

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: P833167

Luminaire Tested: **TTN-D1-735-U-DL-UPL1**

Issue Date: 5/15/2024

Test Information

Test Method: LM-79-08
Report Number: P833167
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-UPL1
Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3500K, 70 CRI LEDS AND DRIVE LANE DISTRIBUTION
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3321.9 lumens
Efficiency: N/A
Efficacy: 114.5 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 0.71' x H: 0.1')
IES Classification: Type IV - Short
BUG Rating: B1 - U3 - G2

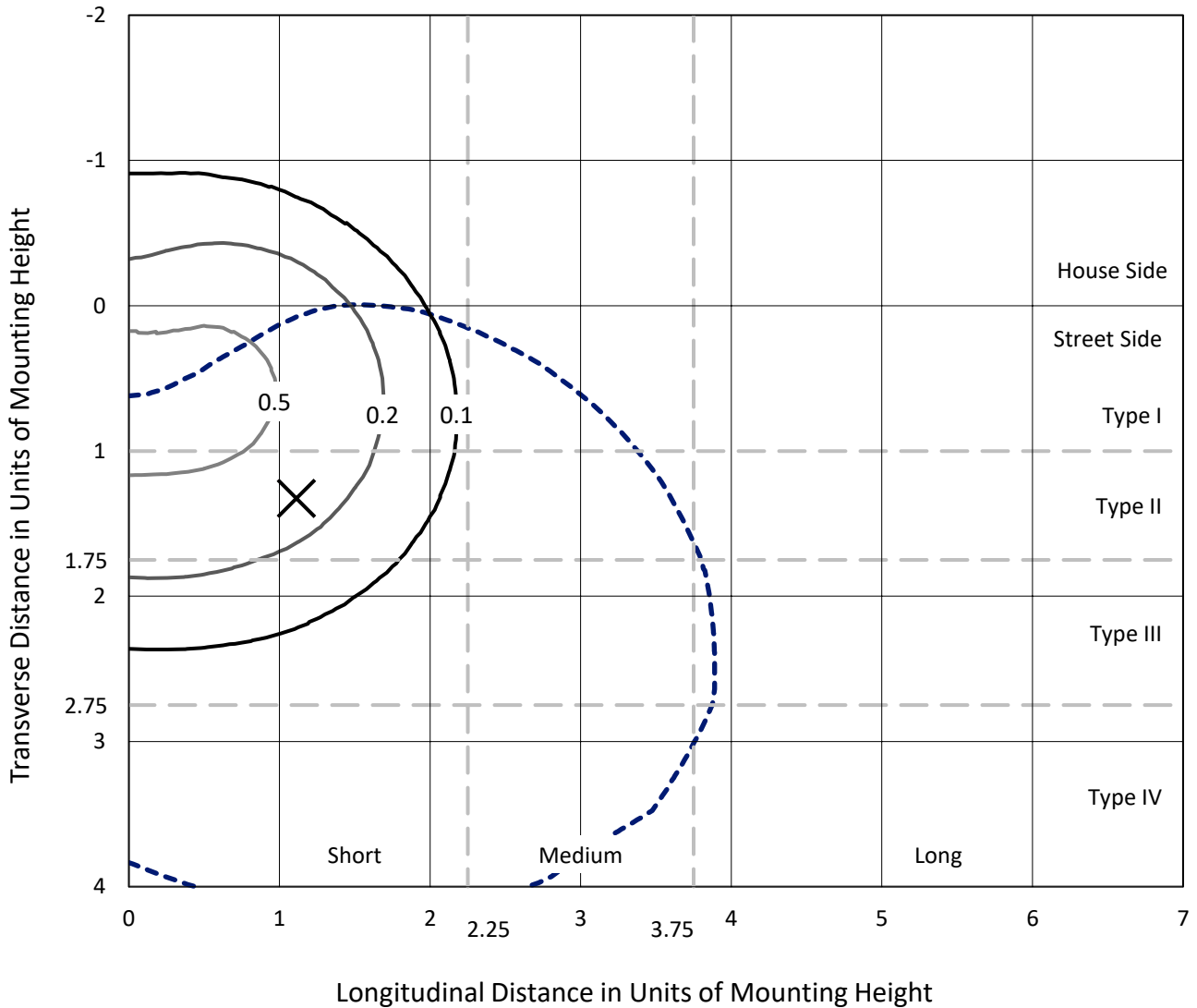
Input Watts (W): 29
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



