

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: P833318

Luminaire Tested: **TTN-D1-830-U-DL-UPL2**

Issue Date: 5/15/2024

Test Information

Test Method: LM-79-08
Report Number: P833318
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-D1-830-U-DL-UPL2
Description: TOPTIER NANO LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3000K, 80 CRI LEDS AND DRIVE LANE DISTRIBUTION
Light Source: -
Ballast/Driver: -

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3389.8 lumens
Efficiency: N/A
Efficacy: 109.7 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 0.71' x H: 0.1')
IES Classification: Type IV - Short
BUG Rating: B1 - U4 - G1

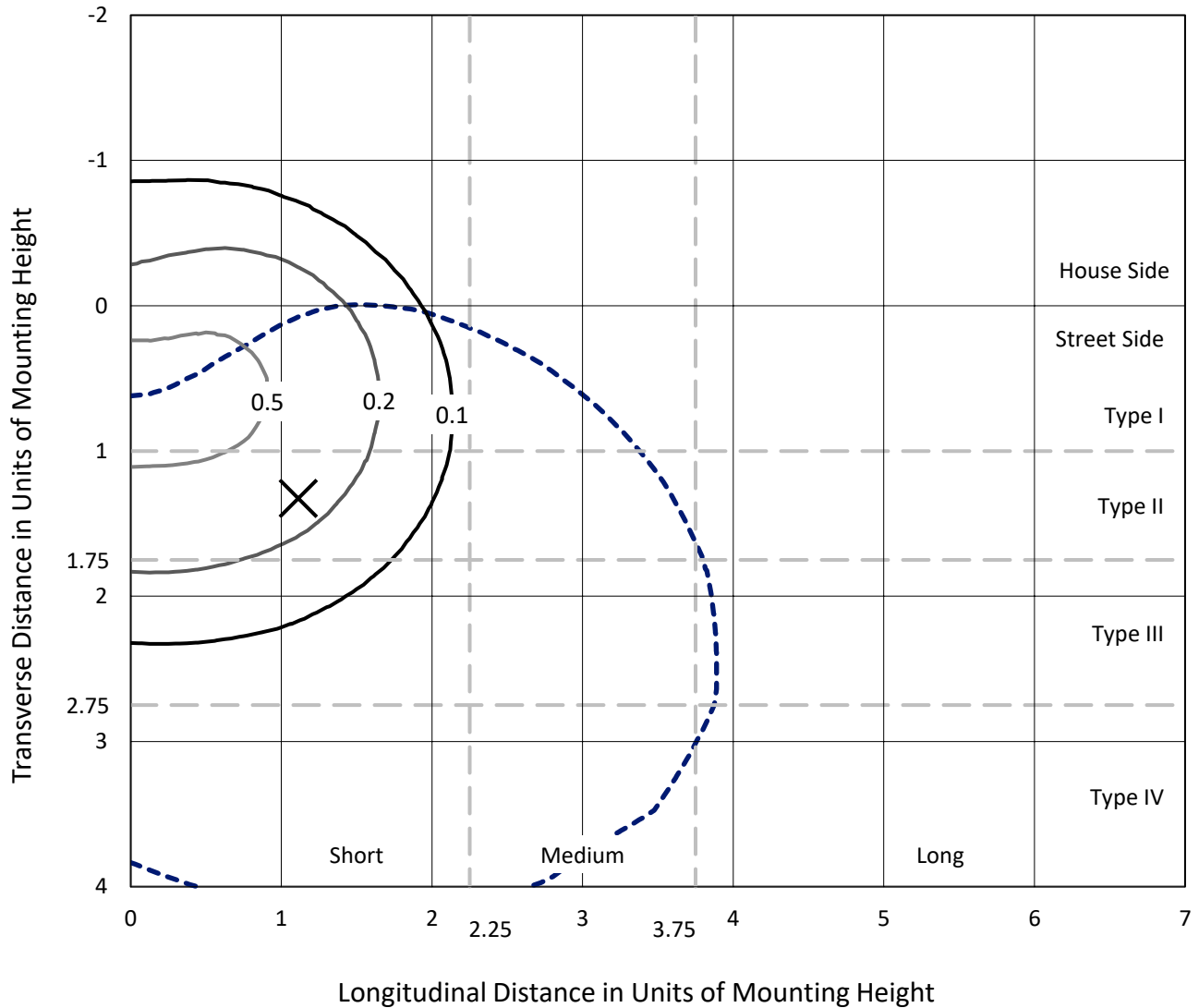
Input Watts (W): 30.9
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT



