

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: P821130

Luminaire Tested: **TT-D2-830-24VDC-CQ-UPL**

Issue Date: 7/23/2020

Test Information

Test Method: LM-79-08
Report Number: P821130
REPORT IS FROM IESNA LM-79-08 TEST DATA - UPLIGHT (G2-2002-677-2) AND
Test Lab: INNOVATION CENTER
Issue Date: 7/23/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: MCGRAW-EDISON
Catalog Number: TT-D2-830-24VDC-CQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3000K, 80 CRI LEDS AND CONCENTRATED DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

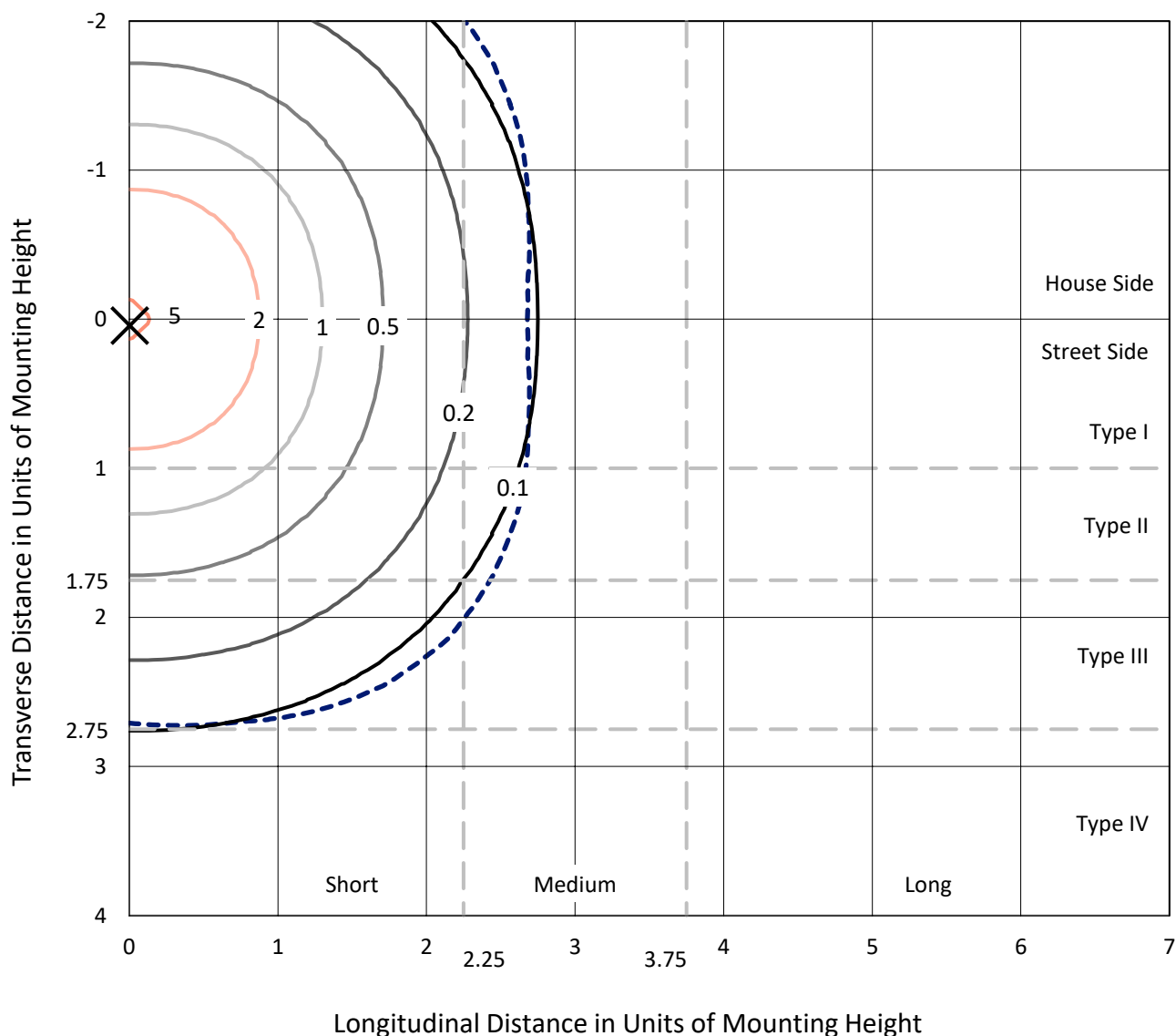
Lumens per Lamp: N/A
Luminaire Lumens: 5475.7 lumens
Efficiency: N/A
Efficacy: 144.1 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B2 - U4 - G1