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Iso-Footcandle Lines of Horizontal Illumination

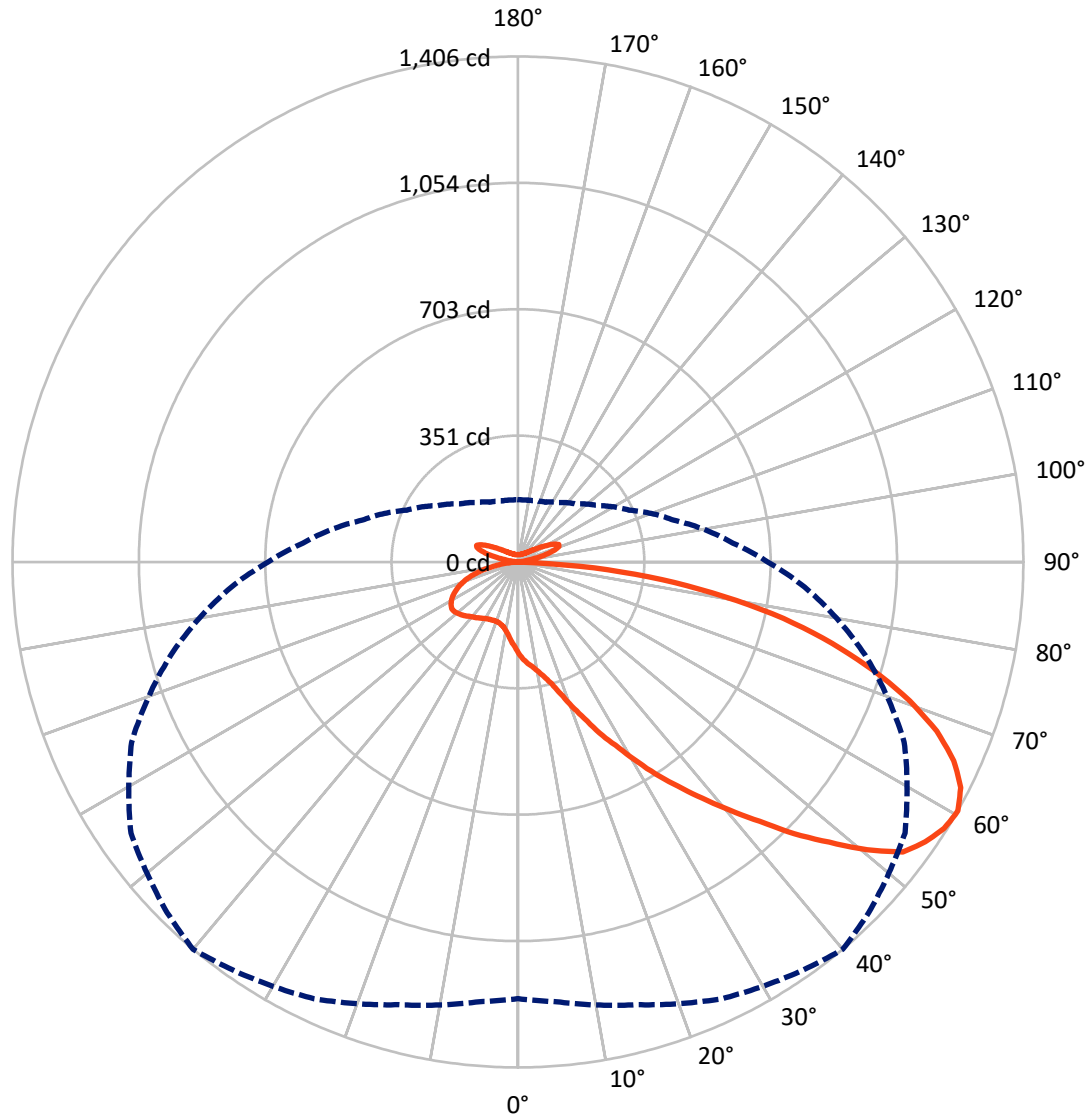
✕ Max cd
 - - - 1/2 Max cd



Based on 25 foot mounting height. Maximum calculated value = 0.7 fc
 Type IV - Short - N/A

