

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: P21003

Luminaire Tested: **TRR-50-LED-E1-2-XX-2L**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-79-08  
Report Number: P21003  
Test Lab: INNOVATION CENTER P2  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: MCGRAW-EDISON  
Catalog Number: TRR-50-LED-E1-2-XX-2L  
Description: TRADITIONARE LED POST TOP FIXTURE - TYPE II DISTRIBUTION WITH BI-LEVEL SWITCHING  
Light Source: -  
Ballast/Driver: -

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 1382.4 lumens  
Efficiency: N/A  
Efficacy: 47.3 lumens/watt  
Luminous Opening: Rectangular w/ Sides (W: 0.83' x L: 0.83' x H: 1')  
IES Classification: Type IV - V Long - Non-Cutoff  
BUG Rating: B1 - U3 - G2

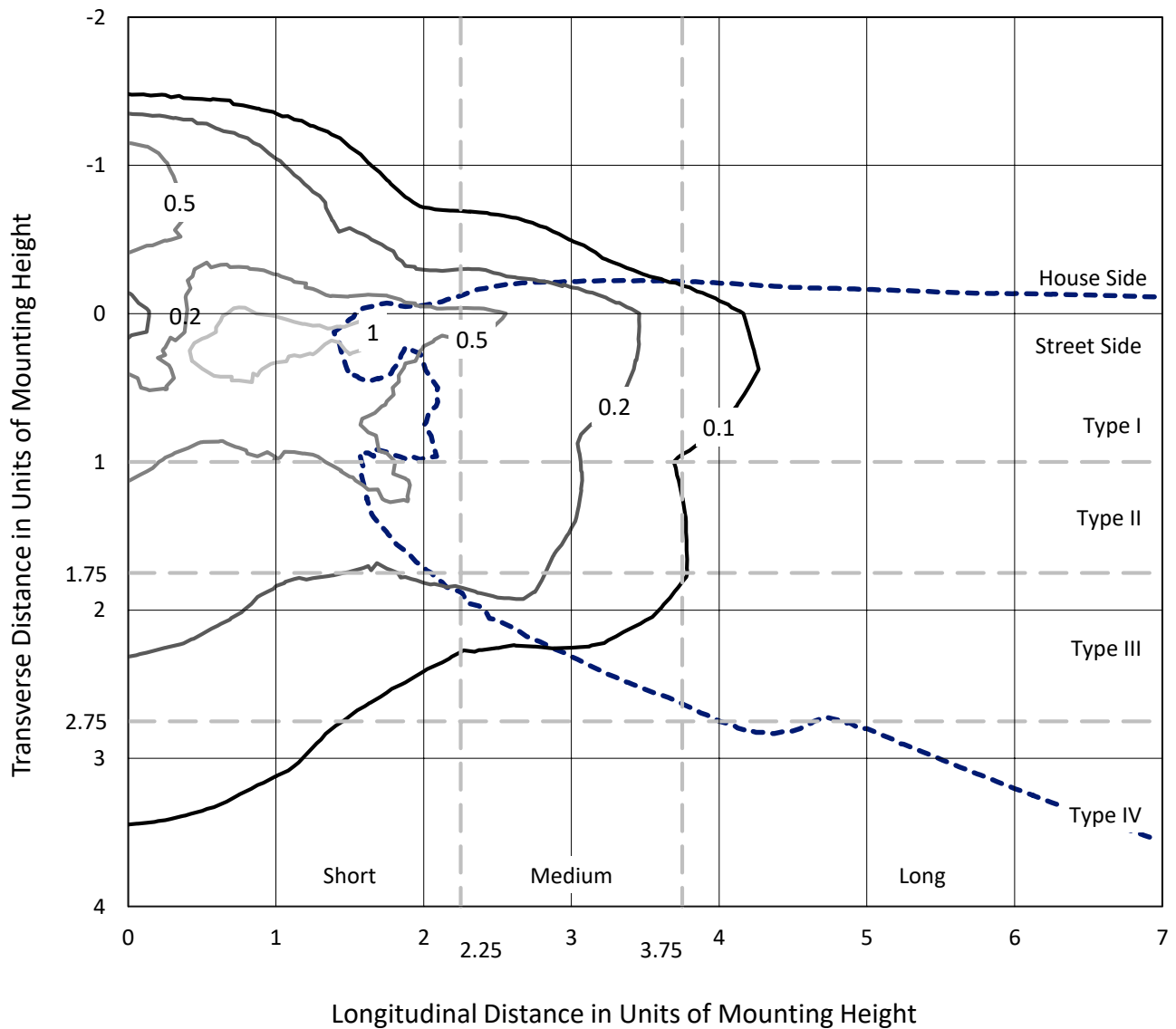
Input Watts (W): 29.2  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Iso-Footcandle Lines of Horizontal Illumination

