

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: P821210

Luminaire Tested: **TT-D2-735-24VDC-MQ-UPL**

Issue Date: 7/23/2020

Test Information

Test Method: LM-79-08
Report Number: P821210
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-D2-735-24VDC-MQ-UPL
Description: TOPTIER LED PARKING GARAGE LUMINAIRE WITH UPLIGHT
3500K, 70 CRI LEDS AND MEDIUM DISTRIBUTION
Light Source: -
Ballast/Driver: ELECTRONIC DRIVER

Summary

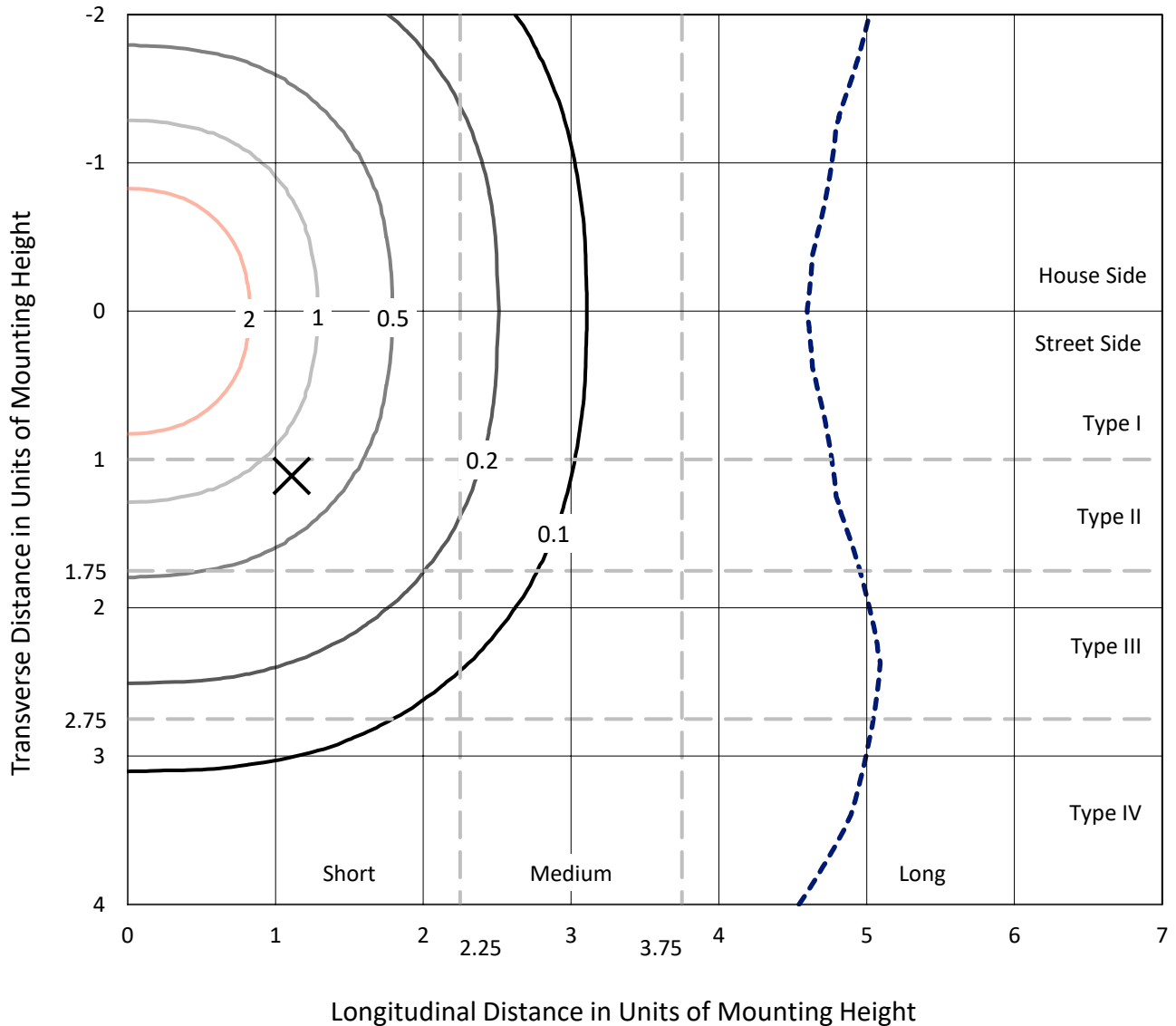
Lumens per Lamp: N/A
Luminaire Lumens: 6104.7 lumens
Efficiency: N/A
Efficacy: 160.7 lumens/watt
Luminous Opening: Vertical Cylinder (Dia: 1.12' x H: 0.1')
IES Classification: Type V - Short
BUG Rating: B2 - U4 - G2