Input Watts (W): 38
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

REPORT NUMBER: P821130
 CATALOG NUMBER: TT-D2-830-24VDC-CQ-UPL

Iso-Footcandle Lines of Horizontal Illumination

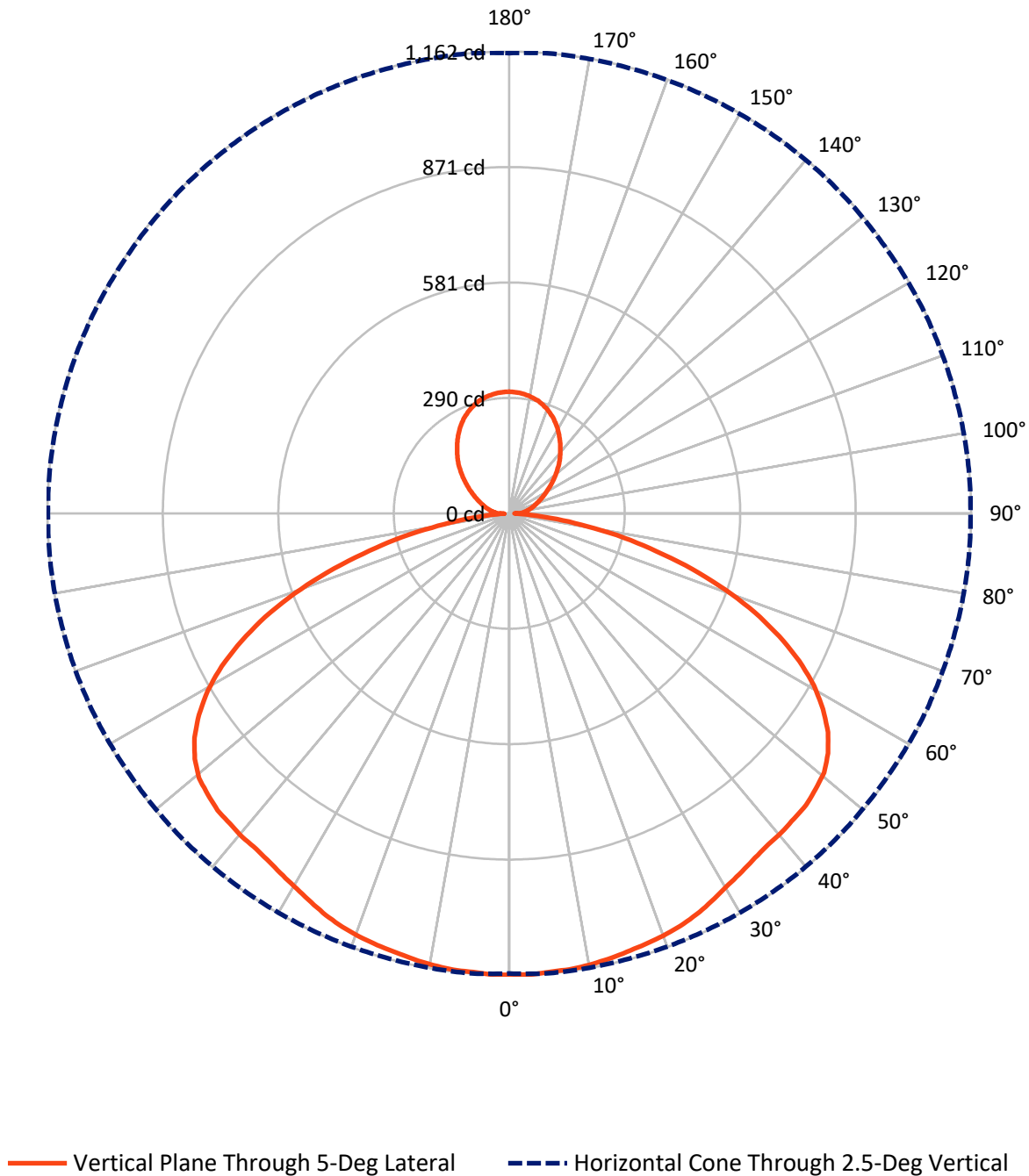
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 5.2 fc
 Type V - Short - N/A

