

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: 113p114R

Luminaire Tested: **HEALTHCARE NARROW EXAM 54T5HO**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.



Test Information

Test Method: LM-79-08
Report Number: 113p114R
Test Lab: METALUX LABORATORIES
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: HEALTHCARE NARROW EXAM 54T5HO
Description: 4' LUMINAIRE, SPECULAR REFLECTOR, 1 LAMP T5, W CLEAR LENS AND PERFORATED INLAY
Light Source: ONE - GE - F54T5HO/830 - 5000 LUMENS - 54 WATTS
Ballast/Driver: QTP 1X54T5HO/UNV PSN

Luminaire Equipment:	<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
	AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
	AS-5443-2	Good	REFLECTOR
	AS-5443-3	Good	DRIVER
	AS-5443-4	Good	UPPER MODULE
	AS-5443-5	Good	LENS
	AS-5443-6	Good	DRIVER 2
	AS-5443-7	Good	TRIM RING

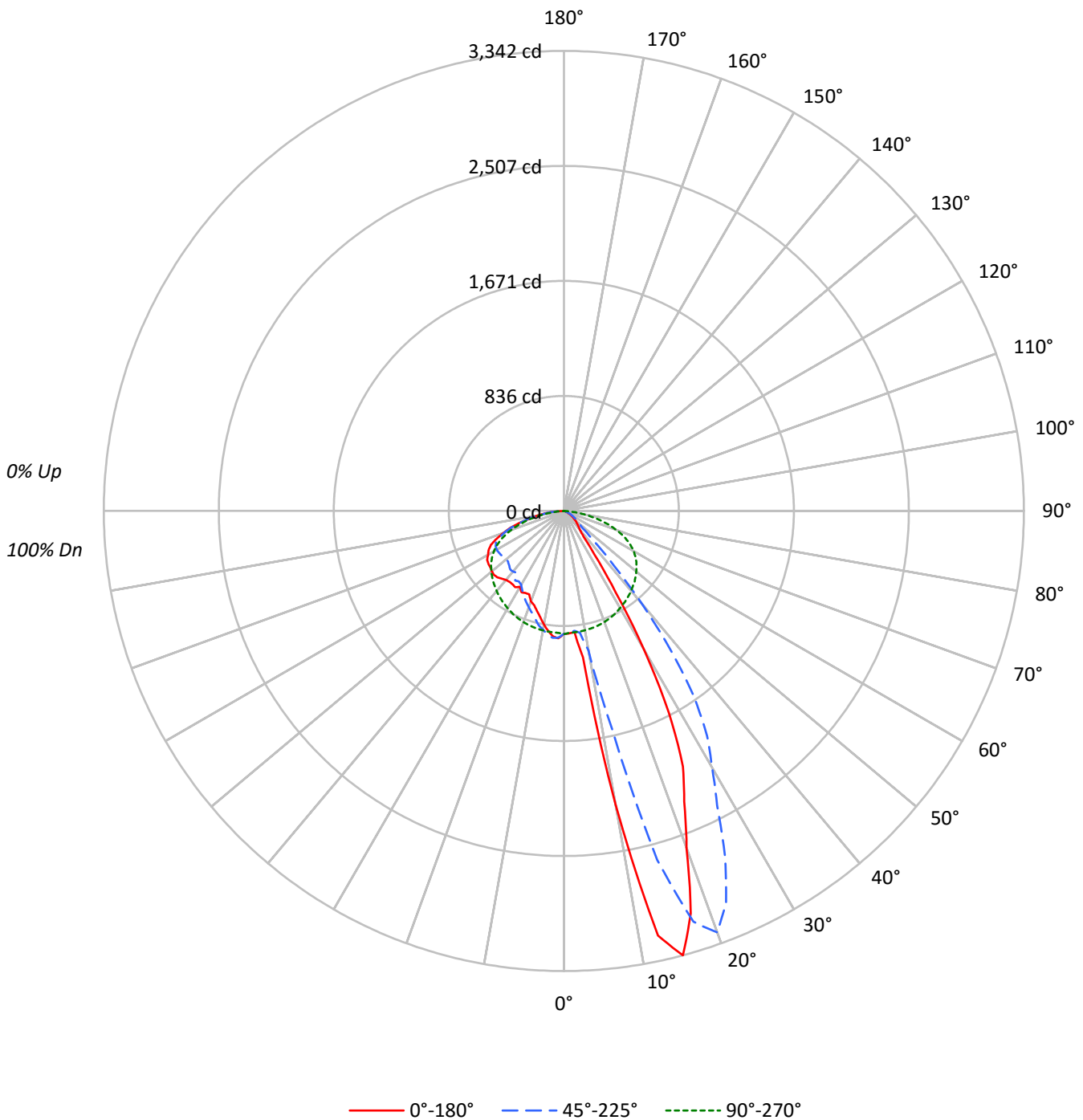
Summary

Lumens per Lamp: 5000 (1 lamp)
Luminaire Lumens: 3241.0 lumens
Efficiency: 64.8%
Efficacy: 53.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.37 / 1.29
Luminous Opening: Rectangular (W 3.85' x L: 0.46' x H: 0')
CIE Type: Direct