Input Watts (W): 38
Input Voltage (V): NR
Input Current (A_{in}): 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: P821210
 CATALOG NUMBER: TT-D2-735-24VDC-MQ-UPL

Iso-Footcandle Lines of Horizontal Illumination

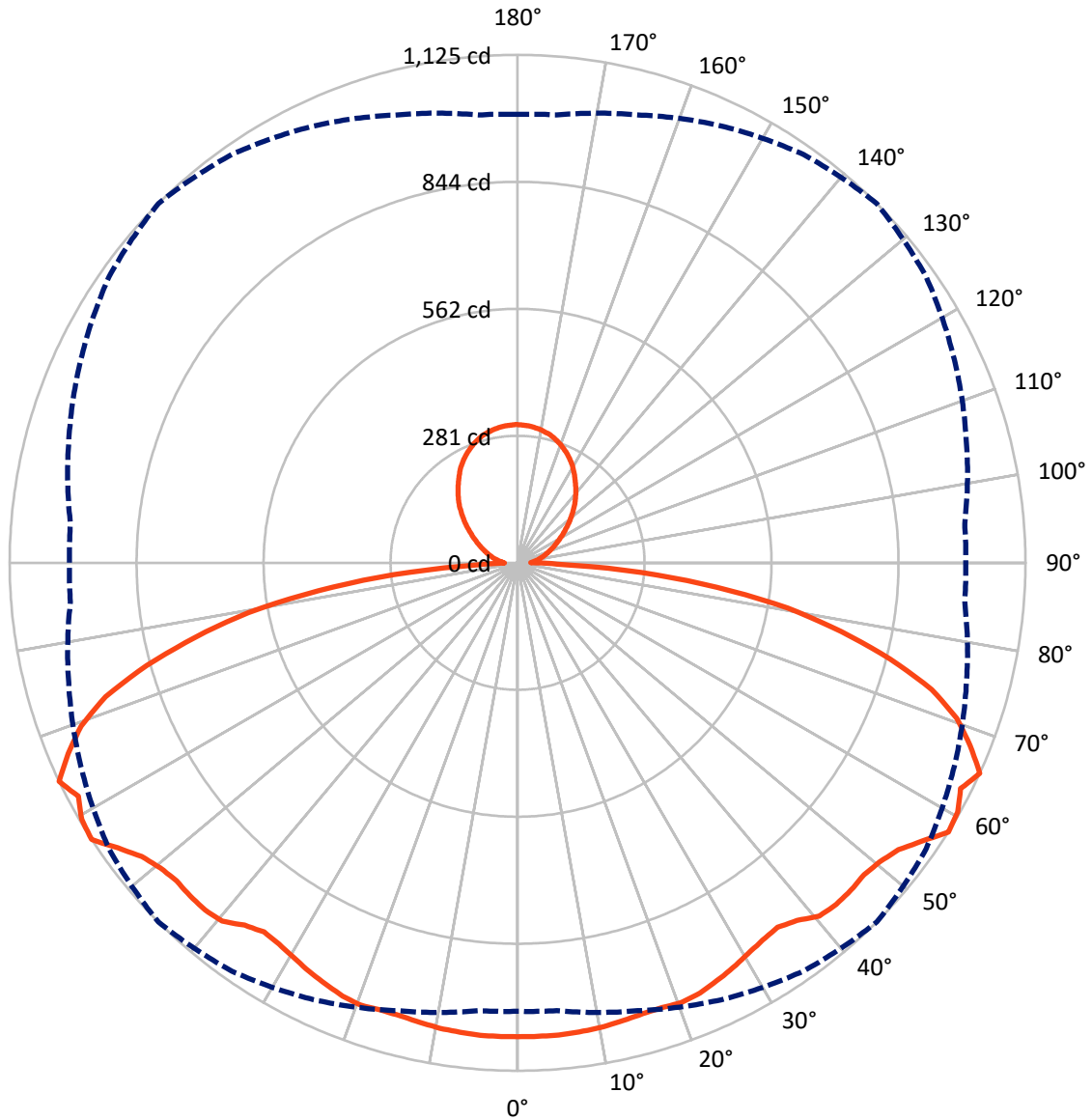
✕ Max cd
 - - - 1/2 Max cd



Based on 15 foot mounting height. Maximum calculated value = 4.7 fc
 Type V - Short - N/A