REPORT NUMBER: P821130
CATALOG NUMBER: TT-D2-830-24VDC-CQ-UPL

Luminous Intensity Polar Plot



REPORT NUMBER: P821130

CATALOG NUMBER: TT-D2-830-24VDC-CQ-UPL

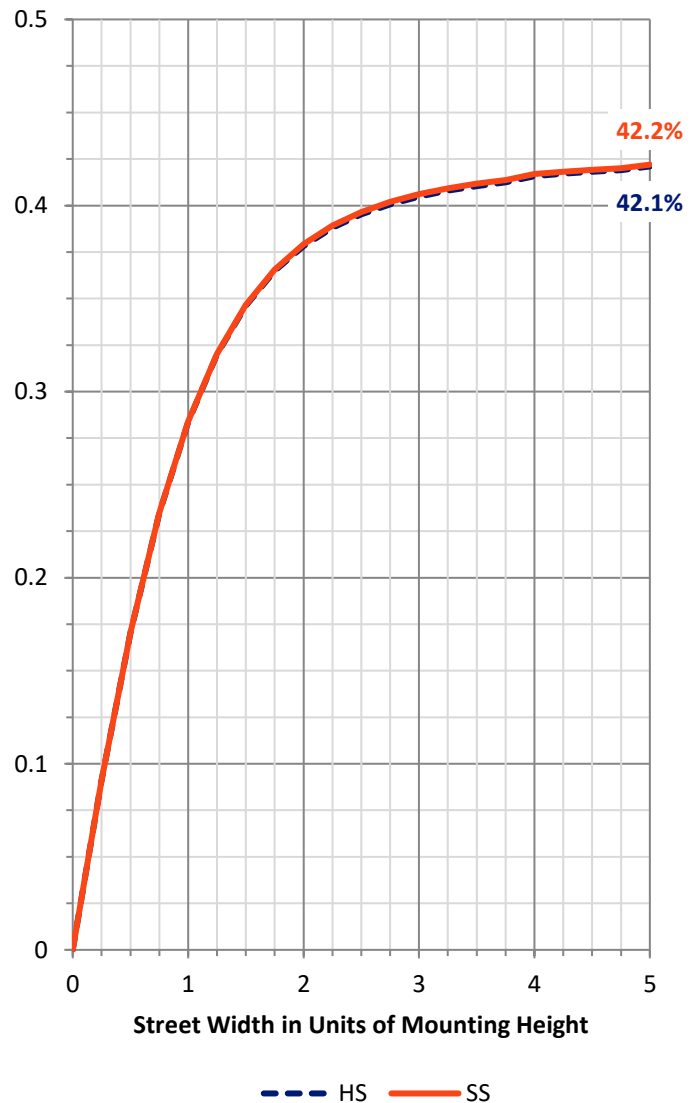
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2322.0	415.9	2737.9
	% Fixture	42.4	7.6	50.0
Street Side	Lumens	2322.0	415.9	2737.9
	% Fixture	42.4	7.6	50.0
Total	Lumens	4644.0	831.7	5475.7
	% Fixture	84.8	15.2	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	110.4	2.0
10°-20°	323.3	5.9
20°-30°	514.2	9.4
30°-40°	676.4	12.4
40°-50°	827.9	15.1
50°-60°	896.7	16.4
60°-70°	771.4	14.1
70°-80°	433.7	7.9
80°-90°	90.0	1.6
90°-100°	42.6	0.8
100°-110°	66.0	1.2
110°-120°	91.9	1.7
120°-130°	119.0	2.2
130°-140°	138.7	2.5
140°-150°	140.5	2.6
150°-160°	121.9	2.2
160°-170°	82.2	1.5
170°-180°	28.9	0.5
0°-90°	4644.0	84.8
0°-180°	5475.7	100.0



