

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: FAIL-SAFE

Report Number: P25724

Luminaire Tested: **TRE15-W-LD4-40W-CL-BZ-UNV-ED1C**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: P25724
Test Lab: INNOVATION CENTER-P2
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: TRE15-W-LD4-40W-CL-BZ-UNV-ED1C
Description: FAILSAFE TERRAPIN 15" DIAMETER WALL MOUNT LUMINAIRE CLEAR REFLECTOR WITH SPECULAR SEGMENTED REFLECTOR INTERNAL RADIAL RIBBED LENS WITH EYELID FACE COVER
Light Source: (112) NICHIA 4000K LEDS
1FS402256M8404-0
Ballast/Driver: (1) OSRAM ELECTRONIC DRIVER
OT40W/PRG1250C/UNV/DIM/L

Summary

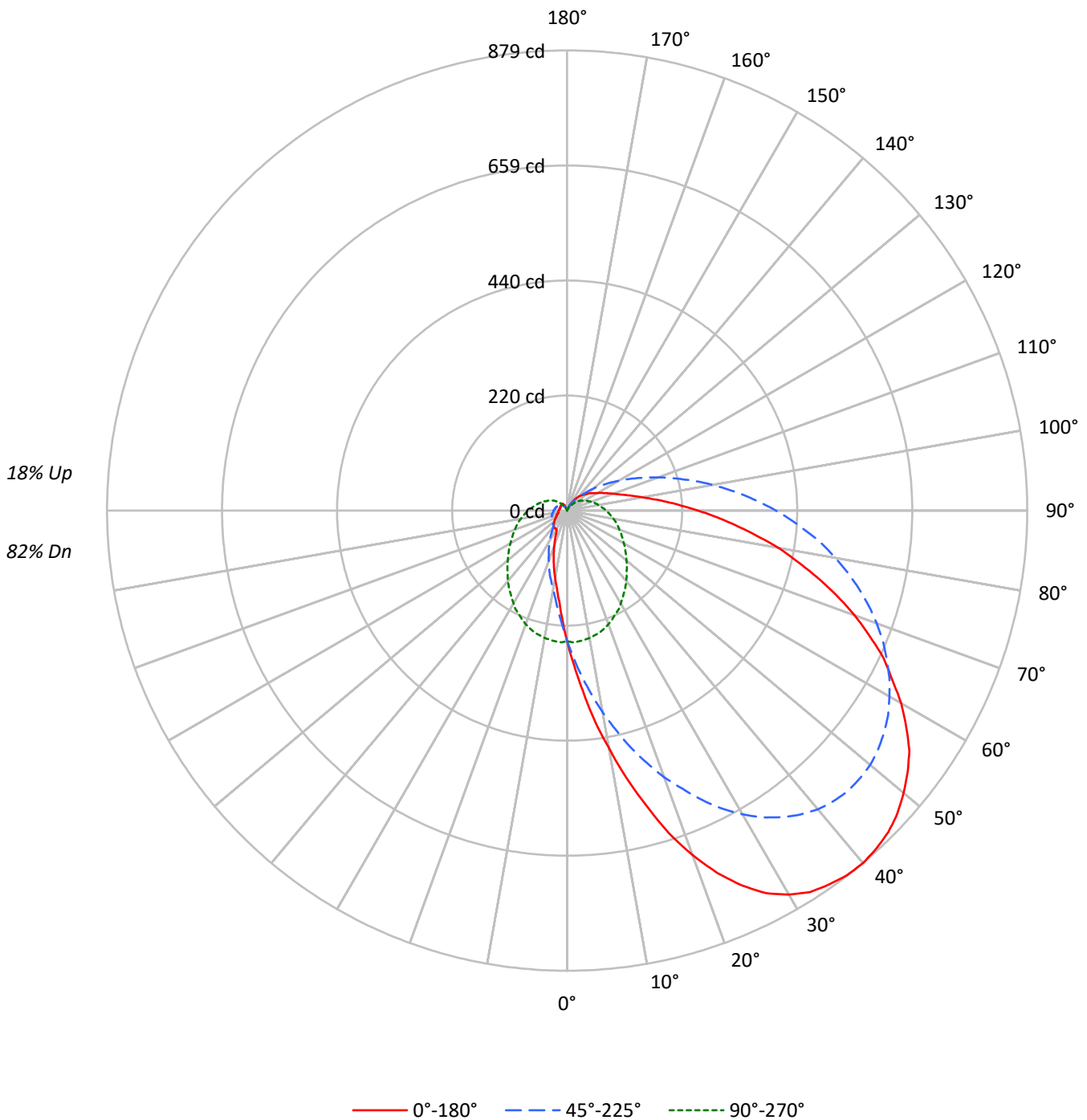
Lumens per Lamp: N/A
Luminaire Lumens: 2202.1 lumens
Efficiency: N/A
Efficacy: 51.1 lumens/watt
Spacing Criteria (0/90/45): 2.3 / 1.22 / 2.17
Luminous Opening: Circular (Dia: 1.25' x H: 0')
CIE Type: Semi-Direct