REPORT NUMBER: P833318
 CATALOG NUMBER: TTN-D1-830-U-DL-UPL2

Iso-Footcandle Lines of Horizontal Illumination

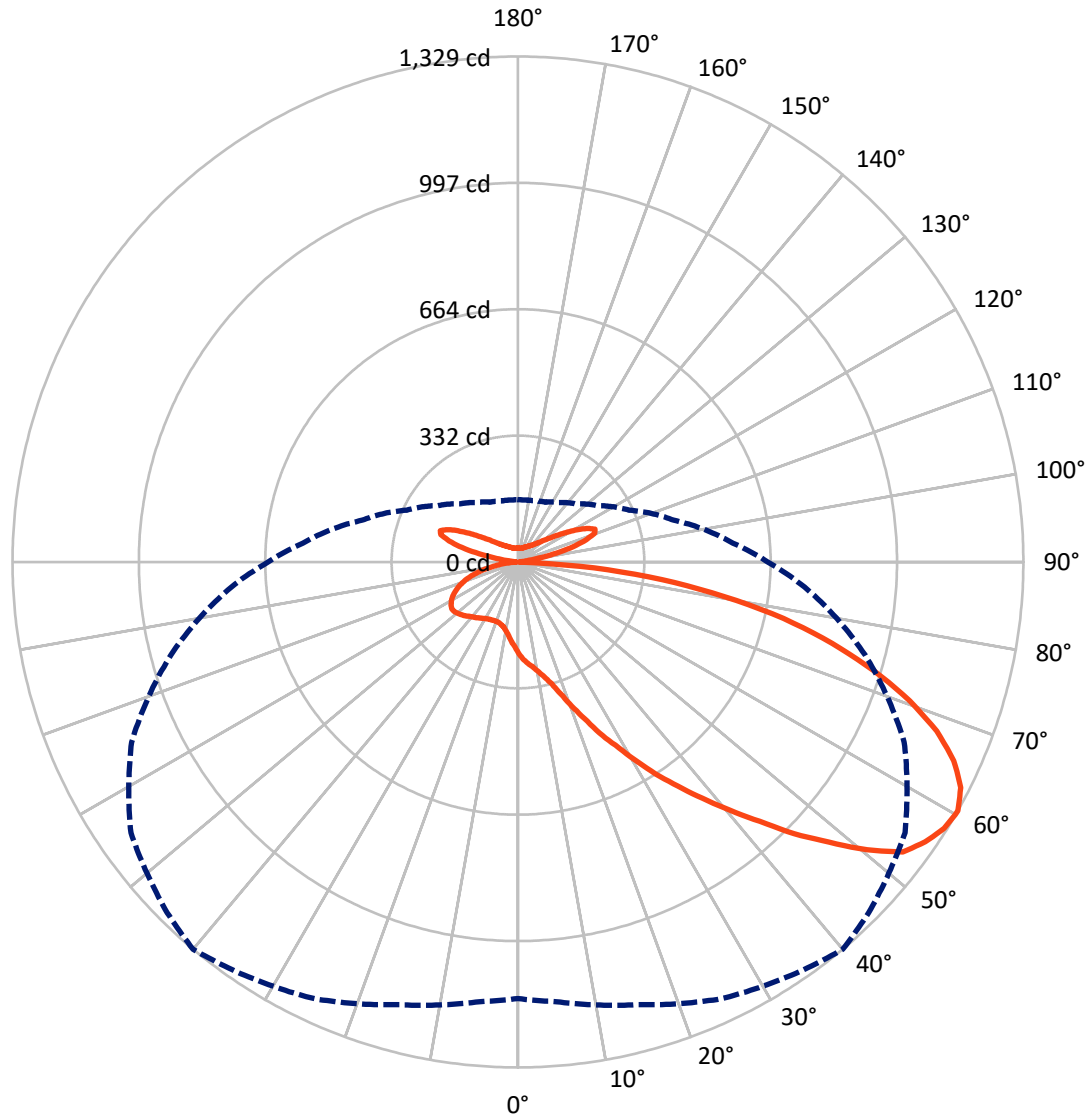
✕ Max cd
 - - - 1/2 Max cd



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

REPORT NUMBER: P833318
CATALOG NUMBER: TTN-D1-830-U-DL-UPL2

Luminous Intensity Polar Plot



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

REPORT NUMBER: P833318

CATALOG NUMBER: TTN-D1-830-U-DL-UPL2

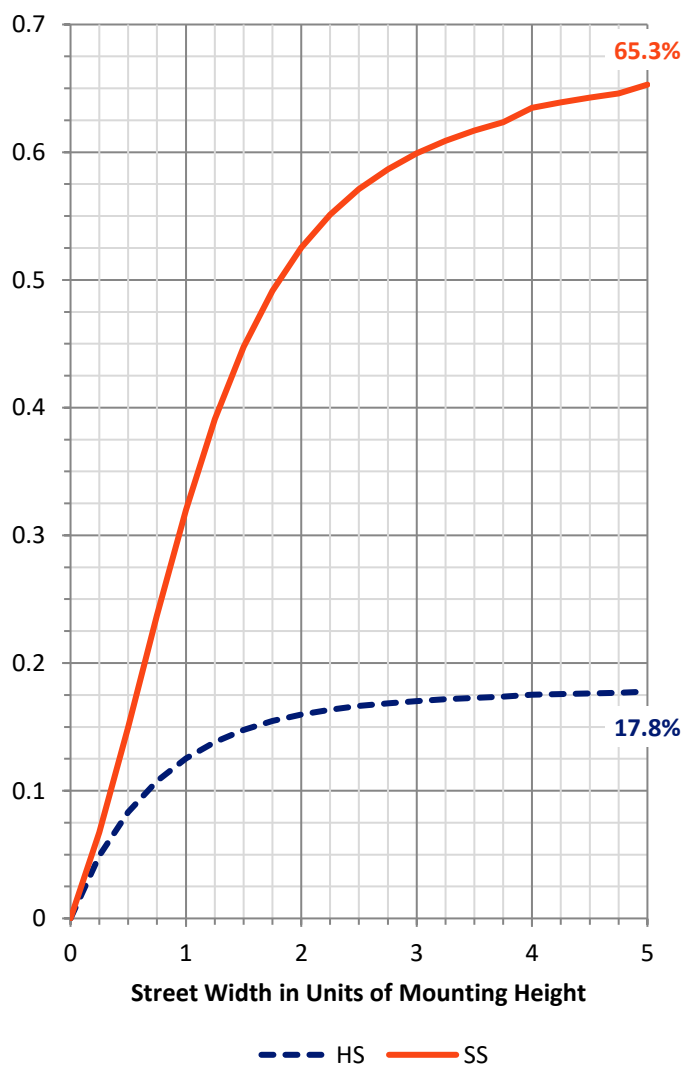
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	608.4	267.0	875.4
	% Fixture	17.9	7.9	25.8
Street Side	Lumens	2247.4	267.0	2514.4
	% Fixture	66.3	7.9	74.2
Total	Lumens	2855.7	534.0	3389.8
	% Fixture	84.2	15.8	100.0

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	22.7	0.7
10°-20°	72.4	2.1
20°-30°	152.9	4.5
30°-40°	279.4	8.2
40°-50°	454.0	13.4
50°-60°	631.1	18.6
60°-70°	654.2	19.3
70°-80°	468.8	13.8
80°-90°	120.3	3.5
90°-100°	11.9	0.4
100°-110°	121.1	3.6
110°-120°	177.1	5.2
120°-130°	102.8	3.0
130°-140°	54.4	1.6
140°-150°	32.3	1.0
150°-160°	19.9	0.6
160°-170°	10.9	0.3
170°-180°	3.5	0.1
0°-90°	2855.7	84.2
0°-180°	3389.8	100.0