REPORT NUMBER: P821130

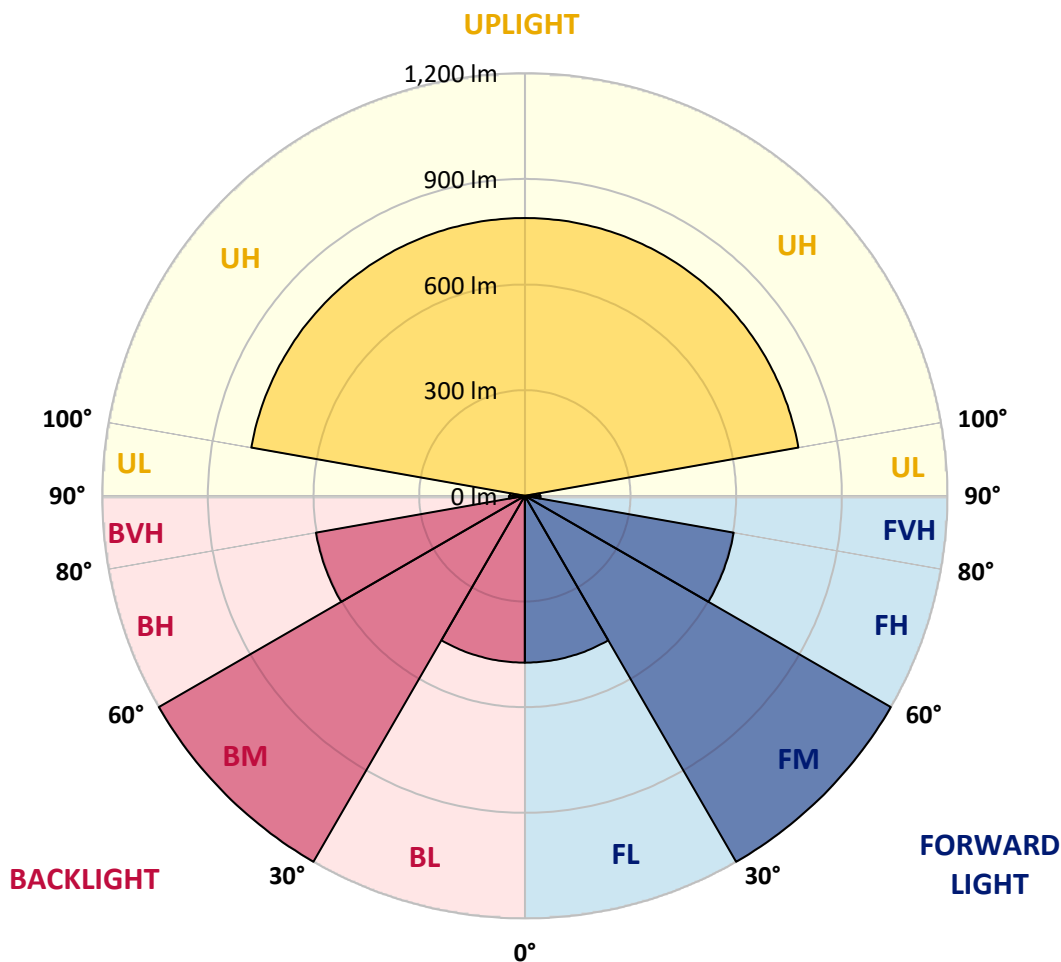
CATALOG NUMBER: TT-D2-830-24VDC-CQ-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	474.0	8.7			
FM	(30°-60°)	1200.5	21.9			
FH	(60°-80°)	602.6	11.0			G0/660
FVH	(80°-90°)	45.0	0.8			G1/100
BL	(0°-30°)	474.0	8.7	B1/500		
BM	(30°-60°)	1200.5	21.9	B2/2500		
BH	(60°-80°)	602.6	11.0	B2/1000		G0/660
BVH	(80°-90°)	45.0	0.8			G1/100
UL	(90°-100°)	42.6	0.8		U2/50	
UH	(100°-180°)	789.1	14.4		U4/1000	