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Luminous Intensity Polar Plot



— Vertical Plane Through 40-Deg Lateral - - - Horizontal Cone Through 60-Deg Vertical



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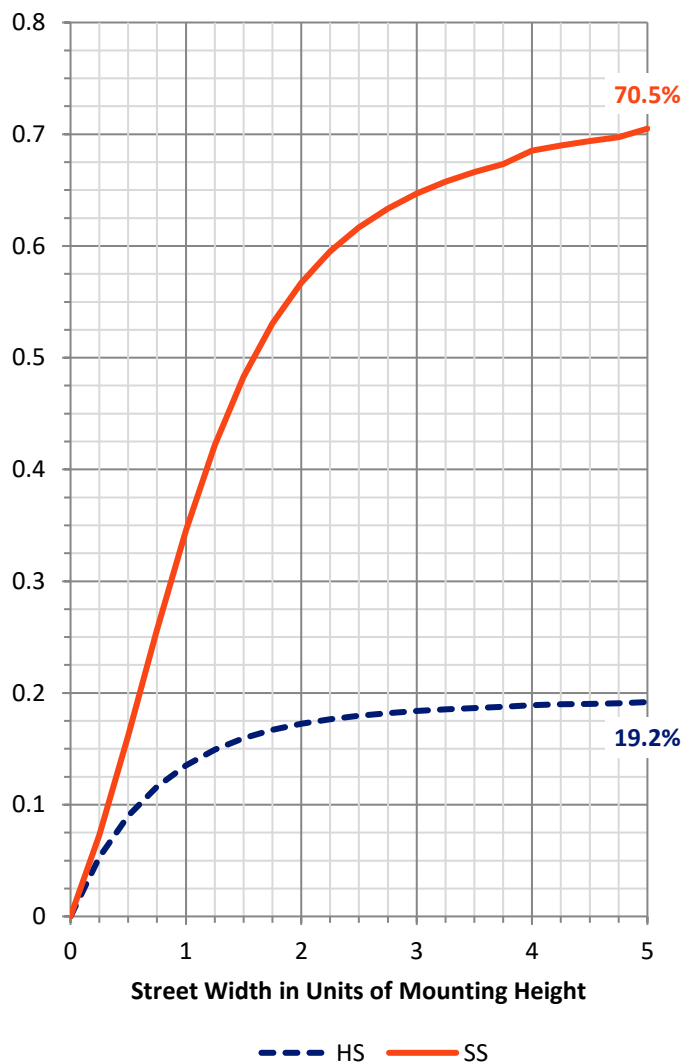
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	643.5	150.2	793.8
	% Fixture	19.4	4.5	23.9
Street Side	Lumens	2377.9	150.2	2528.1
	% Fixture	71.6	4.5	76.1
Total	Lumens	3021.4	300.5	3321.9
	% Fixture	91.0	9.0	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.0	0.7
10°-20°	76.6	2.3
20°-30°	161.8	4.9
30°-40°	295.7	8.9
40°-50°	480.4	14.5
50°-60°	667.8	20.1
60°-70°	692.3	20.8
70°-80°	496.0	14.9
80°-90°	126.9	3.8
90°-100°	6.7	0.2
100°-110°	68.2	2.1
110°-120°	99.6	3.0
120°-130°	57.8	1.7
130°-140°	30.6	0.9
140°-150°	18.2	0.5
150°-160°	11.2	0.3
160°-170°	6.1	0.2
170°-180°	2.0	0.1
0°-90°	3021.4	91.0
0°-180°	3321.9	100.0