Input Watts (W): 43.1
Input Voltage (V): 120.06
Input Current (A_{in}): 0.36040
Voltage Rise (V): NR
Power Factor: 0.9985
Total Harmonic Distortion (THDi): 7.16%
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: 14 HR
Ambient Temperature (°C): NR
Test Distance: 25 FT

TEST NUMBER: P25724

CATALOG NUMBER: TRE15-W-LD4-40W-CL-BZ-UNV-ED1C

Luminous Intensity Polar Plot





TEST NUMBER: P25724

CATALOG NUMBER: TRE15-W-LD4-40W-CL-BZ-UNV-ED1C

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20	
RC	80					70					50					30					10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0	
RCR																						
0	115	115	115	115	110	110	110	110	101	101	101	93	93	93	85	85	85	82				
1	100	94	88	82	95	89	84	79	82	77	73	75	71	68	68	65	63	59				
2	89	79	70	63	85	75	68	61	69	62	57	63	57	53	57	53	49	46				
3	80	68	58	50	76	65	56	49	59	51	45	54	47	42	49	44	39	36				
4	72	59	49	41	69	56	47	40	51	43	37	47	40	35	42	37	32	29				
5	66	52	42	34	62	49	40	33	45	37	31	41	34	29	37	32	27	24				
6	61	46	36	29	57	44	35	28	40	32	26	37	30	25	34	28	23	20				
7	56	41	32	25	53	39	31	24	36	28	23	33	26	21	30	24	20	18				
8	52	37	28	22	49	36	27	21	33	25	20	30	23	19	28	22	18	15				
9	48	34	25	19	46	32	24	19	30	23	18	28	21	17	25	20	15	13				
10	45	31	23	17	43	30	22	17	27	20	16	25	19	15	23	18	14	12				

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	2184	2184	2184
5°	3046	2210	1532
10°	4106	2200	1167
15°	5294	2188	899
20°	6534	2156	672
25°	7646	2110	484
30°	8579	2076	415
35°	9337	2034	439
40°	10065	2015	458
45°	10767	1997	447
50°	11449	2020	437
55°	12203	2080	428
60°	12929	2193	421
65°	13843	2387	457
70°	14977	2718	513
75°	16775	3321	610
80°	20710	4546	859
85°	32506	8252	1711



TEST NUMBER: P25724

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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	24.9	1.1
10°-20°	83.9	3.8
20°-30°	154.3	7.0
30°-40°	221.9	10.1
40°-50°	272.4	12.4
50°-60°	296.3	13.5
60°-70°	290.0	13.2
70°-80°	256.5	11.6
80°-90°	204.8	9.3
90°-100°	149.9	6.8
100°-110°	102.7	4.7
110°-120°	66.9	3.0
120°-130°	41.2	1.9
130°-140°	22.8	1.0
140°-150°	10.6	0.5
150°-160°	3.1	0.1
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	263.1	11.9
0°-40°	485.0	22.0
0°-60°	1053.7	47.9
0°-90°	1805.1	82.0
90°-120°	319.4	14.5
90°-150°	394.0	17.9
90°-180°	397.0	18.0
0°-180°	2202.1	100.0

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	249	249	249	249	249	
5°	346	317	251	193	174	37
15°	583	468	241	127	99	169
25°	790	610	218	83	50	365
35°	872	715	190	52	41	546
45°	868	758	161	38	36	669
55°	798	739	136	36	28	711
65°	667	674	115	33	22	657
75°	495	577	98	30	18	524
85°	323	460	82	27	17	282
90°	250	399	74	26	16	137
95°	191	339	67	24	16	147
105°	115	230	55	22	14	124
115°	79	146	43	21	15	79
125°	58	87	33	19	15	52
135°	42	46	22	16	15	33
145°	27	22	11	10	16	17
155°	12	10	6	7	10	4
165°	0	0	0	0	0	0
175°	0	0	0	0	0	0
180°	0	0	0	0	0	0



