

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: 10898.0

Luminaire Tested: **TRE15-C-1100MH**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-79-08  
Report Number: 10898.0  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: FAIL-SAFE  
Catalog Number: TRE15-C-1100MH  
Description: FAIL-SAFE 15"DIA WALL MNT LUMINAIRE  
WHITE REFLECTOR w/SPECULAR SEGMENTED REFLECTOR  
INTERNAL RADIAL RIBBED LENS w/EYELID FACE COVER  
Light Source: 1/100W CLEAR ED17 MH 8500 LUMENS  
M90 M100/U/MED  
Ballast/Driver: -

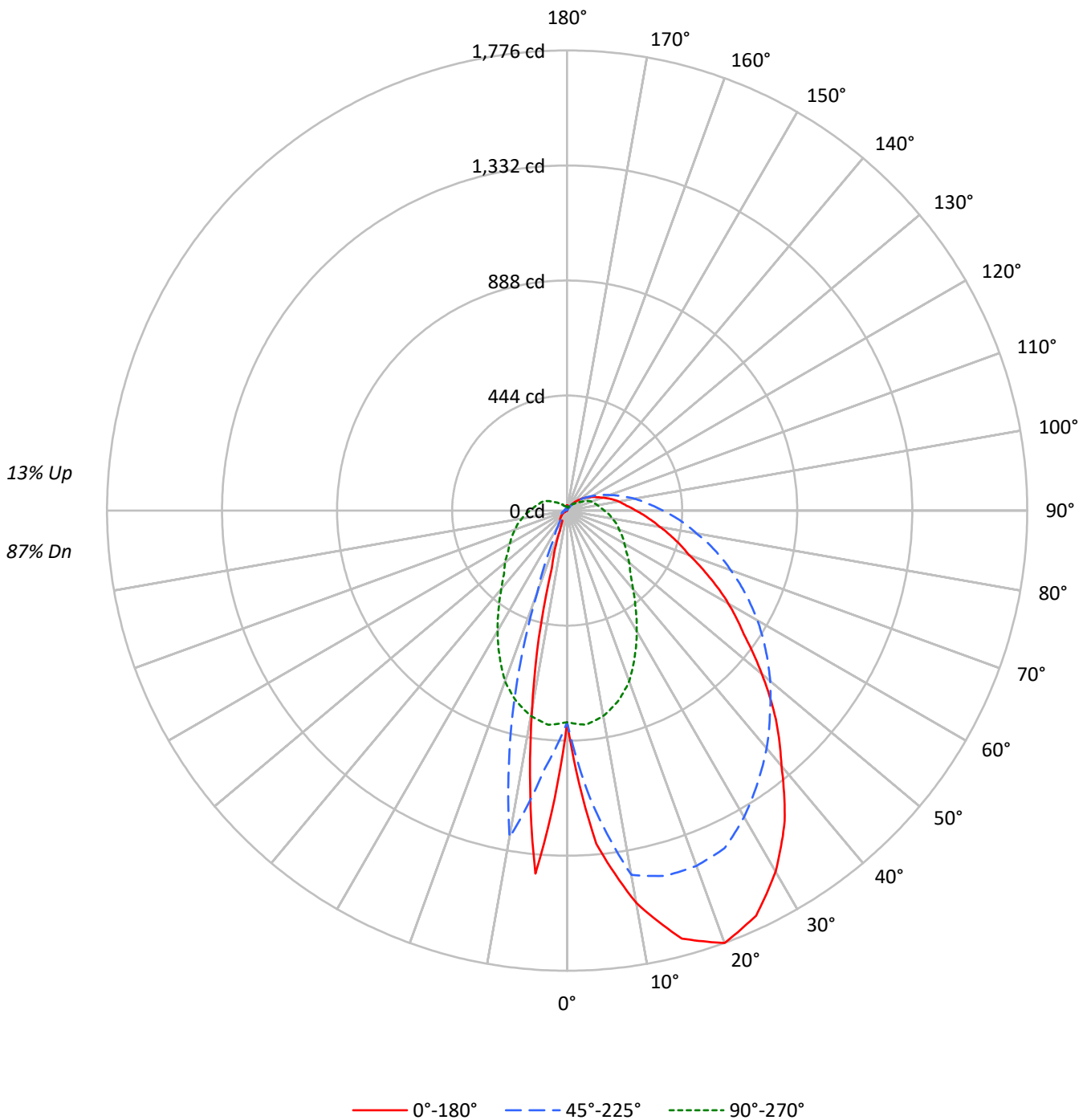
**Summary**

Lumens per Lamp: 8500 (1 lamp)  
Luminaire Lumens: 3234.6 lumens  
Efficiency: 38.1%  
Efficacy: 33.7 lumens/watt  
Spacing Criteria (0/90/45): 1.41 / 1.03 / 1.42  
Luminous Opening: Rectangular w/ Sides (W: 1.04' x L: 0.19' x H: 0.46')  
CIE Type: Semi-Direct