Coefficient of Utilization



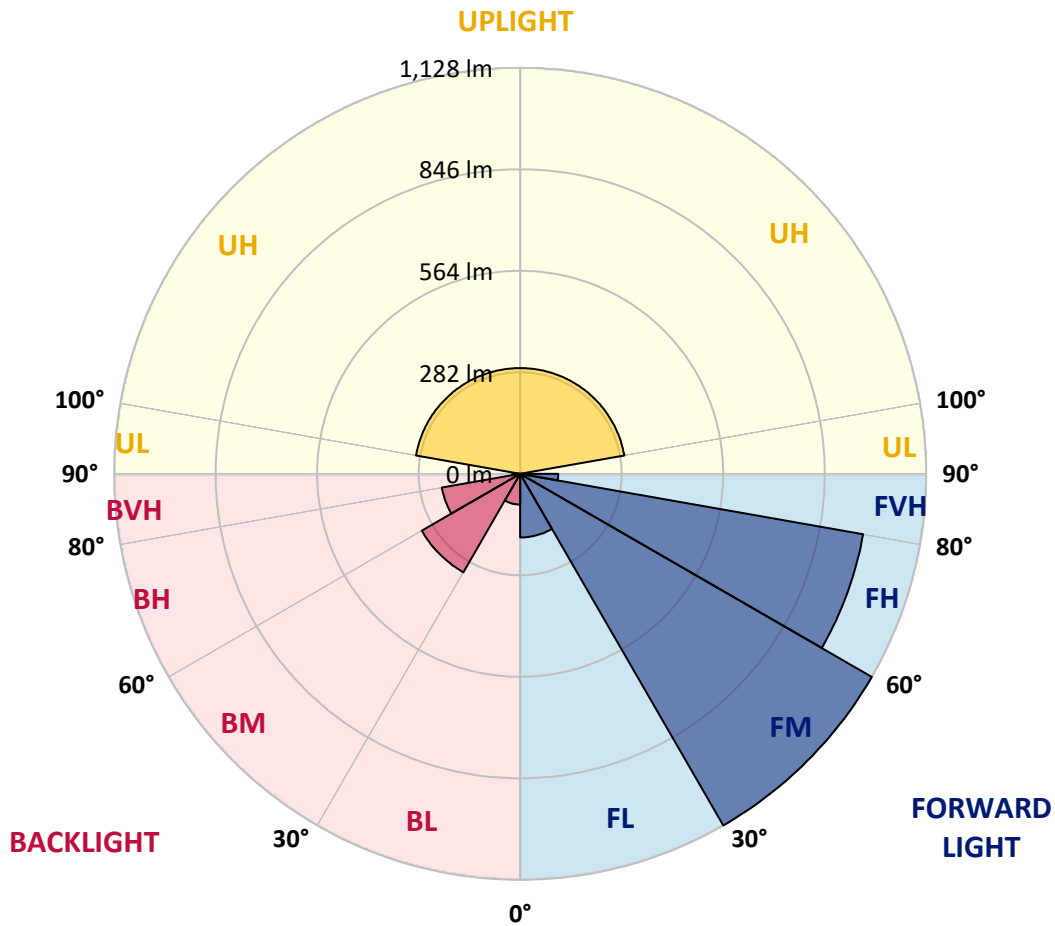
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LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	176.8	5.3			
FM (30°-60°)	1128.0	34.0			
FH (60°-80°)	967.5	29.1			G1/1800
FVH (80°-90°)	105.6	3.2			G2/225
BL (0°-30°)	85.6	2.6	B0/110		
BM (30°-60°)	315.8	9.5	B1/1000		
BH (60°-80°)	220.8	6.6	B1/500		G1/500
BVH (80°-90°)	21.3	0.6			G1/100
UL (90°-100°)	6.7	0.2		U1/10	
UH (100°-180°)	293.8	8.8		U3/500	