REPORT NUMBER: P821210
CATALOG NUMBER: TT-D2-735-24VDC-MQ-UPL

Luminous Intensity Polar Plot



— Vertical Plane Through 45-Deg Lateral - - - Horizontal Cone Through 57.5-Deg Vertical

REPORT NUMBER: P821210
 CATALOG NUMBER: TT-D2-735-24VDC-MQ-UPL

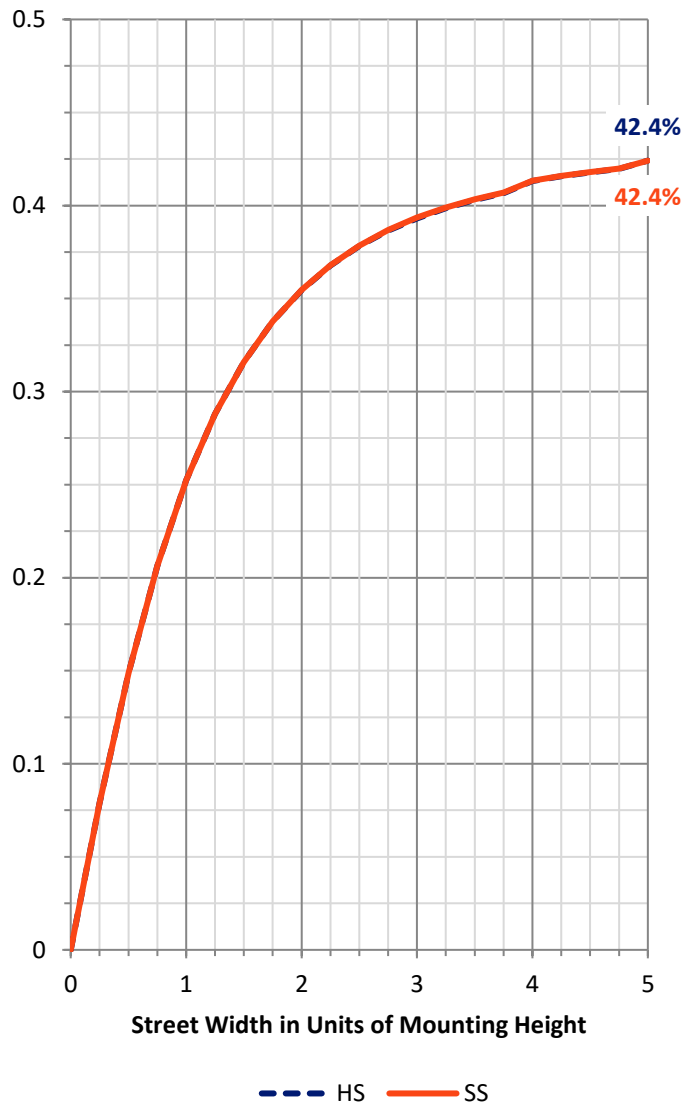
FLUX DISTRIBUTION:

		Downward	Upward	Total
House Side	Lumens	2636.5	415.9	3052.4
	% Fixture	43.2	6.8	50.0
Street Side	Lumens	2636.5	415.9	3052.4
	% Fixture	43.2	6.8	50.0
Total	Lumens	5273.0	831.7	6104.7
	% Fixture	86.4	13.6	100.0

Coefficient of Utilization

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.0	1.6
10°-20°	294.1	4.8
20°-30°	472.6	7.7
30°-40°	623.9	10.2
40°-50°	780.6	12.8
50°-60°	928.5	15.2
60°-70°	1007.0	16.5
70°-80°	801.6	13.1
80°-90°	264.6	4.3
90°-100°	42.6	0.7
100°-110°	66.0	1.1
110°-120°	91.9	1.5
120°-130°	119.0	1.9
130°-140°	138.7	2.3
140°-150°	140.5	2.3
150°-160°	121.9	2.0
160°-170°	82.2	1.3
170°-180°	28.9	0.5
0°-90°	5273.0	86.4
0°-180°	6104.7	100.0