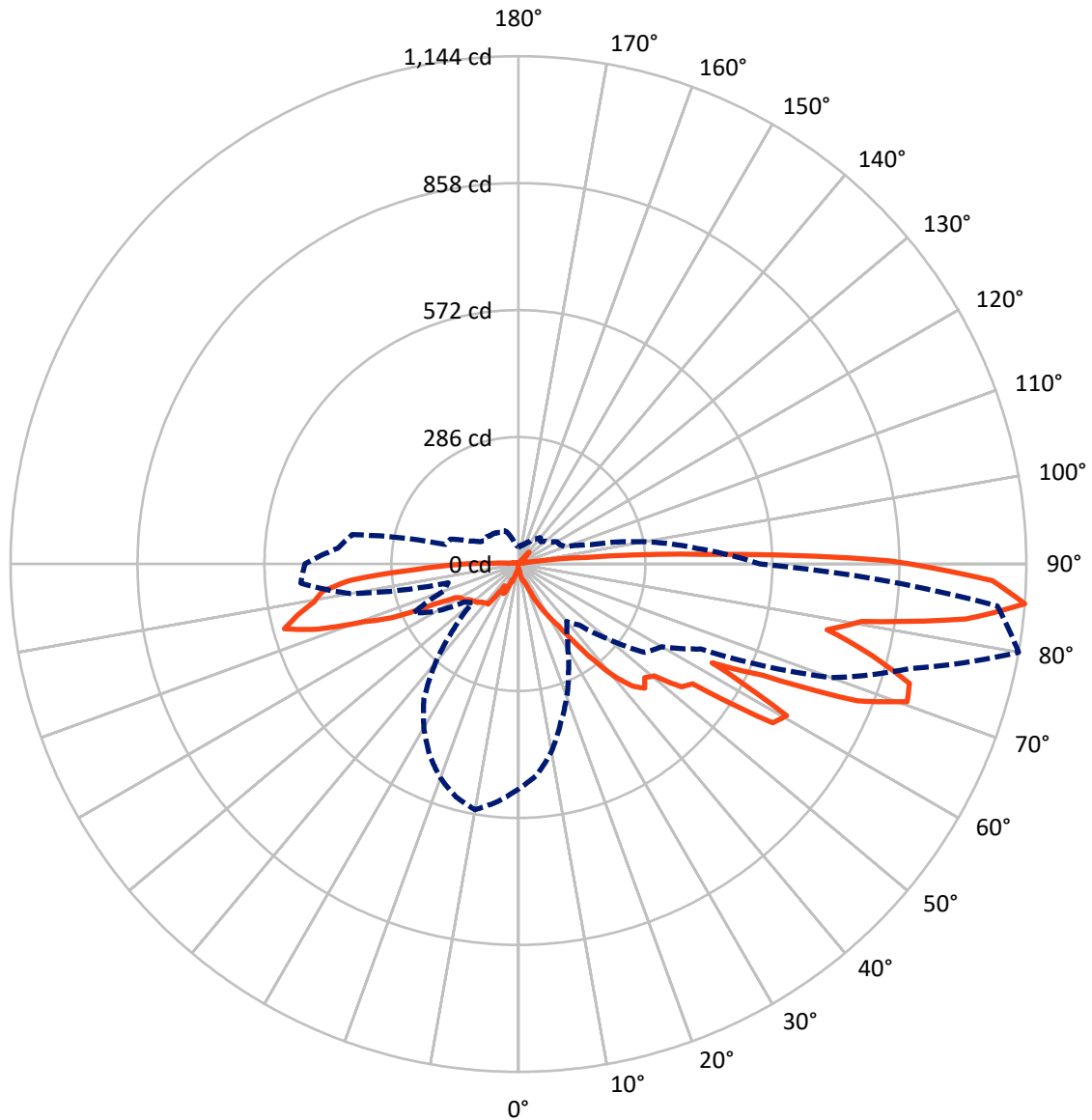
× Max cd  
 - - - 1/2 Max cd



Based on 10 foot mounting height. Maximum calculated value = 1.5 fc  
 Type IV - V Long - Non-Cutoff

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### Luminous Intensity Polar Plot



— Vertical Plane Through 80-Deg Lateral      - - - Horizontal Cone Through 85-Deg Vertical

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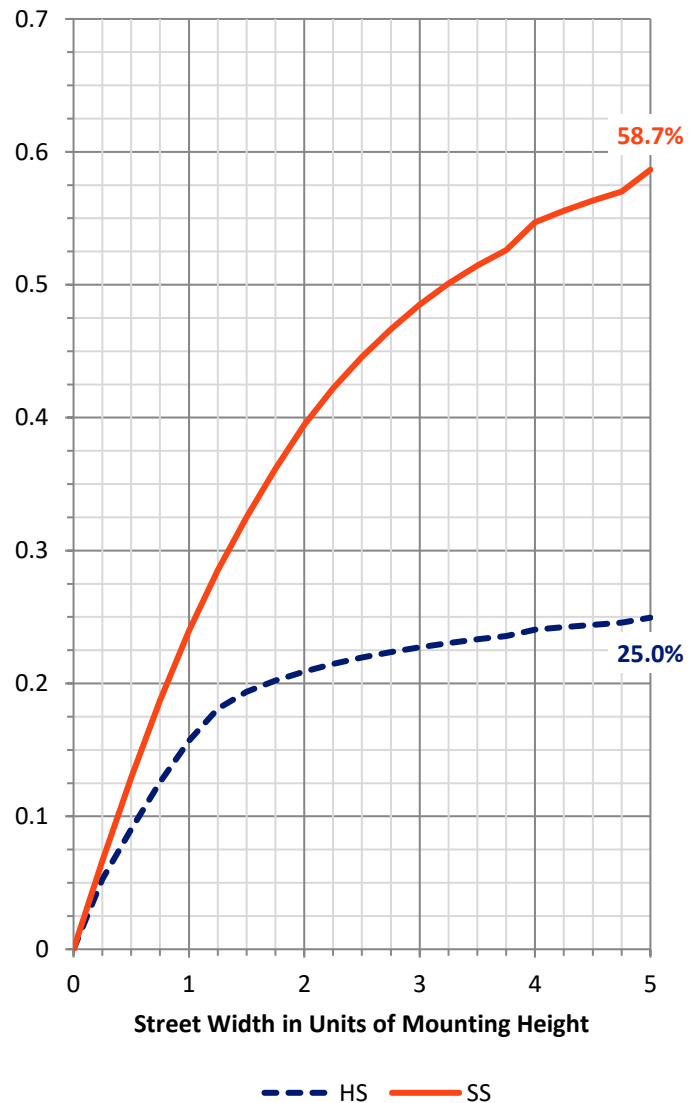
**FLUX DISTRIBUTION:**

		Downward	Upward	Total
<b>House Side</b>	Lumens	368.5	48.0	416.5
	% Fixture	26.7	3.5	30.1
<b>Street Side</b>	Lumens	909.9	56.0	966.0
	% Fixture	65.8	4.1	69.9
<b>Total</b>	Lumens	1278.4	104.0	1382.4
	% Fixture	92.5	7.5	100.0

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	1.5	0.1
10°-20°	9.8	0.7
20°-30°	30.3	2.2
30°-40°	74.9	5.4
40°-50°	120.9	8.7
50°-60°	160.6	11.6
60°-70°	245.5	17.8
70°-80°	360.1	26.0
80°-90°	274.8	19.9
90°-100°	68.5	5.0
100°-110°	16.8	1.2
110°-120°	11.2	0.8
120°-130°	4.8	0.3
130°-140°	2.5	0.2
140°-150°	0.2	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-90°	1278.4	92.5
0°-180°	1382.4	100.0