Input Watts (W): 61
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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Luminous Intensity Polar Plot





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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	0
RCR																		
0	77	77	77	77	75	75	75	75	72	72	72	69	69	69	66	66	66	65
1	71	68	66	63	69	67	64	62	64	62	60	61	60	58	59	58	57	55
2	65	60	56	53	63	59	55	52	57	54	51	55	52	50	53	51	49	47
3	60	54	49	45	58	53	48	44	51	47	43	49	46	43	47	44	42	41
4	55	48	43	39	54	47	42	38	46	41	38	44	40	37	43	39	37	35
5	51	43	38	34	50	43	37	34	41	37	33	40	36	33	39	35	32	31
6	47	39	34	30	46	39	33	30	38	33	29	36	32	29	35	32	29	28
7	44	36	30	27	43	35	30	27	34	30	26	33	29	26	33	29	26	25
8	41	33	28	24	40	32	27	24	32	27	24	31	27	24	30	26	24	22
9	39	30	25	22	38	30	25	22	29	25	22	29	24	21	28	24	21	20
10	36	28	23	20	35	28	23	20	27	23	20	26	22	20	26	22	20	18

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	5447	5447	5447
5°	5407	5413	5585
10°	13365	5445	5179
15°	21082	5501	4744
20°	16905	5570	4533
25°	13769	5648	4424
30°	8197	5741	4475
35°	2864	5877	4835
40°	1464	6037	5202
45°	1232	6256	5877
50°	1043	6513	6475
55°	871	6831	7107
60°	658	7141	7739
65°	519	7353	8435
70°	410	7287	8302
75°	259	6757	7746
80°	105	5509	6772
85°	140	3775	5803



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	90.3	2.8	1.8	0°	894	894	894	894	894	
10°-20°	413.5	12.8	8.3	5°	884	874	885	925	913	118
20°-30°	653.4	20.2	13.1	15°	3342	2624	872	809	752	850
30°-40°	638.6	19.7	12.8	25°	2048	2770	840	682	658	893
40°-50°	496.8	15.3	9.9	35°	385	1651	790	617	650	302
50°-60°	406.4	12.5	8.1	45°	143	303	726	561	682	111
60°-70°	303.0	9.3	6.1	55°	82	107	643	557	669	73
70°-80°	188.6	5.8	3.8	65°	36	49	510	544	585	36
80°-90°	50.4	1.6	1.0	75°	11	17	287	326	329	13
90°-100°	0.0	0.0	0.0	85°	2	2	54	83	83	2
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	1157.3	35.7	23.1							
0°-40°	1795.9	55.4	35.9							
0°-60°	2699.0	83.3	54.0							
0°-90°	3241.0	100.0	64.8							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	3241.0	100.0	64.8							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	894	894	894	894	894	894	894	894	894
2.5°	891	891	889	883	887	908	921	930	926
5°	884	880	874	884	885	921	925	922	913
7.5°	1072	997	891	874	883	921	904	889	877
10°	2160	1760	1027	869	880	912	876	853	837
12.5°	3159	2946	1625	880	877	897	848	807	790
15°	3342	3335	2624	918	872	877	809	770	752
17.5°	3066	3210	3129	1009	866	856	775	740	717
20°	2607	2846	3258	1241	859	833	744	706	699
22.5°	2283	2434	3079	1704	850	808	716	667	655
25°	2048	2170	2770	2259	840	776	682	650	658
27.5°	1656	1910	2410	2644	828	744	652	665	666
30°	1165	1499	2154	2808	816	714	619	631	636
32.5°	701	1033	1937	2842	802	682	607	635	657
35°	385	613	1651	2714	790	653	617	648	650
37.5°	235	342	1280	2512	775	621	565	636	649
40°	184	216	886	2273	759	580	574	633	654
42.5°	161	171	540	1997	742	549	577	636	667
45°	143	150	303	1742	726	500	561	648	682
47.5°	126	132	186	1528	707	470	549	658	688
50°	110	116	144	1323	687	453	541	660	683
52.5°	96	100	123	1077	666	449	547	661	673
55°	82	86	107	797	643	413	557	652	669
57.5°	67	72	90	520	616	408	560	648	661
60°	54	58	76	279	586	394	563	645	635
62.5°	44	46	62	139	551	366	558	609	616
65°	36	38	49	84	510	336	544	583	585
67.5°	29	31	38	62	462	311	505	533	528
70°	23	25	30	48	409	292	457	462	466
72.5°	17	18	23	36	351	277	400	396	408
75°	11	12	17	26	287	265	326	345	329
77.5°	7	8	11	18	222	254	264	242	243
80°	3	4	6	12	157	208	187	191	193
82.5°	2	1	2	7	102	134	132	138	140
85°	2	1	2	3	54	73	83	83	83
87.5°	1	1	1	1	17	31	30	28	28
90°	0	0	0	0	0	0	0	0	0

(END OF REPORT)