TEST NUMBER: P25724

CATALOG NUMBER: TRE15-W-LD4-40W-CL-BZ-UNV-ED1C

CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	249	249	249	249	249	249	249	249	249	249	249
2.5°	295	292	291	289	285	281	276	271	264	256	252
5°	346	344	343	336	328	317	305	291	275	259	251
7.5°	405	400	398	387	372	353	332	310	286	261	249
10°	461	457	453	438	416	391	361	329	296	263	247
12.5°	523	517	511	492	463	429	389	348	305	264	244
15°	583	581	571	547	511	468	418	366	314	264	241
17.5°	646	641	627	601	556	505	445	384	321	263	236
20°	700	697	682	652	603	542	471	399	326	260	231
22.5°	749	745	728	696	644	575	496	413	330	257	225
25°	790	785	771	738	683	610	521	426	334	253	218
27.5°	824	820	805	774	720	642	544	438	336	248	213
30°	847	844	831	802	749	670	565	449	338	243	205
32.5°	864	860	848	822	773	695	584	458	338	237	197
35°	872	871	860	836	791	715	602	466	336	231	190
37.5°	878	877	867	846	805	732	618	473	334	224	183
40°	879	878	870	851	814	745	632	480	332	217	176
42.5°	875	873	868	851	817	753	642	484	328	210	168
45°	868	866	861	847	817	758	651	487	323	204	161
47.5°	856	854	850	839	812	758	656	490	319	196	155
50°	839	840	837	828	804	756	659	491	314	190	148
52.5°	820	820	818	811	793	749	658	491	308	183	142
55°	798	796	797	793	778	739	654	489	302	177	136
57.5°	768	769	771	771	761	727	647	486	297	170	131
60°	737	737	742	746	741	711	638	481	290	164	125
62.5°	700	703	711	719	718	694	626	476	284	159	120
65°	667	667	676	689	695	674	612	468	278	153	115
67.5°	625	627	639	657	667	653	597	460	272	148	111
70°	584	587	600	622	638	629	580	450	266	143	106
72.5°	540	542	561	585	606	604	561	439	259	138	102
75°	495	498	519	549	574	577	540	426	252	133	98
77.5°	450	455	478	510	540	549	519	413	245	128	94
80°	410	411	435	472	505	520	496	398	237	124	90
82.5°	364	368	393	432	470	492	472	383	230	119	85
85°	323	327	353	393	434	460	448	367	222	114	82
87.5°	285	288	315	356	401	429	421	351	214	110	78
90°	250	253	280	321	366	399	396	334	206	105	74
92.5°	218	222	248	288	333	368	372	317	198	101	71
95°	191	194	219	258	301	339	346	299	190	97	67
97.5°	166	171	194	230	273	310	322	281	181	93	64
100°	146	150	171	205	245	282	295	263	172	88	61
102.5°	129	133	153	182	220	256	272	244	163	84	58
105°	115	118	134	162	196	230	246	226	153	80	55
107.5°	103	106	120	144	175	207	223	209	144	76	52
110°	94	96	107	129	155	185	202	191	135	71	49



TEST NUMBER: P25724

CATALOG NUMBER: TRE15-W-LD4-40W-CL-BZ-UNV-ED1C

CANDELA DISTRIBUTION (continued):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
112.5°	86	87	97	115	138	165	181	174	125	67	46
115°	79	80	87	103	123	146	161	157	117	63	43
117.5°	73	74	80	92	110	130	144	141	107	59	41
120°	67	68	73	83	98	114	127	126	98	55	38
122.5°	62	63	66	75	87	100	111	111	88	51	36
125°	58	58	61	67	78	87	97	97	79	47	33
127.5°	54	54	56	61	69	76	84	84	70	42	31
130°	50	50	51	55	60	65	71	72	60	38	28
132.5°	46	46	47	49	53	55	60	61	52	34	25
135°	42	42	43	44	46	46	50	50	43	29	22
137.5°	39	38	39	39	39	39	41	41	36	24	19
140°	35	35	35	34	33	32	34	33	29	20	16
142.5°	31	31	30	29	27	27	27	27	23	17	13
145°	27	26	26	24	23	22	22	21	18	13	11
147.5°	22	22	21	20	18	18	17	16	14	11	9
150°	18	18	18	17	15	15	14	13	11	9	8
152.5°	15	15	15	13	12	12	11	10	9	8	7
155°	12	12	12	11	10	10	9	9	8	7	6
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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CATALOG NUMBER: TRE15-W-LD4-40W-CL-BZ-UNV-ED1C

CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
0°	249	249	249	249	249	249	249	249	249	249
2.5°	248	239	231	224	218	212	210	207	207	208
5°	243	228	214	202	193	185	180	176	175	174
7.5°	238	216	197	183	170	162	156	153	150	150
10°	232	205	183	166	153	143	137	133	131	131
12.5°	226	194	170	152	139	129	122	118	115	115
15°	219	184	159	140	127	116	107	102	100	99
17.5°	212	175	149	129	115	102	93	88	86	85
20°	205	165	140	119	103	90	80	75	73	72
22.5°	197	157	131	110	92	79	70	64	62	61
25°	189	149	123	101	83	69	59	53	51	50
27.5°	182	142	116	93	74	60	51	45	44	43
30°	174	136	109	85	66	52	44	41	41	41
32.5°	166	129	102	78	59	45	41	40	41	41
35°	159	123	95	71	52	41	40	40	41	41
37.5°	152	117	90	65	46	39	40	40	41	41
40°	145	112	84	59	41	39	40	40	40	40
42.5°	139	106	78	53	39	38	39	39	38	38
45°	133	101	73	48	38	38	38	37	36	36
47.5°	127	96	68	44	37	37	37	35	34	34
50°	121	91	63	40	36	37	35	33	32	32
52.5°	116	86	59	38	36	36	34	31	30	30
55°	111	82	55	36	36	35	32	29	28	28
57.5°	106	77	51	35	35	33	30	28	26	26
60°	101	73	48	34	35	32	29	26	25	24
62.5°	97	69	45	34	34	31	27	25	23	23
65°	92	64	42	33	33	30	26	23	22	22
67.5°	88	61	39	33	32	29	25	22	21	21
70°	84	57	37	32	31	28	24	22	20	20
72.5°	80	54	35	32	31	27	23	21	20	19
75°	76	51	33	31	30	26	22	20	19	18
77.5°	73	48	31	31	29	25	21	19	18	17
80°	69	45	30	30	28	24	21	18	17	17
82.5°	65	43	29	30	27	23	20	17	17	17
85°	62	40	28	29	27	23	20	17	16	17
87.5°	58	38	27	28	26	22	19	16	16	16
90°	55	35	26	28	26	22	19	15	16	16
92.5°	52	32	24	27	25	21	18	15	16	16
95°	49	30	23	26	24	21	18	14	16	16
97.5°	47	29	22	26	24	20	18	14	16	16
100°	44	27	21	25	23	20	17	14	15	15
102.5°	41	25	21	24	23	19	17	13	14	14
105°	39	23	20	23	22	19	17	13	14	14
107.5°	36	22	19	23	22	19	16	13	14	14
110°	34	20	18	22	21	19	16	13	14	14



TEST NUMBER: P25724

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CANDELA DISTRIBUTION (continued):

	95°	105°	115°	125°	135°	145°	155°	165°	175°	180°
112.5°	32	19	17	21	21	18	16	13	14	14
115°	30	18	17	20	21	18	16	13	14	15
117.5°	29	17	16	20	21	18	16	13	14	15
120°	27	15	15	19	20	18	16	13	14	14
122.5°	25	14	14	18	20	18	16	13	14	14
125°	23	13	13	17	19	19	17	13	14	15
127.5°	22	12	13	16	19	18	17	13	14	15
130°	20	12	12	15	18	18	16	14	14	15
132.5°	18	11	11	14	17	18	16	14	15	15
135°	16	10	11	13	16	18	16	15	15	15
137.5°	15	9	10	12	15	17	16	15	15	16
140°	13	9	9	11	13	15	16	16	16	16
142.5°	11	8	9	10	12	14	15	16	16	16
145°	10	8	8	9	10	12	14	15	16	16
147.5°	8	7	8	8	9	10	13	14	15	15
150°	7	7	7	8	8	9	11	12	13	14
152.5°	7	7	7	7	7	9	10	11	12	12
155°	6	6	6	6	7	8	9	10	10	10
157.5°	0	0	0	0	0	0	0	0	0	0
160°	0	0	0	0	0	0	0	0	0	0
162.5°	0	0	0	0	0	0	0	0	0	0
165°	0	0	0	0	0	0	0	0	0	0
167.5°	0	0	0	0	0	0	0	0	0	0
170°	0	0	0	0	0	0	0	0	0	0
172.5°	0	0	0	0	0	0	0	0	0	0
175°	0	0	0	0	0	0	0	0	0	0
177.5°	0	0	0	0	0	0	0	0	0	0
180°	0	0	0	0	0	0	0	0	0	0

(END OF REPORT)