BUG Rating: B1-U3-G2

Type IV Short





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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	254.4	254.4	254.4	254.4	254.4	254.4	254.4	254.4	254.4	254.4	254.4
2.5°	272.8	272.8	272.8	272.8	270.2	270.2	267.6	264.9	262.3	259.7	254.4
5°	296.4	296.4	293.8	291.2	285.9	283.3	280.7	275.4	270.2	264.9	257.1
7.5°	306.9	306.9	306.9	304.3	296.4	293.8	288.5	280.7	272.8	264.9	254.4
10°	325.3	325.3	322.6	320.0	312.1	309.5	304.3	293.8	280.7	267.6	254.4
12.5°	348.9	346.2	343.6	341.0	333.1	327.9	320.0	309.5	293.8	278.0	262.3
15°	377.7	372.5	372.5	367.2	359.4	351.5	346.2	330.5	314.8	293.8	272.8
17.5°	409.2	406.6	403.9	398.7	390.8	385.6	377.7	359.4	338.4	312.1	288.5
20°	448.5	443.3	445.9	438.0	430.2	427.6	414.4	393.5	367.2	338.4	309.5
22.5°	495.8	490.5	490.5	482.6	477.4	472.1	459.0	435.4	401.3	369.8	333.1
25°	548.2	543.0	543.0	537.7	532.5	527.2	511.5	485.3	445.9	406.6	364.6
27.5°	605.9	600.7	600.7	598.1	584.9	577.1	564.0	535.1	495.8	445.9	396.1
30°	666.3	661.0	666.3	661.0	653.1	637.4	621.7	590.2	545.6	490.5	430.2
32.5°	713.5	713.5	716.1	721.3	716.1	703.0	684.6	658.4	598.1	529.9	461.7
35°	768.6	768.6	773.8	781.7	779.0	765.9	747.6	718.7	655.8	574.4	495.8
37.5°	828.9	828.9	834.1	847.2	842.0	834.1	821.0	784.3	713.5	619.0	532.5
40°	894.5	891.8	897.1	915.4	918.1	907.6	891.8	855.1	773.8	676.7	571.8
42.5°	960.0	957.4	967.9	986.3	988.9	986.3	970.5	928.6	836.7	734.5	611.2
45°	1025.6	1025.6	1041.3	1070.2	1083.3	1078.1	1065.0	1012.5	915.4	794.8	663.6
47.5°	1093.8	1093.8	1114.8	1151.5	1167.3	1164.6	1159.4	1096.4	991.5	857.7	708.2
50°	1146.3	1146.3	1180.4	1222.3	1248.6	1259.1	1232.8	1175.1	1057.1	912.8	744.9
52.5°	1198.7	1198.7	1232.8	1298.4	1324.6	1340.4	1306.3	1245.9	1130.5	962.7	779.0
55°	1225.0	1230.2	1277.4	1340.4	1382.3	1374.5	1387.6	1306.3	1177.7	999.4	800.0
57.5°	1227.6	1235.5	1287.9	1353.5	1400.7	1398.1	1400.7	1327.3	1196.1	1007.2	802.7
60°	1214.5	1227.6	1274.8	1340.4	1385.0	1405.9	1379.7	1314.1	1185.6	999.4	800.0
62.5°	1183.0	1209.2	1259.1	1308.9	1374.5	1382.3	1361.4	1306.3	1156.8	991.5	786.9
65°	1112.2	1141.0	1211.8	1269.6	1322.0	1332.5	1308.9	1261.7	1127.9	954.8	744.9
67.5°	1041.3	1059.7	1120.0	1209.2	1245.9	1256.4	1248.6	1193.5	1078.1	881.3	695.1
70°	960.0	983.6	1030.9	1122.7	1159.4	1156.8	1180.4	1117.4	1002.0	818.4	642.6
72.5°	849.9	884.0	931.2	1007.2	1051.8	1036.1	1072.8	1020.4	902.3	739.7	571.8
75°	721.3	750.2	810.5	870.8	920.7	902.3	931.2	894.5	786.9	645.3	490.5
77.5°	577.1	611.2	666.3	721.3	755.4	755.4	768.6	737.1	653.1	529.9	401.3
80°	427.6	459.0	508.9	548.2	579.7	582.3	595.4	579.7	503.6	411.8	306.9
82.5°	283.3	299.0	343.6	375.1	406.6	403.9	424.9	414.4	351.5	283.3	204.6
85°	120.7	131.2	167.9	194.1	223.0	212.5	241.3	238.7	188.9	136.4	91.8
87.5°	5.2	7.9	7.9	5.2	7.9	2.6	7.9	10.5	7.9	5.2	5.2
90°	2.6	2.6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.6
92.5°	2.6	2.6	2.6	3.6	4.1	3.8	3.6	4.1	3.1	3.1	2.6
95°	3.1	3.1	3.6	4.6	5.7	6.0	6.2	6.2	3.6	3.6	3.1
97.5°	4.1	4.6	4.6	5.7	9.3	13.2	17.0	10.3	5.1	5.1	4.6
100°	6.7	7.2	7.2	12.9	27.2	31.8	36.5	26.2	13.4	9.8	7.2
102.5°	21.6	22.6	27.8	41.6	61.7	58.8	56.0	47.3	44.7	30.8	24.7
105°	55.0	54.5	58.6	69.4	86.4	85.6	84.8	78.1	70.9	61.2	56.5
107.5°	72.5	72.5	76.1	85.3	98.2	106.4	114.6	116.2	92.0	80.7	75.6
110°	81.7	81.7	84.8	92.5	109.5	121.0	132.6	131.6	113.6	99.7	93.0