Coefficient of Utilization



REPORT NUMBER: P833318

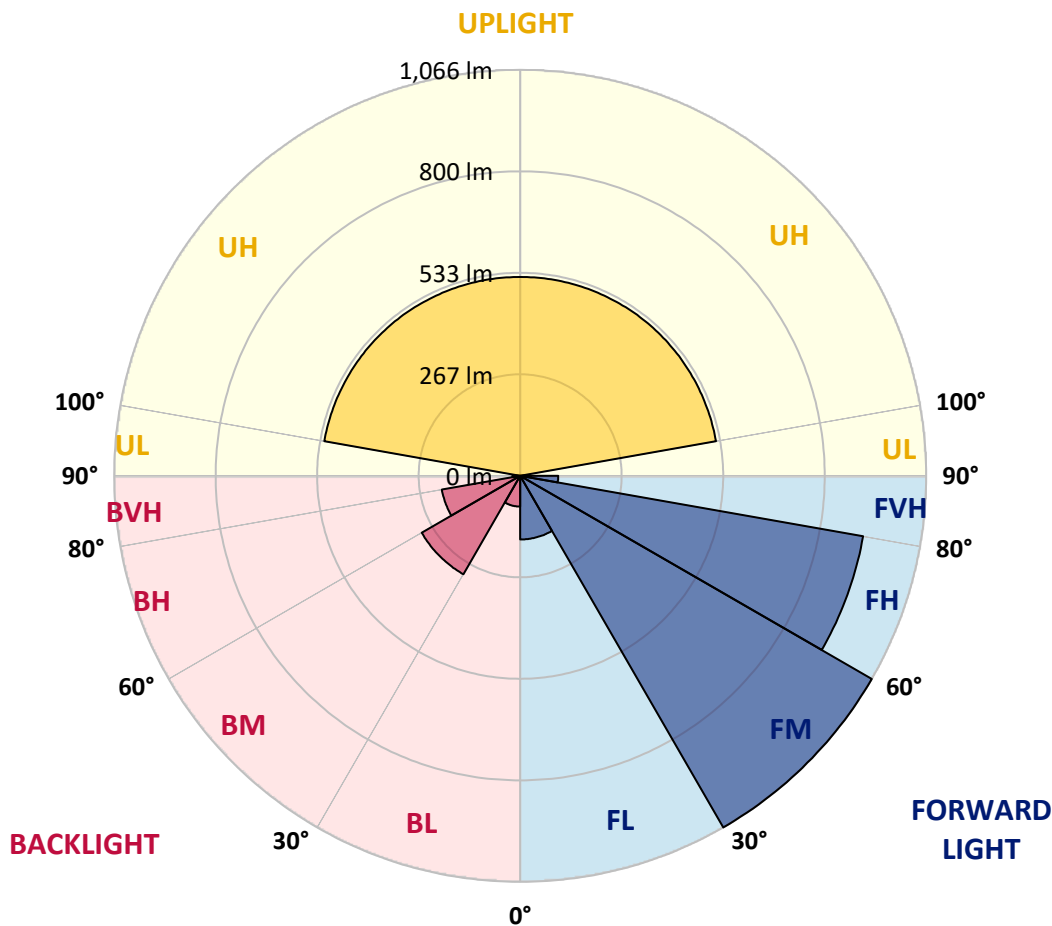
CATALOG NUMBER: TTN-D1-830-U-DL-UPL2

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	167.1	4.9			
FM (30°-60°)	1066.1	31.4			
FH (60°-80°)	914.3	27.0			G1/1800
FVH (80°-90°)	99.9	2.9			G1/100
BL (0°-30°)	80.9	2.4	B0/110		
BM (30°-60°)	298.5	8.8	B1/1000		
BH (60°-80°)	208.7	6.2	B1/500		G1/500
BVH (80°-90°)	20.3	0.6			G1/100
UL (90°-100°)	11.9	0.4		U2/50	
UH (100°-180°)	522.1	15.4		U4/1000	