**Coefficient of Utilization**



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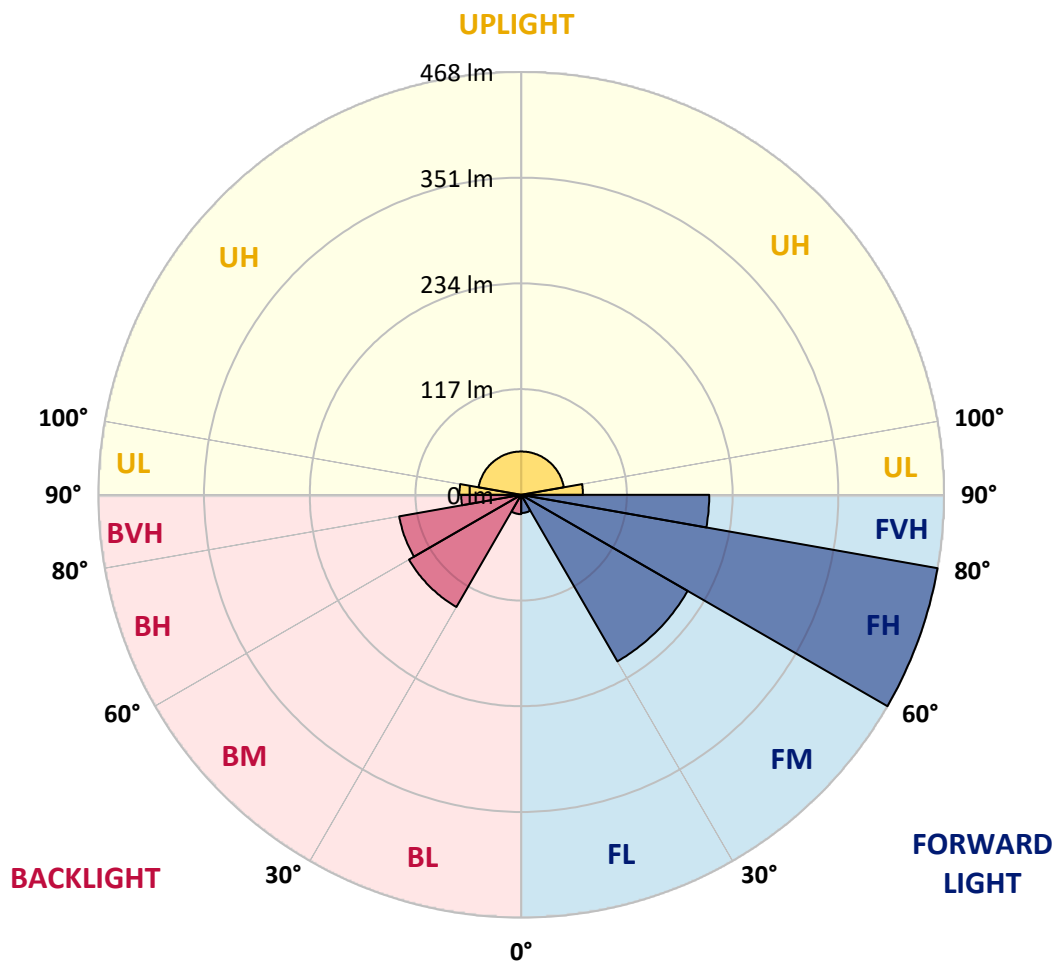
CATALOG NUMBER: TRR-50-LED-E1-2-XX-2L

**LUMINAIRE CLASSIFICATION SYSTEM LUMEN TABLE AND BUG RATING:**

Zone		Lumens	% Fixture	Zone Rating/Lumen Limit		
				B	U	G
FL	(0°-30°)	20.2	1.5			
FM	(30°-60°)	213.0	15.4			
FH	(60°-80°)	468.4	33.9			G0/660
FVH	(80°-90°)	208.3	15.1			G2/225
BL	(0°-30°)	21.4	1.6	B0/110		
BM	(30°-60°)	143.4	10.4	B0/220		
BH	(60°-80°)	137.2	9.9	B1/500		G1/500
BVH	(80°-90°)	66.5	4.8			G1/100
UL	(90°-100°)	68.5	5.0		U3/500	
UH	(100°-180°)	48.0	3.5		U2/50	

**BUG Rating: B1-U3-G2**

Type IV V Long





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**CANDELA DISTRIBUTION (FULL):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
0°	11	11	11	11	11	11	11	11	11	11	11
2.5°	18	17	16	13	10	8	7	7	7	7	8
5°	18	16	15	12	11	11	11	11	11	10	9
7.5°	18	17	16	14	13	13	14	15	16	17	17
10°	16	15	14	12	12	13	13	14	16	21	26
12.5°	18	18	16	14	14	16	16	17	21	26	29
15°	33	32	32	30	30	30	30	31	31	31	40
17.5°	46	47	49	49	53	55	55	52	48	47	56
20°	61	62	66	62	68	71	69	69	68	67	67
22.5°	53	53	53	54	51	51	53	58	66	69	71
25°	59	56	52	48	45	44	47	56	67	80	93
27.5°	86	83	77	69	63	59	58	60	73	101	130
30°	111	109	102	92	84	80	81	81	83	95	130
32.5°	130	126	120	110	102	100	100	101	102	107	123
35°	136	134	130	121	114	113	113	118	118	120	120
37.5°	140	137	135	125	121	123	126	129	130	129	134
40°	149	146	142	131	127	135	146	138	135	141	149
42.5°	156	152	148	138	134	138	150	155	146	149	158
45°	159	154	148	141	139	141	141	158	170	164	172
47.5°	165	158	151	144	142	145	140	150	180	193	192
50°	183	173	166	156	148	147	143	153	184	232	208
52.5°	192	182	171	156	150	149	151	167	196	252	239
55°	181	172	166	158	159	159	156	171	208	254	266
57.5°	224	211	203	186	176	163	157	168	208	250	289
60°	306	289	265	224	201	181	176	179	207	254	330
62.5°	336	321	306	277	263	242	224	214	241	293	410
65°	311	298	295	280	271	253	257	271	295	330	532
67.5°	325	315	306	283	270	261	279	298	322	342	565
70°	435	418	404	372	352	323	319	324	347	381	553
72.5°	479	465	447	415	397	359	348	349	358	383	509
75°	446	439	422	396	390	347	330	330	327	339	435
77.5°	423	422	406	382	379	342	317	310	290	305	382
80°	435	423	402	369	358	322	292	284	265	278	338
82.5°	471	448	417	375	343	301	265	244	226	241	302
85°	507	477	429	369	318	267	223	190	169	195	261
87.5°	427	396	349	290	239	190	151	126	110	146	210
90°	264	245	215	174	145	114	93	80	74	104	166
92.5°	149	140	122	98	81	65	53	46	49	66	114
95°	76	71	62	49	39	32	27	27	30	39	68
97.5°	14	13	13	12	12	14	15	18	20	24	39
100°	8	7	6	6	7	8	10	14	15	17	24
102.5°	7	6	5	4	5	6	8	12	13	15	17
105°	8	6	5	3	4	5	7	11	13	16	16
107.5°	7	5	4	2	2	3	7	11	17	18	16
110°	5	4	2	0	1	2	7	13	27	30	22