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CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
112.5°	83.8	84.3	88.4	100.2	118.7	123.8	129.0	124.4	117.2	111.0	105.9
115°	86.9	86.9	91.5	102.8	113.1	115.2	117.2	112.1	106.4	102.3	100.2
117.5°	85.8	87.4	88.4	94.6	101.3	102.8	104.4	101.8	94.1	91.0	90.0
120°	79.7	79.7	80.7	83.8	87.4	88.2	88.9	87.9	82.8	80.2	79.7
122.5°	70.9	71.5	70.9	72.5	75.0	75.8	76.6	75.6	71.5	70.4	70.4
125°	62.2	62.2	61.7	62.7	64.3	64.0	63.7	64.3	62.2	61.7	61.7
127.5°	56.0	55.5	54.5	55.0	55.5	55.5	55.5	56.0	54.0	54.5	55.0
130°	49.9	49.9	48.8	48.8	48.8	48.3	47.8	48.8	47.8	48.3	48.8
132.5°	44.2	44.2	42.7	42.2	42.2	42.2	42.2	42.7	42.2	43.2	44.2
135°	39.6	39.6	38.0	38.6	38.6	38.3	38.0	38.6	38.0	39.1	39.6
137.5°	36.0	36.0	35.0	35.0	35.0	34.7	34.4	35.0	35.0	35.5	36.5
140°	32.9	32.9	32.4	32.4	31.9	32.2	32.4	32.4	32.4	32.9	33.4
142.5°	31.4	30.8	30.3	29.8	30.3	30.3	30.3	30.3	29.8	30.3	31.4
145°	28.8	28.8	28.3	28.3	28.3	28.6	28.8	28.3	28.3	28.8	28.8
147.5°	27.2	27.2	26.7	27.2	27.2	27.2	27.2	27.2	26.7	27.2	27.2
150°	26.7	26.2	25.7	26.2	26.2	26.0	25.7	25.7	25.7	25.7	26.2
152.5°	25.2	25.2	24.7	25.2	24.7	24.7	24.7	24.7	24.7	24.7	25.2
155°	24.2	24.2	23.6	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2
157.5°	23.1	23.6	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.6
160°	22.6	22.6	22.6	22.6	22.1	22.1	22.1	22.1	22.6	22.6	22.6
162.5°	22.1	22.1	22.1	22.1	21.6	21.6	21.6	21.6	21.6	22.1	22.1
165°	22.1	21.6	21.6	21.6	21.1	21.1	21.1	21.1	21.1	21.6	22.1
167.5°	21.1	21.1	21.1	21.1	21.1	20.8	20.6	20.6	21.1	21.1	21.1
170°	21.1	21.1	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6
172.5°	21.1	21.1	21.1	21.1	20.6	20.6	20.6	20.6	20.6	20.6	21.1
175°	21.1	21.1	21.1	21.1	20.6	20.6	20.6	20.6	21.1	21.1	21.1
177.5°	21.1	21.1	21.1	21.1	20.6	20.8	21.1	21.1	21.1	21.1	21.1
180°	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1