BUG Rating: B1-U4-G1

Type IV Short





REPORT NUMBER: P833318

CATALOG NUMBER: TTN-D1-830-U-DL-UPL2

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
0°	240.5	240.5	240.5	240.5	240.5	240.5	240.5	240.5	240.5	240.5	240.5
2.5°	257.8	257.8	257.8	257.8	255.3	255.3	252.8	250.4	247.9	245.4	240.5
5°	280.1	280.1	277.6	275.2	270.2	267.7	265.2	260.3	255.3	250.4	242.9
7.5°	290.0	290.0	290.0	287.6	280.1	277.6	272.7	265.2	257.8	250.4	240.5
10°	307.4	307.4	304.9	302.4	295.0	292.5	287.6	277.6	265.2	252.8	240.5
12.5°	329.7	327.2	324.7	322.3	314.8	309.9	302.4	292.5	277.6	262.8	247.9
15°	357.0	352.0	352.0	347.0	339.6	332.2	327.2	312.3	297.5	277.6	257.8
17.5°	386.7	384.2	381.8	376.8	369.4	364.4	357.0	339.6	319.8	295.0	272.7
20°	423.9	418.9	421.4	414.0	406.5	404.1	391.7	371.8	347.0	319.8	292.5
22.5°	468.5	463.6	463.6	456.1	451.2	446.2	433.8	411.5	379.3	349.5	314.8
25°	518.1	513.1	513.1	508.2	503.2	498.3	483.4	458.6	421.4	384.2	344.6
27.5°	572.6	567.7	567.7	565.2	552.8	545.4	533.0	505.7	468.5	421.4	374.3
30°	629.6	624.7	629.6	624.7	617.2	602.4	587.5	557.8	515.6	463.6	406.5
32.5°	674.3	674.3	676.7	681.7	676.7	664.3	647.0	622.2	565.2	500.7	436.3
35°	726.3	726.3	731.3	738.7	736.2	723.8	706.5	679.2	619.7	542.9	468.5
37.5°	783.3	783.3	788.3	800.7	795.7	788.3	775.9	741.2	674.3	585.0	503.2
40°	845.3	842.8	847.8	865.1	867.6	857.7	842.8	808.1	731.3	639.6	540.4
42.5°	907.3	904.8	914.7	932.1	934.5	932.1	917.2	877.5	790.8	694.1	577.6
45°	969.3	969.3	984.1	1011.4	1023.8	1018.8	1006.4	956.9	865.1	751.1	627.2
47.5°	1033.7	1033.7	1053.5	1088.2	1103.1	1100.6	1095.7	1036.2	937.0	810.6	669.3
50°	1083.3	1083.3	1115.5	1155.2	1180.0	1189.9	1165.1	1110.6	999.0	862.7	704.0
52.5°	1132.9	1132.9	1165.1	1227.1	1251.8	1266.7	1234.5	1177.5	1068.4	909.8	736.2
55°	1157.6	1162.6	1207.2	1266.7	1306.4	1298.9	1311.3	1234.5	1113.0	944.5	756.1
57.5°	1160.1	1167.6	1217.1	1279.1	1323.7	1321.3	1323.7	1254.3	1130.4	951.9	758.5
60°	1147.7	1160.1	1204.7	1266.7	1308.9	1328.7	1303.9	1241.9	1120.5	944.5	756.1
62.5°	1118.0	1142.8	1189.9	1237.0	1298.9	1306.4	1286.6	1234.5	1093.2	937.0	743.7
65°	1051.1	1078.3	1145.3	1199.8	1249.4	1259.3	1237.0	1192.4	1065.9	902.3	704.0
67.5°	984.1	1001.5	1058.5	1142.8	1177.5	1187.4	1180.0	1127.9	1018.8	832.9	656.9
70°	907.3	929.6	974.2	1061.0	1095.7	1093.2	1115.5	1056.0	946.9	773.4	607.3
72.5°	803.2	835.4	880.0	951.9	994.0	979.2	1013.9	964.3	852.7	699.1	540.4
75°	681.7	709.0	766.0	823.0	870.1	852.7	880.0	845.3	743.7	609.8	463.6
77.5°	545.4	577.6	629.6	681.7	713.9	713.9	726.3	696.6	617.2	500.7	379.3
80°	404.1	433.8	480.9	518.1	547.8	550.3	562.7	547.8	476.0	389.2	290.0
82.5°	267.7	282.6	324.7	354.5	384.2	381.8	401.6	391.7	332.2	267.7	193.4
85°	114.0	123.9	158.7	183.4	210.7	200.8	228.1	225.6	178.5	128.9	86.8
87.5°	5.0	7.4	7.4	5.0	7.4	2.5	7.4	9.9	7.4	5.0	5.0
90°	4.6	4.6	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	4.6
92.5°	4.6	4.6	4.6	6.4	7.3	6.8	6.4	7.3	5.5	5.5	4.6
95°	5.5	5.5	6.4	8.2	10.1	10.6	11.0	11.0	6.4	6.4	5.5
97.5°	7.3	8.2	8.2	10.1	16.4	23.3	30.2	18.3	9.1	9.1	8.2
100°	11.9	12.8	12.8	22.8	48.4	56.6	64.9	46.6	23.8	17.4	12.8
102.5°	38.4	40.2	49.3	74.0	109.6	104.6	99.6	84.1	79.5	54.8	43.9
105°	97.8	96.8	104.2	123.3	153.5	152.2	150.8	138.9	126.1	108.7	100.5
107.5°	128.8	128.8	135.2	151.7	174.5	189.1	203.7	206.5	163.5	143.4	134.3
110°	145.3	145.3	150.8	164.5	194.6	215.2	235.7	233.9	201.9	177.3	165.4



