	52.8	54.1	54.1	54.1	55.4
167.5°	54.1	52.8	52.8	52.8	51.5	51.5	52.8	52.8	52.8	52.8	52.8
170°	52.8	51.5	51.5	51.5	51.5	51.5	51.5	51.5	51.5	52.8	52.8
172.5°	52.8	52.8	51.5	51.5	51.5	51.5	51.5	52.8	52.8	52.8	52.8
175°	51.5	52.8	52.8	52.8	51.5	51.5	51.5	52.8	52.8	52.8	52.8
177.5°	52.8	52.8	52.8	52.8	52.8	52.8	51.5	52.8	52.8	52.8	52.8
180°	52.8	52.8	52.8	52.8	52.8	52.8	52.8	52.8	52.8	52.8	52.8

(END OF REPORT)