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CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	254.4	254.4	254.4	254.4	254.4	254.4	254.4	254.4	254.4	254.4	254.4
2.5°	254.4	251.8	246.6	243.9	241.3	236.1	236.1	233.5	233.5	233.5	230.8
5°	254.4	249.2	243.9	236.1	230.8	225.6	220.3	215.1	212.5	212.5	209.8
7.5°	249.2	243.9	236.1	228.2	220.3	209.8	204.6	194.1	191.5	188.9	188.9
10°	249.2	243.9	230.8	220.3	209.8	199.4	191.5	181.0	173.1	170.5	170.5
12.5°	251.8	243.9	230.8	217.7	204.6	191.5	181.0	170.5	162.6	157.4	157.4
15°	262.3	251.8	236.1	217.7	202.0	186.2	175.7	162.6	154.8	149.5	149.5
17.5°	275.4	264.9	241.3	220.3	202.0	183.6	170.5	157.4	149.5	144.3	141.6
20°	293.8	278.0	251.8	223.0	202.0	183.6	167.9	154.8	144.3	139.0	139.0
22.5°	314.8	296.4	262.3	228.2	204.6	183.6	167.9	152.1	141.6	136.4	136.4
25°	341.0	317.4	278.0	238.7	209.8	186.2	167.9	152.1	141.6	136.4	136.4
27.5°	369.8	343.6	293.8	249.2	215.1	188.9	167.9	152.1	141.6	136.4	136.4
30°	396.1	367.2	309.5	259.7	223.0	191.5	170.5	154.8	144.3	139.0	136.4
32.5°	424.9	388.2	325.3	270.2	228.2	196.7	173.1	157.4	144.3	139.0	139.0
35°	453.8	414.4	341.0	283.3	236.1	202.0	175.7	160.0	146.9	141.6	141.6
37.5°	485.3	443.3	359.4	293.8	243.9	207.2	181.0	162.6	149.5	144.3	144.3
40°	522.0	472.1	377.7	306.9	251.8	212.5	183.6	167.9	154.8	149.5	149.5
42.5°	556.1	498.4	396.1	317.4	259.7	217.7	188.9	170.5	160.0	154.8	154.8
45°	590.2	529.9	414.4	330.5	267.6	225.6	194.1	178.4	165.3	160.0	160.0
47.5°	629.5	558.7	435.4	341.0	275.4	230.8	199.4	183.6	170.5	167.9	165.3
50°	661.0	579.7	448.5	351.5	280.7	236.1	204.6	186.2	175.7	170.5	170.5
52.5°	689.9	600.7	459.0	356.7	283.3	238.7	209.8	191.5	181.0	175.7	175.7
55°	705.6	608.5	466.9	356.7	285.9	241.3	209.8	191.5	181.0	178.4	175.7
57.5°	705.6	608.5	461.7	351.5	280.7	236.1	207.2	188.9	181.0	175.7	175.7
60°	695.1	600.7	448.5	341.0	272.8	228.2	202.0	183.6	175.7	173.1	173.1
62.5°	679.4	587.6	438.0	327.9	262.3	217.7	194.1	175.7	170.5	170.5	167.9
65°	637.4	548.2	414.4	309.5	246.6	204.6	183.6	167.9	162.6	160.0	157.4
67.5°	592.8	511.5	377.7	288.5	225.6	191.5	170.5	157.4	149.5	149.5	146.9
70°	548.2	472.1	343.6	259.7	202.0	175.7	154.8	141.6	136.4	136.4	136.4
72.5°	487.9	422.3	304.3	228.2	178.4	154.8	139.0	125.9	123.3	123.3	120.7
75°	417.1	359.4	257.1	194.1	149.5	131.2	118.0	104.9	104.9	104.9	104.9
77.5°	341.0	291.2	204.6	154.8	118.0	104.9	97.1	86.6	86.6	86.6	86.6
80°	257.1	215.1	149.5	112.8	86.6	76.1	70.8	65.6	68.2	68.2	65.6
82.5°	167.9	141.6	94.4	70.8	55.1	49.8	49.8	44.6	47.2	47.2	47.2
85°	73.4	63.0	39.3	31.5	26.2	26.2	26.2	23.6	26.2	26.2	26.2
87.5°	5.2	5.2	5.2	5.2	5.2	5.2	5.2	0.0	2.6	5.2	2.6
90°	2.6	2.6	3.1	3.1	3.1	3.1	3.1	3.1	3.1	2.6	2.6
92.5°	2.6	2.6	3.1	3.1	4.1	3.6	4.1	3.6	2.6	2.6	2.6
95°	3.1	3.1	3.6	3.6	6.2	6.2	5.7	4.6	3.6	3.1	3.1
97.5°	4.1	4.6	5.1	5.1	10.3	17.0	9.3	5.7	4.6	4.6	4.1
100°	7.2	7.2	9.8	13.4	26.2	36.5	27.2	12.9	7.2	7.2	6.7
102.5°	23.6	24.7	30.8	44.7	47.3	56.0	61.7	41.6	27.8	22.6	21.6
105°	56.5	56.5	61.2	70.9	78.1	84.8	86.4	69.4	58.6	54.5	55.0
107.5°	75.0	75.6	80.7	92.0	116.2	114.6	98.2	85.3	76.1	72.5	72.5
110°	92.0	93.0	99.7	113.6	131.6	132.6	109.5	92.5	84.8	81.7	81.7