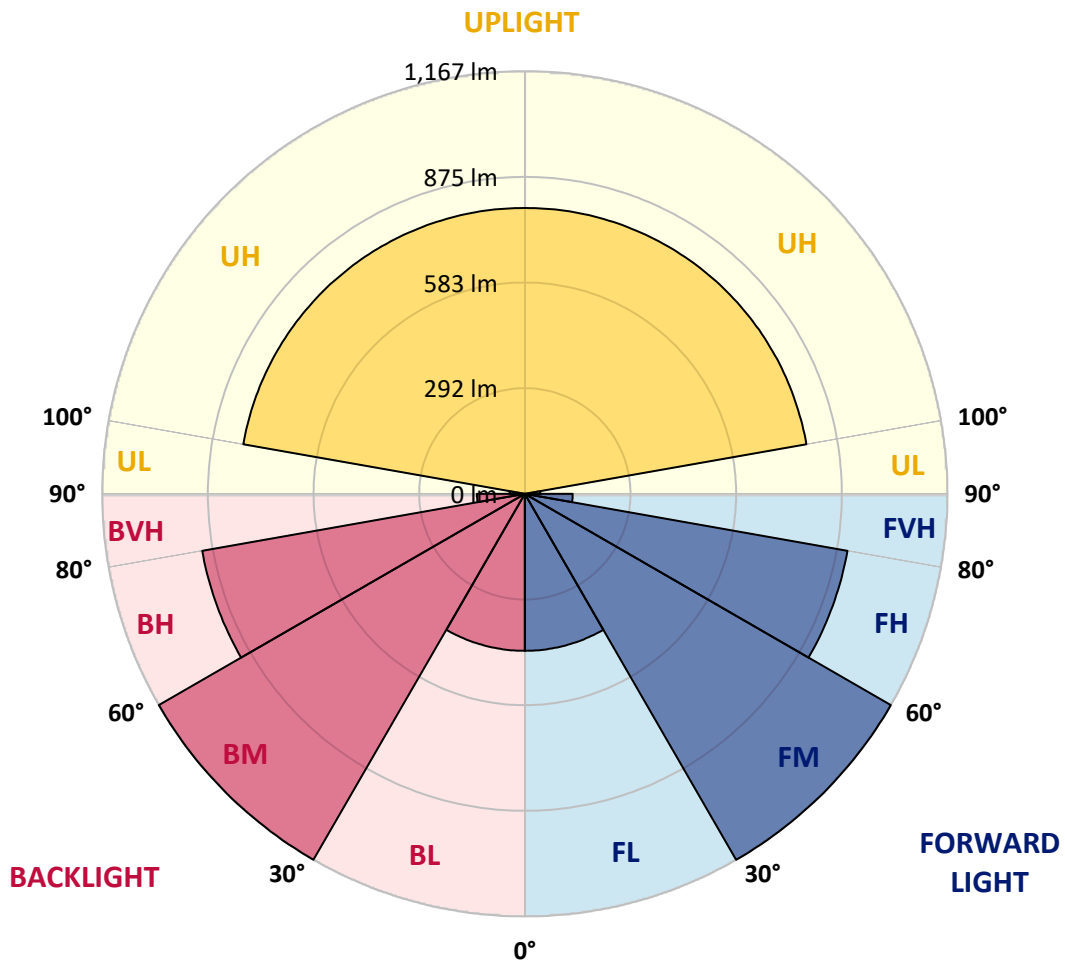


REPORT NUMBER: P821210
 CATALOG NUMBER: TT-D2-735-24VDC-MQ-UPL

LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:

Zone	Lumens	% Fixture	Zone Rating/Lumen Limit		
			B	U	G
FL (0°-30°)	433.4	7.1			
FM (30°-60°)	1166.5	19.1			
FH (60°-80°)	904.3	14.8			G1/1800
FVH (80°-90°)	132.3	2.2			G2/225
BL (0°-30°)	433.4	7.1	B1/500		
BM (30°-60°)	1166.5	19.1	B2/2500		
BH (60°-80°)	904.3	14.8	B2/1000		G1/1800
BVH (80°-90°)	132.3	2.2			G2/225
UL (90°-100°)	42.6	0.7		U2/50	
UH (100°-180°)	789.1	12.9		U4/1000	