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**CANDELA DISTRIBUTION (continued):**

	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°
112.5°	5	3	1	0	0	2	5	10	23	34	29
115°	4	3	1	0	0	1	5	7	17	25	25
117.5°	4	3	1	0	0	1	4	6	11	18	25
120°	4	3	1	0	0	0	3	4	8	13	23
122.5°	3	2	0	0	0	0	1	2	5	9	17
125°	2	1	0	0	0	0	0	0	2	6	10
127.5°	1	0	0	0	0	0	0	0	0	3	5
130°	1	0	0	0	0	0	0	0	0	0	1
132.5°	2	1	0	0	0	0	0	0	0	0	0
135°	11	9	6	2	0	0	0	0	0	0	0
137.5°	8	6	4	0	0	0	0	0	0	0	0
140°	4	2	0	0	0	0	0	0	0	0	0
142.5°	0	0	0	0	0	0	0	0	0	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0





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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
0°	11	11	11	11	11	11	11	11	11	11	11
2.5°	8	9	10	11	12	14	15	16	17	18	18
5°	9	10	11	12	12	13	15	17	18	19	20
7.5°	16	15	14	14	15	15	17	18	19	20	22
10°	29	29	24	23	23	24	25	26	27	27	28
12.5°	36	33	32	34	34	34	34	35	36	37	37
15°	40	37	38	38	38	40	42	43	43	44	43
17.5°	49	48	56	45	41	42	42	43	43	44	44
20°	53	62	66	51	49	49	50	50	51	50	49
22.5°	70	85	84	65	65	67	67	68	68	66	64
25°	120	131	109	92	91	93	95	96	94	91	87
27.5°	172	180	164	135	116	117	119	120	115	111	103
30°	200	212	229	199	157	142	141	142	134	129	117
32.5°	181	241	276	256	211	166	160	161	148	141	124
35°	159	243	281	274	268	214	186	189	172	156	138
37.5°	165	239	294	291	309	274	219	216	190	170	152
40°	187	236	278	285	323	332	253	230	207	186	153
42.5°	206	244	257	303	335	376	300	237	220	202	152
45°	228	263	250	317	364	399	365	267	243	201	145
47.5°	251	278	227	267	335	383	422	289	245	193	141
50°	269	296	239	287	374	396	437	266	208	171	137
52.5°	287	307	239	305	435	460	507	333	242	201	150
55°	311	348	263	308	420	476	542	396	242	193	145
57.5°	345	386	349	429	573	675	744	595	293	228	175
60°	430	515	392	449	556	694	734	748	339	244	174
62.5°	534	603	407	458	423	490	522	629	254	184	147
65°	694	676	416	562	497	604	634	732	317	221	167
67.5°	851	824	604	750	659	823	854	985	414	280	199
70°	924	911	813	832	731	929	966	1091	459	313	219
72.5°	923	845	870	814	710	921	962	1004	434	310	221
75°	684	764	796	746	622	822	912	873	382	281	198
77.5°	551	738	789	654	548	711	832	725	321	241	165
80°	498	504	801	627	596	784	894	640	302	223	148
82.5°	425	422	646	741	775	1016	1024	574	353	254	157
85°	347	373	453	749	911	1144	1083	544	404	289	167
87.5°	279	299	356	503	954	1068	884	501	399	289	161
90°	209	223	249	370	794	836	523	414	345	263	137
92.5°	152	162	161	249	527	417	262	256	222	183	98
95°	104	116	112	200	307	154	149	161	145	126	74
97.5°	63	73	59	123	78	62	69	82	81	78	57
100°	43	52	29	19	14	15	18	21	22	20	23
102.5°	28	35	20	14	10	11	13	16	14	14	14
105°	20	21	17	13	8	9	11	16	14	13	12
107.5°	16	17	15	13	10	10	12	20	20	19	13
110°	19	18	15	14	13	14	16	26	29	25	18



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**CANDELA DISTRIBUTION (continued):**

	55°	60°	65°	70°	75°	80°	85°	90°	95°	100°	105°
112.5°	21	16	12	12	13	17	18	27	32	27	23
115°	20	14	8	8	10	15	17	22	27	25	19
117.5°	23	12	6	6	9	13	17	19	20	19	14
120°	23	10	5	5	7	11	15	17	17	14	10
122.5°	15	8	3	3	6	10	14	14	14	11	8
125°	8	5	2	2	4	7	11	12	11	9	5
127.5°	3	2	0	1	3	5	8	9	9	7	4
130°	1	0	0	1	4	5	6	7	6	4	2
132.5°	0	0	0	3	6	6	6	5	5	3	2
135°	4	7	9	16	21	25	19	12	9	7	4
137.5°	0	1	12	27	34	36	30	20	16	13	9
140°	0	0	4	11	15	18	18	13	8	6	3
142.5°	0	0	0	0	0	1	4	4	1	0	0
145°	0	0	0	0	0	0	0	0	0	0	0
147.5°	0	0	0	0	0	0	0	0	0	0	0
150°	0	0	0	0	0	0	0	0	0	0	0
152.5°	0	0	0	0	0	0	0	0	0	0	0
155°	0	0	0	0	0	0	0	0	0	0	0
157.5°	0	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0	0