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 CATALOG NUMBER: TTN-D1-735-U-DL-UPL1

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	104.9	105.9	111.0	117.2	124.4	129.0	118.7	100.2	88.4	84.3	83.8
115°	101.3	100.2	102.3	106.4	112.1	117.2	113.1	102.8	91.5	86.9	86.9
117.5°	88.4	90.0	91.0	94.1	101.8	104.4	101.3	94.6	88.4	87.4	85.8
120°	78.6	79.7	80.2	82.8	87.9	88.9	87.4	83.8	80.7	79.7	79.7
122.5°	69.4	70.4	70.4	71.5	75.6	76.6	75.0	72.5	70.9	71.5	70.9
125°	61.2	61.7	61.7	62.2	64.3	63.7	64.3	62.7	61.7	62.2	62.2
127.5°	54.5	55.0	54.5	54.0	56.0	55.5	55.5	55.0	54.5	55.5	56.0
130°	49.3	48.8	48.3	47.8	48.8	47.8	48.8	48.8	48.8	49.9	49.9
132.5°	44.2	44.2	43.2	42.2	42.7	42.2	42.2	42.2	42.7	44.2	44.2
135°	39.6	39.6	39.1	38.0	38.6	38.0	38.6	38.6	38.0	39.6	39.6
137.5°	37.0	36.5	35.5	35.0	35.0	34.4	35.0	35.0	35.0	36.0	36.0
140°	33.4	33.4	32.9	32.4	32.4	32.4	31.9	32.4	32.4	32.9	32.9
142.5°	31.4	31.4	30.3	29.8	30.3	30.3	30.3	29.8	30.3	30.8	31.4
145°	29.3	28.8	28.8	28.3	28.3	28.8	28.3	28.3	28.3	28.8	28.8
147.5°	27.8	27.2	27.2	26.7	27.2	27.2	27.2	27.2	26.7	27.2	27.2
150°	26.2	26.2	25.7	25.7	25.7	25.7	26.2	26.2	25.7	26.2	26.7
152.5°	25.7	25.2	24.7	24.7	24.7	24.7	24.7	25.2	24.7	25.2	25.2
155°	24.2	24.2	24.2	24.2	24.2	24.2	24.2	24.2	23.6	24.2	24.2
157.5°	23.6	23.6	23.1	23.1	23.1	23.1	23.1	23.1	23.1	23.6	23.1
160°	23.1	22.6	22.6	22.6	22.1	22.1	22.1	22.6	22.6	22.6	22.6
162.5°	22.6	22.1	22.1	21.6	21.6	21.6	21.6	22.1	22.1	22.1	22.1
165°	21.6	22.1	21.6	21.1	21.1	21.1	21.1	21.6	21.6	21.6	22.1
167.5°	21.6	21.1	21.1	21.1	20.6	20.6	21.1	21.1	21.1	21.1	21.1
170°	21.1	20.6	20.6	20.6	20.6	20.6	20.6	20.6	20.6	21.1	21.1
172.5°	21.1	21.1	20.6	20.6	20.6	20.6	20.6	21.1	21.1	21.1	21.1
175°	20.6	21.1	21.1	21.1	20.6	20.6	20.6	21.1	21.1	21.1	21.1
177.5°	21.1	21.1	21.1	21.1	21.1	21.1	20.6	21.1	21.1	21.1	21.1
180°	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1	21.1

(END OF REPORT)