REPORT NUMBER: P833318
 CATALOG NUMBER: TTN-D1-830-U-DL-UPL2

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	40°	45°	55°	65°	75°	85°
112.5°	148.9	149.8	157.1	178.2	211.1	220.2	229.3	221.1	208.3	197.4	188.2
115°	154.4	154.4	162.6	182.7	201.0	204.6	208.3	199.2	189.1	181.8	178.2
117.5°	152.6	155.3	157.1	168.1	180.0	182.8	185.5	180.9	167.2	161.7	159.9
120°	141.6	141.6	143.4	148.9	155.3	156.7	158.1	156.2	147.1	142.5	141.6
122.5°	126.1	127.0	126.1	128.8	133.4	134.8	136.1	134.3	127.0	125.2	125.2
125°	110.6	110.6	109.6	111.5	114.2	113.8	113.3	114.2	110.6	109.6	109.6
127.5°	99.6	98.7	96.8	97.8	98.7	98.7	98.7	99.6	95.9	96.8	97.8
130°	88.6	88.6	86.8	86.8	86.8	85.9	85.0	86.8	85.0	85.9	86.8
132.5°	78.6	78.6	75.8	74.9	74.9	74.9	74.9	75.8	74.9	76.7	78.6
135°	70.4	70.4	67.6	68.5	68.5	68.0	67.6	68.5	67.6	69.4	70.4
137.5°	64.0	64.0	62.1	62.1	62.1	61.6	61.2	62.1	62.1	63.0	64.9
140°	58.5	58.5	57.6	57.6	56.6	57.1	57.6	57.6	57.6	58.5	59.4
142.5°	55.7	54.8	53.9	53.0	53.9	53.9	53.9	53.9	53.0	53.9	55.7
145°	51.2	51.2	50.3	50.3	50.3	50.8	51.2	50.3	50.3	51.2	51.2
147.5°	48.4	48.4	47.5	48.4	48.4	48.4	48.4	48.4	47.5	48.4	48.4
150°	47.5	46.6	45.7	46.6	46.6	46.2	45.7	45.7	45.7	45.7	46.6
152.5°	44.8	44.8	43.9	44.8	43.9	43.9	43.9	43.9	43.9	43.9	44.8
155°	42.9	42.9	42.0	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9
157.5°	41.1	42.0	41.1	41.1	41.1	41.1	41.1	41.1	41.1	41.1	42.0
160°	40.2	40.2	40.2	40.2	39.3	39.3	39.3	39.3	40.2	40.2	40.2
162.5°	39.3	39.3	39.3	39.3	38.4	38.4	38.4	38.4	38.4	39.3	39.3
165°	39.3	38.4	38.4	38.4	37.5	37.5	37.5	37.5	37.5	38.4	39.3
167.5°	37.5	37.5	37.5	37.5	37.5	37.0	36.5	36.5	37.5	37.5	37.5
170°	37.5	37.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5
172.5°	37.5	37.5	37.5	37.5	36.5	36.5	36.5	36.5	36.5	36.5	37.5
175°	37.5	37.5	37.5	37.5	36.5	36.5	36.5	36.5	37.5	37.5	37.5
177.5°	37.5	37.5	37.5	37.5	36.5	37.0	37.5	37.5	37.5	37.5	37.5
180°	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5