BUG Rating: B2-U4-G1

Type V Short



REPORT NUMBER: P821130

CATALOG NUMBER: TT-D2-830-24VDC-CQ-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1160.8	1160.8	1160.8	1160.8	1160.8	1160.8	1160.8	1160.8	1160.8	1160.8	1160.8
2.5°	1157.8	1161.5	1160.1	1160.1	1160.1	1160.1	1158.6	1160.1	1160.1	1160.8	1160.1
5°	1158.6	1157.8	1157.8	1158.6	1158.6	1159.3	1157.8	1158.6	1159.3	1159.3	1160.1
7.5°	1156.4	1157.1	1155.6	1157.1	1155.6	1156.4	1156.4	1157.1	1156.4	1157.1	1158.6
10°	1151.9	1152.7	1151.9	1151.9	1151.9	1153.4	1150.5	1152.7	1151.9	1152.7	1151.9
12.5°	1143.8	1147.5	1146.0	1147.5	1147.5	1147.5	1145.3	1146.8	1147.5	1147.5	1147.5
15°	1140.1	1140.9	1138.6	1141.6	1142.3	1143.1	1140.1	1141.6	1141.6	1142.3	1143.1
17.5°	1132.0	1135.7	1134.9	1137.2	1136.4	1138.6	1137.9	1137.2	1136.4	1137.9	1136.4
20°	1126.1	1129.8	1129.0	1131.3	1132.0	1134.2	1132.0	1132.0	1129.8	1130.5	1132.7
22.5°	1120.2	1121.7	1121.7	1123.9	1123.9	1126.1	1123.9	1123.1	1123.1	1122.4	1124.6
25°	1110.6	1111.3	1110.6	1112.8	1114.3	1115.7	1115.0	1113.5	1112.8	1112.8	1112.1
27.5°	1095.1	1098.0	1099.5	1102.5	1103.2	1105.4	1102.5	1102.5	1101.0	1099.5	1100.2
30°	1083.3	1084.7	1084.7	1091.4	1091.4	1095.1	1091.4	1090.6	1089.9	1089.2	1087.7
32.5°	1072.2	1074.4	1076.6	1081.8	1085.5	1087.0	1084.7	1083.3	1079.6	1077.4	1076.6
35°	1063.3	1064.1	1068.5	1075.9	1080.3	1084.0	1081.0	1077.4	1072.2	1068.5	1071.4
37.5°	1056.7	1057.4	1064.1	1073.7	1081.8	1084.7	1080.3	1074.4	1066.3	1061.8	1060.4
40°	1050.8	1055.2	1062.6	1075.9	1084.7	1089.2	1085.5	1077.4	1065.5	1056.7	1055.9
42.5°	1047.8	1050.0	1061.1	1076.6	1089.2	1095.1	1089.9	1078.8	1064.1	1053.7	1053.0
45°	1040.4	1047.1	1057.4	1077.4	1091.4	1098.8	1091.4	1077.4	1059.6	1047.8	1045.6
47.5°	1034.5	1036.7	1053.0	1075.9	1092.9	1098.8	1091.4	1073.7	1051.5	1036.0	1034.5
50°	1020.5	1025.7	1041.9	1066.3	1086.2	1092.1	1083.3	1059.6	1034.5	1017.5	1014.6
52.5°	999.1	1003.5	1022.7	1053.0	1072.2	1078.8	1065.5	1040.4	1010.9	990.2	990.2
55°	965.8	972.5	992.4	1023.4	1047.8	1053.7	1038.2	1011.6	978.4	957.7	957.0
57.5°	926.0	930.4	951.8	985.8	1009.4	1018.3	1002.8	973.2	940.0	915.6	913.4
60°	874.3	880.2	903.1	935.6	959.9	967.3	954.0	924.5	890.5	864.7	864.7
62.5°	812.3	818.9	841.8	875.0	900.1	911.2	892.7	864.7	829.2	804.1	801.9
65°	739.9	745.8	766.5	801.2	827.0	835.2	821.1	791.6	757.6	734.0	731.8
67.5°	658.7	666.8	687.5	717.0	739.2	749.5	740.6	714.0	678.6	654.2	652.0
70°	570.8	576.7	592.9	620.3	645.4	652.8	639.5	621.7	588.5	566.4	563.4
72.5°	477.0	482.2	495.5	521.3	539.0	548.6	541.3	518.4	491.8	473.3	476.3
75°	382.5	381.8	396.5	415.0	431.2	437.9	432.7	417.9	393.6	378.1	377.3
77.5°	288.0	295.4	300.5	316.0	329.3	334.5	327.1	315.3	296.8	284.3	286.5
80°	202.3	197.9	207.5	217.1	226.0	231.1	226.7	220.0	207.5	197.9	196.4
82.5°	124.1	120.4	124.8	133.7	139.6	141.0	141.8	133.7	128.5	121.1	122.6
85°	54.6	55.4	59.1	65.0	65.7	66.5	66.5	65.0	59.1	58.3	56.9
87.5°	13.3	13.3	14.0	16.2	16.2	17.0	17.0	14.8	14.0	12.6	13.3
90°	30.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1
92.5°	34.8	34.2	34.2	33.8	33.8	33.8	33.8	33.8	33.8	33.8	33.8
95°	39.4	39.4	39.4	38.5	38.5	38.5	38.5	38.5	38.5	38.5	38.5
97.5°	44.6	44.6	44.6	44.2	44.2	44.2	44.2	44.2	44.2	44.2	44.2
100°	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8	49.8
102.5°	55.9	55.9	55.9	55.9	55.9	55.9	55.9	56.4	55.9	55.9	55.9
105°	62.0	62.0	62.0	62.0	62.0	62.0	62.0	62.9	62.0	62.0	62.0
107.5°	68.6	68.6	69.0	69.0	69.0	69.0	69.0	69.5	69.0	69.0	69.0
110°	75.1	75.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1	76.1