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**CANDELA DISTRIBUTION (continued):**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°
0°	11	11	11	11	11	11	11	11	11	11	11
2.5°	19	18	17	16	15	14	13	12	12	13	14
5°	20	21	21	22	21	20	19	18	18	17	17
7.5°	23	23	24	25	25	25	23	22	20	18	18
10°	28	28	29	30	29	28	26	24	22	20	19
12.5°	37	37	35	33	32	33	32	30	30	30	28
15°	42	41	43	43	42	41	42	42	41	41	42
17.5°	44	45	48	52	52	51	48	49	50	48	50
20°	49	48	47	47	47	48	50	53	53	50	51
22.5°	62	59	56	53	52	50	47	48	46	44	45
25°	82	74	65	58	53	50	48	49	52	53	55
27.5°	92	81	72	64	59	57	56	59	64	69	74
30°	104	91	80	72	68	68	69	73	77	82	89
32.5°	111	95	84	78	75	76	79	83	87	94	101
35°	118	97	85	77	75	78	83	88	93	99	108
37.5°	122	97	82	75	75	80	88	92	96	102	111
40°	112	88	80	78	79	84	91	97	103	110	120
42.5°	111	87	78	80	83	87	95	102	108	116	127
45°	113	91	81	84	88	92	99	106	112	122	134
47.5°	106	91	89	93	98	99	103	110	117	126	139
50°	112	98	102	111	113	108	107	117	126	137	147
52.5°	114	103	120	127	121	115	117	125	125	126	124
55°	111	112	124	118	112	112	110	109	98	84	72
57.5°	134	124	121	110	104	100	90	80	70	63	57
60°	135	124	117	105	96	87	75	68	62	57	52
62.5°	125	115	104	96	91	81	72	65	61	57	53
65°	126	104	93	89	85	80	73	68	65	60	56
67.5°	135	108	95	87	86	80	74	71	70	64	58
70°	146	114	100	91	92	84	76	74	74	66	59
72.5°	149	117	101	93	95	86	77	74	74	63	59
75°	137	110	96	91	92	82	74	75	73	63	63
77.5°	118	102	92	88	88	80	74	77	70	67	64
80°	112	102	95	89	88	79	74	78	69	70	62
82.5°	114	104	99	90	86	76	77	75	70	65	56
85°	113	103	100	86	80	71	77	69	62	55	50
87.5°	102	92	89	72	69	65	70	60	52	47	44
90°	86	72	68	55	55	55	60	50	44	40	39
92.5°	62	59	49	41	43	43	47	39	37	35	34
95°	45	44	36	32	33	33	33	32	32	32	31
97.5°	29	25	24	25	27	28	28	29	29	29	29
100°	17	18	20	21	23	25	26	26	27	27	28
102.5°	16	15	17	18	20	22	23	24	25	26	26
105°	12	13	14	16	18	20	21	22	23	24	24
107.5°	11	12	13	15	17	18	19	21	22	22	23
110°	13	12	12	14	15	16	18	19	20	21	21



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REPORT N  
 CATALOG

**CANDELA DISTRIBUTION (continued):**

**CANDELA**

	110°	115°	120°	125°	130°	135°	140°	145°	150°	155°	160°	
112.5°	16	12	12	13	14	15	16	18	19	19	20	0°
115°	17	12	11	11	13	14	15	16	17	18	19	2.5°
117.5°	12	11	10	10	11	12	14	15	16	16	17	5°
120°	8	9	10	10	10	11	12	13	14	14	15	7.5°
122.5°	5	7	8	8	9	10	11	11	12	12	13	10°
125°	3	4	5	6	7	8	9	9	10	10	11	12.5°
127.5°	2	1	3	4	5	6	7	7	8	8	9	15°
130°	1	0	1	2	3	4	5	5	6	6	7	17.5°
132.5°	0	0	0	0	1	2	2	3	3	4	5	20°
135°	1	0	0	0	0	0	0	0	1	2	3	22.5°
137.5°	3	0	0	0	0	0	0	0	0	0	1	25°
140°	0	0	0	0	0	0	0	0	0	0	0	27.5°
142.5°	0	0	0	0	0	0	0	0	0	0	0	30°
145°	0	0	0	0	0	0	0	0	0	0	0	32.5°
147.5°	0	0	0	0	0	0	0	0	0	0	0	35°
150°	0	0	0	0	0	0	0	0	0	0	0	37.5°
152.5°	0	0	0	0	0	0	0	0	0	0	0	40°
155°	0	0	0	0	0	0	0	0	0	0	0	42.5°
157.5°	0	0	0	0	0	0	0	0	0	0	0	45°
160°	0	0	0	0	0	0	0	0	0	0	0	47.5°
162.5°	0	0	0	0	0	0	0	0	0	0	0	50°
165°	0	0	0	0	0	0	0	0	0	0	0	52.5°
167.5°	0	0	0	0	0	0	0	0	0	0	0	55°
170°	0	0	0	0	0	0	0	0	0	0	0	57.5°
172.5°	0	0	0	0	0	0	0	0	0	0	0	60°
175°	0	0	0	0	0	0	0	0	0	0	0	62.5°
177.5°	0	0	0	0	0	0	0	0	0	0	0	65°
180°	0	0	0	0	0	0	0	0	0	0	0	67.5°
												70°
												72.5°
												75°
												77.5°
												80°
												82.5°
												85°
												87.5°
												90°
												92.5°
												95°
												97.5°
												100°
												102.5°
												105°
												107.5°
												110°

NUMBER: P21003  
 NUMBER: TRR-50-LED-E1-2-XX-2L

REPORT NUMBER: P  
 CATALOG NUMBER:

**DISTRIBUTION (continued):**

**CANDELA DISTRIBUTION**

165°	170°	175°	180°	185°	190°	195°	200°	205°	210°	215°	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	
11	11	11	11	11	11	11	11	11	11	11	112.5°	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	20
14	14	14	13	13	12	13	13	15	15	14	115°	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	19	
17	17	17	17	16	15	15	15	17	17	17	117.5°	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	17		
18	19	19	19	18	17	17	16	16	16	15	120°	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	16			
19	20	20	20	20	20	20	20	20	19	16	122.5°	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	14				
27	29	30	30	30	29	29	28	28	26	23	125°	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	12					
41	44	43	42	41	41	40	40	41	40	39	127.5°	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	10						
50	53	53	53	52	51	50	50	48	45	45	130°	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	8							
52	54	55	55	56	54	55	55	55	54	51	132.5°	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	6								
47	50	52	55	54	52	52	51	51	50	49	135°	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	4									
59	63	67	71	69	67	64	62	60	57	50	137.5°	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	2										
80	89	94	98	97	94	90	86	80	72	65	140°	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	0											
97	106	114	120	121	120	116	110	105	96	88	142.5°	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	0												
110	119	128	135	139	139	136	132	127	117	109	145°	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	0													
119	127	135	143	148	149	147	143	140	134	124	147.5°	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	0														
123	135	144	153	159	159	156	151	146	141	133	150°	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	0															
132	146	157	164	172	170	169	165	158	150	140	152.5°	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	0																
139	152	162	169	179	178	179	177	172	164	150	155°	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	0																	
147	162	173	180	188	189	191	186	179	172	160	157.5°	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	0																		
153	169	180	188	196	197	200	196	192	183	170	160°	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	0																			
155	165	170	177	186	194	206	209	204	193	179	162.5°	165°	167.5°	170°	172.5°	175°	177.5°	180°	0																				
118	114	109	112	121	137	163	181	192	194	187	165°	167.5°	170°	172.5°	175°	177.5°	180°	0																					
64	61	57	57	59	66	83	101	128	154	171	167.5°	170°	172.5°	175°	177.5°	180°	0																						
52	50	47	47	48	51	59	69	80	95	114	170°	172.5°	175°	177.5°	180°	0																							
48	47	45	45	46	49	54	59	65	72	79	172.5°	175°	177.5°	180°	0																								
49	48	46	45	47	51	56	60	65	67	69	175°	177.5°	180°	0																									
52	50	47	47	51	55	60	63	67	69	71	177.5°	180°	0																										
54	53	49	49	57	68	67	67	70	73	73	180°	0																											
56	54	48	45	56	70	86	75	77	80	81	0																												
60	57	50	45	59	77	102	111	89	90	91	0																												
61	56	49	45	60	94	134	156	106	100	98	0																												
57	51	44	41	54	99	161	186	138	109	101	0																												
53	47	43	41	49	82	162	193	160	112	101	0																												
49	44	42	41	45	62	110	141	131	101	96	0																												
45	43	40	39	42	48	62	77	84	82	86	0																												
41	39	38	37	38	42	50	59	66	71	77	0																												
36	35	34	33	34	38	44	51	58	62	68	0																												
33	33	32	31	32	35	39	44	50	53	55	0																												
31	31	30	30	30	32	36	39	43	44	44	0																												
29	30	29	29	29	30	33	35	37	38	38	0																												
28	29	28	28	28	28	30	31	33	34	34	0																												
26	27	27	27	27	27	28	29	30	31	30	0																												
25	26	26	26	26	25	26	27	28	28	27	0																												
23	24	25	25	24	24	25	26	26	26	24	0																												
22	23	24	24	23	22	23	24	24	23	22	0																												

'21003  
 TRR-50-LED-E1-2-XX-2L

REPORT NUMBER: P21003  
 CATALOG NUMBER: TRR-50-LE

**TION (continued):**

**CANDELA DISTRIBUTION (con**

170°	175°	180°	185°	190°	195°	200°	205°	210°	215°		220°	225°
22	23	23	22	21	21	23	23	22	20	0°	11	11
21	21	22	21	20	20	20	21	20	18	2.5°	14	14
19	20	20	20	18	18	18	19	17	15	5°	17	17
18	18	19	18	17	16	16	16	15	14	7.5°	15	15
16	17	17	17	15	15	14	14	14	12	10°	15	14
14	15	15	15	13	13	12	12	12	10	12.5°	20	21
12	13	13	13	11	11	10	10	10	8	15°	36	35
10	11	11	11	10	9	8	8	8	6	17.5°	48	47
8	8	9	9	8	7	6	6	5	4	20°	48	49
6	6	7	6	5	5	4	4	3	1	22.5°	48	47
3	4	4	4	3	2	2	2	1	0	25°	47	46
1	2	2	2	1	0	0	0	0	0	27.5°	58	53
0	0	0	0	0	0	0	0	0	0	30°	78	67
0	0	0	0	0	0	0	0	0	0	32.5°	98	87
0	0	0	0	0	0	0	0	0	0	35°	114	103
0	0	0	0	0	0	0	0	0	0	37.5°	122	111
0	0	0	0	0	0	0	0	0	0	40°	127	119
0	0	0	0	0	0	0	0	0	0	42.5°	135	126
0	0	0	0	0	0	0	0	0	0	45°	146	135
0	0	0	0	0	0	0	0	0	0	47.5°	155	143
0	0	0	0	0	0	0	0	0	0	50°	164	151
0	0	0	0	0	0	0	0	0	0	52.5°	171	158
0	0	0	0	0	0	0	0	0	0	55°	171	163
0	0	0	0	0	0	0	0	0	0	57.5°	135	151
0	0	0	0	0	0	0	0	0	0	60°	85	106
0	0	0	0	0	0	0	0	0	0	62.5°	69	73
0	0	0	0	0	0	0	0	0	0	65°	71	70
0	0	0	0	0	0	0	0	0	0	67.5°	75	73
										70°	82	83
										72.5°	90	94
										75°	96	101
										77.5°	98	102
										80°	97	101
										82.5°	95	96
										85°	89	90
										87.5°	83	84
										90°	72	73
										92.5°	57	58
										95°	44	45
										97.5°	38	38
										100°	34	33
										102.5°	30	28
										105°	26	24
										107.5°	23	21
										110°	20	19