REPORT NUMBER: P833318

CATALOG NUMBER: TTN-D1-830-U-DL-UPL2

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	240.5	240.5	240.5	240.5	240.5	240.5	240.5	240.5	240.5	240.5	240.5
2.5°	240.5	238.0	233.0	230.5	228.1	223.1	223.1	220.6	220.6	220.6	218.1
5°	240.5	235.5	230.5	223.1	218.1	213.2	208.2	203.3	200.8	200.8	198.3
7.5°	235.5	230.5	223.1	215.7	208.2	198.3	193.4	183.4	181.0	178.5	178.5
10°	235.5	230.5	218.1	208.2	198.3	188.4	181.0	171.0	163.6	161.1	161.1
12.5°	238.0	230.5	218.1	205.7	193.4	181.0	171.0	161.1	153.7	148.7	148.7
15°	247.9	238.0	223.1	205.7	190.9	176.0	166.1	153.7	146.3	141.3	141.3
17.5°	260.3	250.4	228.1	208.2	190.9	173.5	161.1	148.7	141.3	136.3	133.9
20°	277.6	262.8	238.0	210.7	190.9	173.5	158.7	146.3	136.3	131.4	131.4
22.5°	297.5	280.1	247.9	215.7	193.4	173.5	158.7	143.8	133.9	128.9	128.9
25°	322.3	299.9	262.8	225.6	198.3	176.0	158.7	143.8	133.9	128.9	128.9
27.5°	349.5	324.7	277.6	235.5	203.3	178.5	158.7	143.8	133.9	128.9	128.9
30°	374.3	347.0	292.5	245.4	210.7	181.0	161.1	146.3	136.3	131.4	128.9
32.5°	401.6	366.9	307.4	255.3	215.7	185.9	163.6	148.7	136.3	131.4	131.4
35°	428.9	391.7	322.3	267.7	223.1	190.9	166.1	151.2	138.8	133.9	133.9
37.5°	458.6	418.9	339.6	277.6	230.5	195.8	171.0	153.7	141.3	136.3	136.3
40°	493.3	446.2	357.0	290.0	238.0	200.8	173.5	158.7	146.3	141.3	141.3
42.5°	525.5	471.0	374.3	299.9	245.4	205.7	178.5	161.1	151.2	146.3	146.3
45°	557.8	500.7	391.7	312.3	252.8	213.2	183.4	168.6	156.2	151.2	151.2
47.5°	594.9	528.0	411.5	322.3	260.3	218.1	188.4	173.5	161.1	158.7	156.2
50°	624.7	547.8	423.9	332.2	265.2	223.1	193.4	176.0	166.1	161.1	161.1
52.5°	652.0	567.7	433.8	337.1	267.7	225.6	198.3	181.0	171.0	166.1	166.1
55°	666.8	575.1	441.2	337.1	270.2	228.1	198.3	181.0	171.0	168.6	166.1
57.5°	666.8	575.1	436.3	332.2	265.2	223.1	195.8	178.5	171.0	166.1	166.1
60°	656.9	567.7	423.9	322.3	257.8	215.7	190.9	173.5	166.1	163.6	163.6
62.5°	642.0	555.3	414.0	309.9	247.9	205.7	183.4	166.1	161.1	161.1	158.7
65°	602.4	518.1	391.7	292.5	233.0	193.4	173.5	158.7	153.7	151.2	148.7
67.5°	560.2	483.4	357.0	272.7	213.2	181.0	161.1	148.7	141.3	141.3	138.8
70°	518.1	446.2	324.7	245.4	190.9	166.1	146.3	133.9	128.9	128.9	128.9
72.5°	461.1	399.1	287.6	215.7	168.6	146.3	131.4	119.0	116.5	116.5	114.0
75°	394.1	339.6	242.9	183.4	141.3	123.9	111.6	99.2	99.2	99.2	99.2
77.5°	322.3	275.2	193.4	146.3	111.6	99.2	91.7	81.8	81.8	81.8	81.8
80°	242.9	203.3	141.3	106.6	81.8	71.9	66.9	62.0	64.5	64.5	62.0
82.5°	158.7	133.9	89.2	66.9	52.1	47.1	47.1	42.1	44.6	44.6	44.6
85°	69.4	59.5	37.2	29.7	24.8	24.8	24.8	22.3	24.8	24.8	24.8
87.5°	5.0	5.0	5.0	5.0	5.0	5.0	5.0	0.0	2.5	5.0	2.5
90°	4.6	4.6	5.5	5.5	5.5	5.5	5.5	5.5	5.5	4.6	4.6
92.5°	4.6	4.6	5.5	5.5	7.3	6.4	7.3	6.4	4.6	4.6	4.6
95°	5.5	5.5	6.4	6.4	11.0	11.0	10.1	8.2	6.4	5.5	5.5
97.5°	7.3	8.2	9.1	9.1	18.3	30.2	16.4	10.1	8.2	8.2	7.3
100°	12.8	12.8	17.4	23.8	46.6	64.9	48.4	22.8	12.8	12.8	11.9
102.5°	42.0	43.9	54.8	79.5	84.1	99.6	109.6	74.0	49.3	40.2	38.4
105°	100.5	100.5	108.7	126.1	138.9	150.8	153.5	123.3	104.2	96.8	97.8
107.5°	133.4	134.3	143.4	163.5	206.5	203.7	174.5	151.7	135.2	128.8	128.8
110°	163.5	165.4	177.3	201.9	233.9	235.7	194.6	164.5	150.8	145.3	145.3