BUG Rating: B2-U4-G2
 Type V Short





REPORT NUMBER: P821210

CATALOG NUMBER: TT-D2-735-24VDC-MQ-UPL

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	1049.4	1049.4	1049.4	1049.4	1049.4	1049.4	1049.4	1049.4	1049.4	1049.4	1049.4
2.5°	1051.0	1050.2	1051.0	1050.2	1050.2	1049.4	1050.2	1050.2	1050.2	1050.2	1050.2
5°	1050.2	1049.4	1049.4	1050.2	1049.4	1049.4	1049.4	1049.4	1049.4	1049.4	1049.4
7.5°	1047.1	1047.1	1047.9	1047.1	1047.1	1047.1	1047.1	1047.1	1047.1	1047.9	1047.9
10°	1044.7	1043.9	1044.7	1044.7	1043.9	1044.7	1043.9	1044.7	1044.7	1044.7	1044.7
12.5°	1041.6	1040.8	1041.6	1041.6	1040.8	1040.0	1040.8	1040.8	1041.6	1041.6	1041.6
15°	1036.1	1036.1	1037.7	1036.9	1036.9	1036.1	1037.7	1036.9	1036.1	1036.9	1036.9
17.5°	1032.2	1032.2	1033.7	1035.3	1035.3	1035.3	1035.3	1034.5	1033.0	1033.7	1032.2
20°	1033.0	1033.7	1034.5	1036.9	1038.4	1039.2	1039.2	1036.9	1034.5	1035.3	1034.5
22.5°	1030.6	1029.8	1030.6	1032.2	1034.5	1034.5	1034.5	1031.4	1030.6	1029.8	1029.8
25°	1021.2	1021.2	1022.8	1024.3	1025.9	1025.1	1025.9	1024.3	1022.8	1021.2	1021.2
27.5°	1010.2	1010.2	1012.6	1014.2	1015.7	1015.7	1014.9	1013.4	1012.6	1011.0	1010.2
30°	999.3	999.3	1001.6	1003.2	1005.5	1004.7	1004.7	1002.4	1000.0	998.5	998.5
32.5°	987.5	986.7	989.1	993.0	996.1	996.1	996.1	991.4	988.3	986.7	985.9
35°	977.3	977.3	980.5	987.5	991.4	991.4	989.9	986.7	979.7	977.3	977.3
37.5°	974.2	976.5	985.2	995.3	1003.2	1004.7	1002.4	993.8	984.4	977.3	975.0
40°	984.4	986.7	997.7	1014.2	1025.9	1028.3	1025.9	1013.4	996.9	985.9	985.2
42.5°	985.9	987.5	1000.8	1019.6	1030.6	1034.5	1030.6	1018.1	1000.0	986.7	985.9
45°	980.5	981.2	996.9	1016.5	1029.8	1034.5	1029.8	1014.9	996.1	981.2	980.5
47.5°	973.4	975.0	992.2	1012.6	1029.0	1032.2	1028.3	1011.8	990.6	975.8	973.4
50°	967.9	972.6	988.3	1011.0	1030.6	1040.0	1030.6	1008.7	987.5	971.0	967.9
52.5°	971.0	972.6	993.0	1025.1	1051.8	1055.7	1051.0	1025.1	991.4	972.6	970.3
55°	980.5	987.5	1009.5	1055.7	1080.0	1087.0	1076.9	1054.1	1010.2	987.5	980.5
57.5°	993.0	995.3	1026.7	1067.4	1103.5	1124.7	1104.3	1066.7	1029.0	993.8	992.2
60°	982.8	975.8	1014.9	1062.7	1111.3	1120.0	1108.2	1063.5	1013.4	975.0	982.0
62.5°	955.4	960.1	992.2	1058.0	1091.7	1101.1	1088.6	1058.0	990.6	964.0	953.0
65°	933.4	961.6	996.9	1043.9	1098.0	1124.7	1098.8	1042.4	998.5	956.9	931.1
67.5°	902.9	908.3	960.9	1018.9	1067.4	1080.8	1066.7	1019.6	956.2	904.4	908.3
70°	851.1	843.3	896.6	964.0	1010.2	1031.4	1011.8	960.9	894.2	841.7	848.8
72.5°	765.7	770.4	819.8	891.1	938.9	959.3	939.7	885.6	818.2	775.1	770.4
75°	676.4	681.9	729.7	794.7	843.3	851.9	846.4	790.8	731.2	681.1	676.4
77.5°	574.5	580.0	619.2	690.5	719.5	732.8	721.0	694.4	617.6	579.2	572.9
80°	461.6	460.1	494.5	555.7	591.7	606.6	591.7	557.2	493.0	463.2	453.0
82.5°	330.0	331.5	363.7	406.0	440.5	445.2	438.1	409.9	360.5	335.4	321.3
85°	183.4	190.4	214.0	245.3	268.0	275.9	264.1	237.5	213.2	193.6	187.3
87.5°	43.9	47.8	55.6	70.5	79.2	87.0	79.2	73.7	52.5	47.8	43.9
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: P821210
 CATALOG NUMBER: TT-D2-735-24VDC-MQ-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	167.6	168.6	168.6	168.6	168.6	168.1
135°	179.4	179.4	179.4	179.4	179.4	179.4	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)