REPORT NUMBER: P21003

CATALOG NUMBER: TRR-50-LED-E1-2-XX

TRR-50-LED-E1-2-XX-2L

Continued):									CANDELA DISTRIBUTION (continued):			
230°	235°	240°	245°	250°	255°	260°	265°	270°	112.5°	220°	225°	230°
11	11	11	11	11	11	11	11	11	112.5°	17	15	13
14	13	12	11	10	9	8	8	7	115°	15	13	11
16	16	16	16	15	14	12	10	9	117.5°	14	11	9
16	16	17	18	18	18	18	17	15	120°	12	10	8
14	15	15	17	18	19	19	19	18	122.5°	10	8	7
19	22	23	20	19	20	20	20	20	125°	9	7	5
32	33	33	34	31	28	22	20	19	127.5°	7	5	3
44	43	42	43	44	44	32	23	20	130°	5	3	1
49	48	47	46	46	48	43	29	20	132.5°	2	1	0
48	45	43	42	43	41	38	27	21	135°	0	0	0
44	47	53	56	61	65	69	69	38	137.5°	0	0	0
51	46	57	61	64	70	75	72	65	140°	0	0	0
59	53	45	58	65	70	74	82	80	142.5°	0	0	0
75	63	51	58	56	58	58	62	72	145°	0	0	0
88	73	61	52	66	76	80	86	85	147.5°	0	0	0
97	85	73	61	90	103	113	124	126	150°	0	0	0
106	93	82	69	106	107	114	133	131	152.5°	0	0	0
110	95	88	75	97	117	117	128	133	155°	0	0	0
115	98	89	78	78	117	120	133	139	157.5°	0	0	0
122	101	90	83	72	115	127	140	156	160°	0	0	0
127	105	91	85	75	117	129	150	158	162.5°	0	0	0
133	109	93	87	79	124	134	157	157	165°	0	0	0
138	112	95	87	80	133	138	162	163	167.5°	0	0	0
138	114	96	89	83	133	148	174	172	170°	0	0	0
114	109	97	89	83	122	150	182	180	172.5°	0	0	0
79	85	86	85	86	111	161	180	174	175°	0	0	0
68	68	70	80	97	124	210	240	244	177.5°	0	0	0
73	73	74	87	121	152	309	359	350	180°	0	0	0
83	88	91	105	143	180	372	411	389				
93	102	107	126	168	214	475	506	486				
100	110	116	141	199	245	547	569	571				
102	111	118	145	195	233	510	540	565				
105	113	118	146	188	219	468	504	564				
104	106	115	146	189	211	446	482	596				
95	92	100	123	163	170	380	408	481				
83	77	77	84	109	103	226	245	256				
69	60	56	58	67	69	137	147	161				
52	44	39	35	34	33	54	45	33				
43	37	32	26	23	21	22	18	17				
35	31	27	23	19	17	17	15	14				
30	26	22	19	16	14	14	13	12				
25	22	18	15	13	13	12	11	11				
21	18	15	13	11	11	11	9	10				
18	15	13	11	9	8	9	10	9				
16	13	10	9	7	5	5	6	6				



REPORT NUMBER: P21003

CATALOG NUMBER: TRR-50-LED-E1-2-XX-2L

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**CANDELA DISTRIBUTION (continued):**

235°	240°	245°	250°	255°	260°	265°	270°		275°	280°	285°	290°
11	8	6	5	3	3	4	4	0°	11	11	11	11
9	7	5	3	2	2	2	3	2.5°	6	5	4	3
8	5	3	2	1	1	2	2	5°	7	6	6	5
6	4	2	1	0	0	1	1	7.5°	13	13	11	10
5	3	1	0	0	0	1	1	10°	17	17	16	15
3	1	0	0	0	0	0	0	12.5°	19	19	18	16
1	0	0	0	0	0	0	0	15°	19	18	16	14
0	0	0	0	0	0	0	0	17.5°	18	17	15	14
0	0	0	0	0	0	0	0	20°	18	16	16	16
0	0	0	0	1	2	3	4	22.5°	19	18	18	19
0	0	0	0	2	3	4	5	25°	27	25	25	26
0	0	0	0	0	0	0	0	27.5°	36	29	28	30
0	0	0	0	0	0	0	0	30°	56	32	31	31
0	0	0	0	0	0	0	0	32.5°	53	32	29	29
0	0	0	0	0	0	0	0	35°	73	39	31	34
0	0	0	0	0	0	0	0	37.5°	116	58	42	50
0	0	0	0	0	0	0	0	40°	137	80	53	54
0	0	0	0	0	0	0	0	42.5°	146	108	65	53
0	0	0	0	0	0	0	0	45°	151	140	68	51
0	0	0	0	0	0	0	0	47.5°	157	171	71	55
0	0	0	0	0	0	0	0	50°	159	190	87	59
0	0	0	0	0	0	0	0	52.5°	162	196	112	63
0	0	0	0	0	0	0	0	55°	172	203	136	69
0	0	0	0	0	0	0	0	57.5°	190	199	153	76
0	0	0	0	0	0	0	0	60°	194	205	174	86
0	0	0	0	0	0	0	0	62.5°	206	211	203	102
0	0	0	0	0	0	0	0	65°	291	274	257	153
0	0	0	0	0	0	0	0	67.5°	421	395	364	267
								70°	464	441	481	373
								72.5°	565	566	576	410
								75°	651	652	551	438
								77.5°	609	604	509	379
								80°	628	643	427	317
								82.5°	658	620	287	274
								85°	492	384	164	179
								87.5°	277	135	91	87
								90°	109	60	54	48
								92.5°	26	24	24	24
								95°	16	15	16	15
								97.5°	13	12	13	12
								100°	11	11	11	11
								102.5°	11	10	11	11
								105°	11	10	11	14
								107.5°	9	9	14	13
								110°	7	8	12	12