REPORT NUMBER: P821130

CATALOG NUMBER: TT-D2-830-24VDC-CQ-UPL

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	83.1	83.1	84.0	84.0	84.0	84.0	84.6	84.6	84.0	84.0	84.0
115°	91.1	91.1	92.0	92.0	92.0	92.0	93.0	93.0	92.0	92.0	92.0
117.5°	100.5	100.5	101.0	101.4	101.4	101.4	102.4	102.4	101.4	101.4	101.4
120°	109.9	109.9	109.9	110.8	110.8	110.8	111.8	111.8	110.8	110.8	110.8
122.5°	120.7	120.7	121.2	121.6	121.6	121.6	122.6	122.6	122.1	122.1	121.6
125°	131.5	131.5	132.4	132.4	132.4	132.4	133.4	133.4	133.4	133.4	132.4
127.5°	143.2	143.2	144.2	144.2	144.2	144.2	145.1	145.1	145.1	145.1	144.2
130°	155.0	155.0	155.9	155.9	155.9	155.9	156.8	156.8	156.8	156.8	155.9
132.5°	167.2	167.2	167.6	167.6	167.6	168.1	168.6	168.6	168.6	168.6	168.1
135°	179.4	179.4	179.4	179.4	179.4	180.3	180.3	180.3	180.3	180.3	180.3
137.5°	191.2	190.6	191.2	190.6	191.2	191.6	191.6	191.6	191.6	191.6	191.6
140°	202.9	201.9	202.9	201.9	202.9	202.9	202.9	202.9	202.9	202.9	202.9
142.5°	213.7	213.2	213.7	212.7	213.7	213.7	213.7	213.7	213.7	213.7	213.7
145°	224.5	224.5	224.5	223.5	224.5	224.5	224.5	224.5	224.5	224.5	224.5
147.5°	235.8	235.3	235.8	234.8	235.8	235.8	235.8	235.8	235.8	235.8	235.8
150°	247.0	246.1	247.0	246.1	247.0	247.0	247.0	247.0	247.0	247.0	247.0
152.5°	256.0	255.5	256.4	255.5	256.0	256.0	256.4	256.0	256.0	256.0	256.0
155°	264.9	264.9	265.8	264.9	264.9	264.9	265.8	264.9	264.9	264.9	264.9
157.5°	272.4	272.4	273.3	272.4	272.4	272.4	273.3	272.4	272.4	272.4	272.4
160°	279.9	279.9	280.8	279.9	279.9	279.9	280.8	279.9	279.9	279.9	279.9
162.5°	286.0	286.0	286.9	286.0	286.0	286.0	286.9	286.0	286.0	286.0	286.0
165°	292.1	292.1	293.0	292.1	292.1	292.1	293.0	292.1	292.1	292.1	292.1
167.5°	295.8	295.8	296.8	295.8	295.8	295.8	296.8	295.8	295.8	295.8	295.8
170°	299.6	299.6	300.5	299.6	299.6	299.6	300.5	299.6	299.6	299.6	299.6
172.5°	302.0	302.0	302.8	302.0	302.4	302.0	302.8	302.0	302.0	302.0	302.0
175°	304.3	304.3	305.2	304.3	305.2	304.3	305.2	304.3	304.3	304.3	304.3
177.5°	305.2	305.2	305.7	305.2	305.7	305.2	305.7	305.2	305.2	305.2	305.2
180°	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2	306.2

(END OF REPORT)