Input Watts (W): 96  
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

TEST NUMBER: 10898.0  
CATALOG NUMBER: TRE15-C-1100MH

### Luminous Intensity Polar Plot





TEST NUMBER: 10898.0

CATALOG NUMBER: TRE15-C-1100MH

**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	44	44	44	44	43	43	43	43	40	40	40	37	37	37	34	34	34	33				33
1	40	37	35	34	38	36	34	33	33	32	31	31	30	29	29	28	27				26	
2	36	32	30	27	34	31	29	26	29	27	25	27	25	24	25	24	23				21	
3	33	28	25	23	31	27	24	22	26	23	21	24	22	20	22	21	19				18	
4	30	25	22	19	29	24	21	19	23	20	18	21	19	17	20	18	16				15	
5	28	23	19	17	26	22	19	16	20	18	16	19	17	15	18	16	14				13	
6	25	20	17	14	24	20	17	14	19	16	14	17	15	13	16	14	13				12	
7	24	18	15	13	23	18	15	13	17	14	12	16	14	12	15	13	11				11	
8	22	17	14	11	21	16	13	11	16	13	11	15	12	11	14	12	10				9	
9	21	16	12	10	20	15	12	10	14	12	10	14	11	10	13	11	9				9	
10	19	14	11	9	19	14	11	9	13	11	9	13	10	9	12	10	9				8	

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	44892	44892	44892
5°	58697	44085	63971
10°	60027	41684	30404
15°	58855	38729	7882
20°	55043	35337	2510
25°	48962	31095	1220
30°	42421	27175	1186
35°	36293	23594	1165
40°	30325	20699	990
45°	25758	18569	769
50°	21462	17558	591
55°	17794	16420	385
60°	15138	15910	232
65°	12637	15728	146
70°	10441	15501	21
75°	9046	15840	0
80°	7774	16035	0
85°	6797	16954	0



TEST NUMBER: 10898.0

CATALOG NUMBER: TRE15-C-1100MH

**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	101.8	3.1	1.2	0°	817	817	817	817	817	
10°-20°	292.5	9.0	3.4	5°	1291	1141	830	1000	1407	126
20°-30°	396.9	12.3	4.7	15°	1710	1460	761	813	229	480
30°-40°	423.8	13.1	5.0	25°	1725	1438	618	128	43	789
40°-50°	412.2	12.7	4.8	35°	1464	1282	460	41	47	912
50°-60°	381.4	11.8	4.5	45°	1139	1107	344	32	34	877
60°-70°	331.3	10.2	3.9	55°	832	935	279	28	18	752
70°-80°	269.3	8.3	3.2	65°	605	759	235	23	7	602
80°-90°	206.9	6.4	2.4	75°	430	590	197	15	0	456
90°-100°	153.1	4.7	1.8	85°	311	438	162	11	0	265
100°-110°	108.8	3.4	1.3	90°	265	369	143	10	0	146
110°-120°	71.5	2.2	0.8	95°	228	311	130	9	1	183
120°-130°	42.6	1.3	0.5	105°	174	215	109	9	1	184
130°-140°	22.3	0.7	0.3	115°	123	143	88	9	2	123
140°-150°	10.5	0.3	0.1	125°	87	88	56	7	2	78
150°-160°	5.1	0.2	0.1	135°	52	46	37	5	5	42
160°-170°	3.2	0.1	0.0	145°	27	20	25	5	6	17
170°-180°	1.4	0.0	0.0	155°	10	9	18	6	7	5
0°-30°	791.2	24.5	9.3	165°	5	5	12	18	12	2
0°-40°	1215.0	37.6	14.3	175°	21	16	14	11	20	2
0°-60°	2008.6	62.1	23.6	180°	16	16	16	16	16	
0°-90°	2816.1	87.1	33.1							
90°-120°	333.4	10.3	3.9							
90°-150°	408.8	12.6	4.8							
90°-180°	419.0	13.0	4.9							
0°-180°	3234.6	100.0	38.1							



TEST NUMBER: 10898.0

CATALOG NUMBER: TRE15-C-1100MH

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	817	817	817	817	817	817	817	817	817
5°	1291	1259	1141	983	830	775	1000	1272	1407
10°	1538	1509	1428	1123	805	848	1281	948	779
15°	1710	1626	1460	1238	761	1085	813	315	229
20°	1776	1676	1459	1225	701	1189	338	105	81
25°	1725	1624	1438	1132	618	1044	128	50	43
30°	1609	1522	1366	1031	537	730	73	36	45
35°	1464	1403	1282	949	460	461	41	41	47
40°	1287	1264	1198	888	395	282	34	41	42
45°	1139	1134	1107	840	344	175	32	34	34
50°	980	1000	1023	787	313	116	32	28	27
55°	832	891	935	734	279	88	28	21	18
60°	719	778	848	675	255	64	24	15	11
65°	605	675	759	617	235	51	23	10	7
70°	500	570	672	552	213	39	18	5	1
75°	430	492	590	494	197	32	15	3	0
80°	364	416	507	434	177	28	12	1	0
85°	311	346	438	377	162	23	11	0	0
90°	265	286	369	328	143	19	10	0	0
95°	228	255	311	279	130	19	9	1	1
100°	202	217	264	235	119	18	9	2	1
105°	174	183	215	193	109	19	9	1	1
110°	145	154	175	159	101	18	7	2	1
115°	123	127	143	125	88	16	9	1	2
120°	104	104	112	100	70	19	7	2	2
125°	87	86	88	76	56	18	7	2	2
130°	70	68	64	52	47	18	5	3	3
135°	52	51	46	37	37	16	5	5	5
140°	39	36	32	27	32	16	3	5	6
145°	27	23	20	20	25	16	5	3	6
150°	16	14	12	15	20	18	5	3	6
155°	10	7	9	16	18	16	6	7	7
160°	5	3	3	16	14	14	12	9	7
165°	5	3	5	15	12	12	18	15	12
170°	11	6	15	18	11	11	18	19	19
175°	21	14	16	16	14	7	11	20	20
180°	16	16	16	16	16	16	16	16	16

(END OF REPORT)