REPORT NUMBER: P21003  
 CATALOG NUMBER: TRR-50-LED-E1-2-XX-2L

**CANDELA DISTRIBUTION (continued):**

295°	300°	305°	310°	315°	320°	325°		275°	280°	285°	290°	295°
11	11	11	11	11	11	11	112.5°	5	6	6	7	6
3	3	3	3	3	5	7	115°	3	3	3	4	3
5	5	5	5	5	7	9	117.5°	2	2	2	3	2
9	9	9	9	9	9	10	120°	1	1	2	2	1
13	11	9	8	8	9	9	122.5°	0	0	1	2	1
13	11	9	7	7	8	9	125°	0	0	0	2	1
12	11	9	9	10	13	16	127.5°	0	0	0	0	0
12	12	14	17	21	25	28	130°	0	0	0	0	0
17	19	22	25	29	34	38	132.5°	0	0	0	0	0
21	24	28	31	34	38	41	135°	4	3	2	0	0
27	28	31	36	36	36	37	137.5°	5	5	4	1	0
30	32	36	38	39	40	47	140°	0	0	0	0	0
31	37	36	42	46	60	73	142.5°	0	0	0	0	0
35	34	41	54	72	96	105	145°	0	0	0	0	0
35	39	51	71	98	111	121	147.5°	0	0	0	0	0
46	53	74	104	117	119	122	150°	0	0	0	0	0
54	65	94	131	138	129	126	152.5°	0	0	0	0	0
58	83	127	129	146	138	136	155°	0	0	0	0	0
61	94	131	132	134	136	146	157.5°	0	0	0	0	0
71	130	120	145	135	145	157	160°	0	0	0	0	0
89	132	139	130	137	155	166	162.5°	0	0	0	0	0
101	141	139	139	145	168	175	165°	0	0	0	0	0
139	131	147	131	159	172	189	167.5°	0	0	0	0	0
148	144	129	138	166	185	205	170°	0	0	0	0	0
140	144	140	143	171	198	225	172.5°	0	0	0	0	0
150	148	141	164	193	242	282	175°	0	0	0	0	0
187	179	159	205	265	331	388	177.5°	0	0	0	0	0
246	246	234	296	390	429	470	180°	0	0	0	0	0
302	317	336	381	487	528	559						
374	380	385	417	533	606	666						
439	425	406	434	544	618	665						
414	398	389	417	523	599	635						
346	317	308	340	461	567	608						
328	272	219	233	336	445	536						
261	212	149	135	205	290	371						
152	124	88	70	99	152	210						
102	81	52	42	48	76	106						
35	32	29	27	28	37	55						
18	20	21	20	20	23	27						
14	16	17	16	16	17	19						
12	13	14	14	13	14	14						
10	11	11	11	11	11	11						
9	8	9	9	9	10	10						
9	8	8	7	8	8	9						
9	7	6	6	6	7	7						



REPORT NUMBER: P21003

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**CANDELA DISTRIBUTION (continued):**

300°	305°	310°	315°	320°	325°		330°	335°	340°	345°	350°	355°
4	4	4	4	4	5	0°	11	11	11	11	11	11
3	3	3	3	3	3	2.5°	9	10	14	21	24	20
2	2	2	2	3	3	5°	11	12	15	23	24	20
1	1	1	1	2	2	7.5°	11	13	16	23	24	20
0	0	0	0	1	1	10°	10	11	13	21	22	18
0	0	0	0	0	0	12.5°	10	11	14	22	24	19
0	0	0	0	0	0	15°	19	22	27	37	40	35
0	0	0	0	0	0	17.5°	32	35	38	48	50	47
0	0	0	0	0	0	20°	41	44	48	56	59	58
0	0	0	0	0	0	22.5°	43	44	47	54	56	53
0	0	0	0	0	0	25°	39	42	48	58	62	59
0	0	0	0	0	0	27.5°	51	57	65	80	86	86
0	0	0	0	0	0	30°	88	93	99	112	114	111
0	0	0	0	0	0	32.5°	112	115	122	136	141	132
0	0	0	0	0	0	35°	130	127	130	145	149	140
0	0	0	0	0	0	37.5°	128	129	132	148	154	145
0	0	0	0	0	0	40°	132	139	144	159	164	155
0	0	0	0	0	0	42.5°	142	149	154	167	169	161
0	0	0	0	0	0	45°	153	160	163	175	175	166
0	0	0	0	0	0	47.5°	164	171	179	190	185	172
0	0	0	0	0	0	50°	173	184	194	208	206	191
0	0	0	0	0	0	52.5°	192	199	202	211	210	200
0	0	0	0	0	0	55°	206	220	225	228	214	192
0	0	0	0	0	0	57.5°	214	226	251	259	253	231
0	0	0	0	0	0	60°	253	280	280	303	311	310
0	0	0	0	0	0	62.5°	337	378	391	392	374	346
0	0	0	0	0	0	65°	419	410	410	398	366	326
0	0	0	0	0	0	67.5°	456	428	404	383	359	336
						70°	531	547	544	517	483	452
						72.5°	655	633	616	577	538	499
						75°	648	639	622	562	512	468
						77.5°	628	639	602	538	488	442
						80°	611	626	586	547	507	460
						82.5°	556	574	555	554	544	500
						85°	426	474	513	543	562	537
						87.5°	262	318	366	411	441	441
						90°	137	178	214	251	270	272
						92.5°	71	92	116	143	153	151
						95°	32	40	52	71	79	78
						97.5°	18	16	17	23	22	16
						100°	13	12	12	17	16	10
						102.5°	11	10	11	16	16	9
						105°	10	9	10	16	16	10
						107.5°	8	8	9	15	15	9
						110°	6	6	7	13	13	8



REPORT NUMBER: P21003  
 CATALOG NUMBER: TRR-50-LED-E1-2-XX-2L

**CANDELA DISTRIBUTION (continued):**

360°		330°	335°	340°	345°	350°	355°	360°
11	112.5°	4	4	5	11	12	7	5
18	115°	3	3	4	10	11	6	4
18	117.5°	2	2	3	10	11	6	4
18	120°	2	1	2	10	11	6	4
16	122.5°	1	0	1	9	10	5	3
18	125°	0	0	0	8	9	4	2
33	127.5°	0	0	0	7	8	3	1
46	130°	0	0	0	6	8	3	1
61	132.5°	0	0	0	7	8	4	2
53	135°	1	4	7	16	17	12	11
59	137.5°	0	1	4	13	15	10	8
86	140°	0	0	1	8	10	5	4
111	142.5°	0	0	0	3	5	0	0
130	145°	0	0	0	1	2	0	0
136	147.5°	0	0	0	0	1	0	0
140	150°	0	0	0	0	0	0	0
149	152.5°	0	0	0	0	0	0	0
156	155°	0	0	0	0	0	0	0
159	157.5°	0	0	0	0	0	0	0
165	160°	0	0	0	0	0	0	0
183	162.5°	0	0	0	0	0	0	0
192	165°	0	0	0	0	0	0	0
181	167.5°	0	0	0	0	0	0	0
224	170°	0	0	0	0	0	0	0
306	172.5°	0	0	0	0	0	0	0
336	175°	0	0	0	0	0	0	0
311	177.5°	0	0	0	0	0	0	0
325	180°	0	0	0	0	0	0	0
435								
479								
446								
423								
435								
471								
507								
427								
264								
149								
76								
14								
8								
7								
8								
7								
5								

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Cooper Lighting Solutions Photometric Lab  
1121 Highway 74 South  
Peachtree City, GA 30269

Scaled Data Report



(REPORT)