REPORT NUMBER: P833318
 CATALOG NUMBER: TTN-D1-830-U-DL-UPL2

CANDELA DISTRIBUTION (continued):

	90°	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	186.4	188.2	197.4	208.3	221.1	229.3	211.1	178.2	157.1	149.8	148.9
115°	180.0	178.2	181.8	189.1	199.2	208.3	201.0	182.7	162.6	154.4	154.4
117.5°	157.1	159.9	161.7	167.2	180.9	185.5	180.0	168.1	157.1	155.3	152.6
120°	139.8	141.6	142.5	147.1	156.2	158.1	155.3	148.9	143.4	141.6	141.6
122.5°	123.3	125.2	125.2	127.0	134.3	136.1	133.4	128.8	126.1	127.0	126.1
125°	108.7	109.6	109.6	110.6	114.2	113.3	114.2	111.5	109.6	110.6	110.6
127.5°	96.8	97.8	96.8	95.9	99.6	98.7	98.7	97.8	96.8	98.7	99.6
130°	87.7	86.8	85.9	85.0	86.8	85.0	86.8	86.8	86.8	88.6	88.6
132.5°	78.6	78.6	76.7	74.9	75.8	74.9	74.9	74.9	75.8	78.6	78.6
135°	70.4	70.4	69.4	67.6	68.5	67.6	68.5	68.5	67.6	70.4	70.4
137.5°	65.8	64.9	63.0	62.1	62.1	61.2	62.1	62.1	62.1	64.0	64.0
140°	59.4	59.4	58.5	57.6	57.6	57.6	56.6	57.6	57.6	58.5	58.5
142.5°	55.7	55.7	53.9	53.0	53.9	53.9	53.9	53.0	53.9	54.8	55.7
145°	52.1	51.2	51.2	50.3	50.3	51.2	50.3	50.3	50.3	51.2	51.2
147.5°	49.3	48.4	48.4	47.5	48.4	48.4	48.4	48.4	47.5	48.4	48.4
150°	46.6	46.6	45.7	45.7	45.7	45.7	46.6	46.6	45.7	46.6	47.5
152.5°	45.7	44.8	43.9	43.9	43.9	43.9	43.9	44.8	43.9	44.8	44.8
155°	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.9	42.0	42.9	42.9
157.5°	42.0	42.0	41.1	41.1	41.1	41.1	41.1	41.1	41.1	42.0	41.1
160°	41.1	40.2	40.2	40.2	39.3	39.3	39.3	40.2	40.2	40.2	40.2
162.5°	40.2	39.3	39.3	38.4	38.4	38.4	38.4	39.3	39.3	39.3	39.3
165°	38.4	39.3	38.4	37.5	37.5	37.5	37.5	38.4	38.4	38.4	39.3
167.5°	38.4	37.5	37.5	37.5	36.5	36.5	37.5	37.5	37.5	37.5	37.5
170°	37.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	36.5	37.5	37.5
172.5°	37.5	37.5	36.5	36.5	36.5	36.5	36.5	37.5	37.5	37.5	37.5
175°	36.5	37.5	37.5	37.5	36.5	36.5	36.5	37.5	37.5	37.5	37.5
177.5°	37.5	37.5	37.5	37.5	37.5	37.5	36.5	37.5	37.5	37.5	37.5
180°	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5	37.5

(END OF REPORT)