

Scaled data based on original data using

LM-41-14 Approved Method for Photometric Testing Of Indoor Fluorescent Luminaires

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: METALUX

Report Number: 227P122

Luminaire Tested: **SM-354-ASY**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: 227P122  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: SM-354-ASY  
Description: Cricket Series Luminaire with a white asymmetric reflector.  
Light Source: Three - F54T5/830 H0 - 4400 Lumens ea. - 54 Watts ea.  
Ballast/Driver: Two - Triad B254PUNV-D Electronic

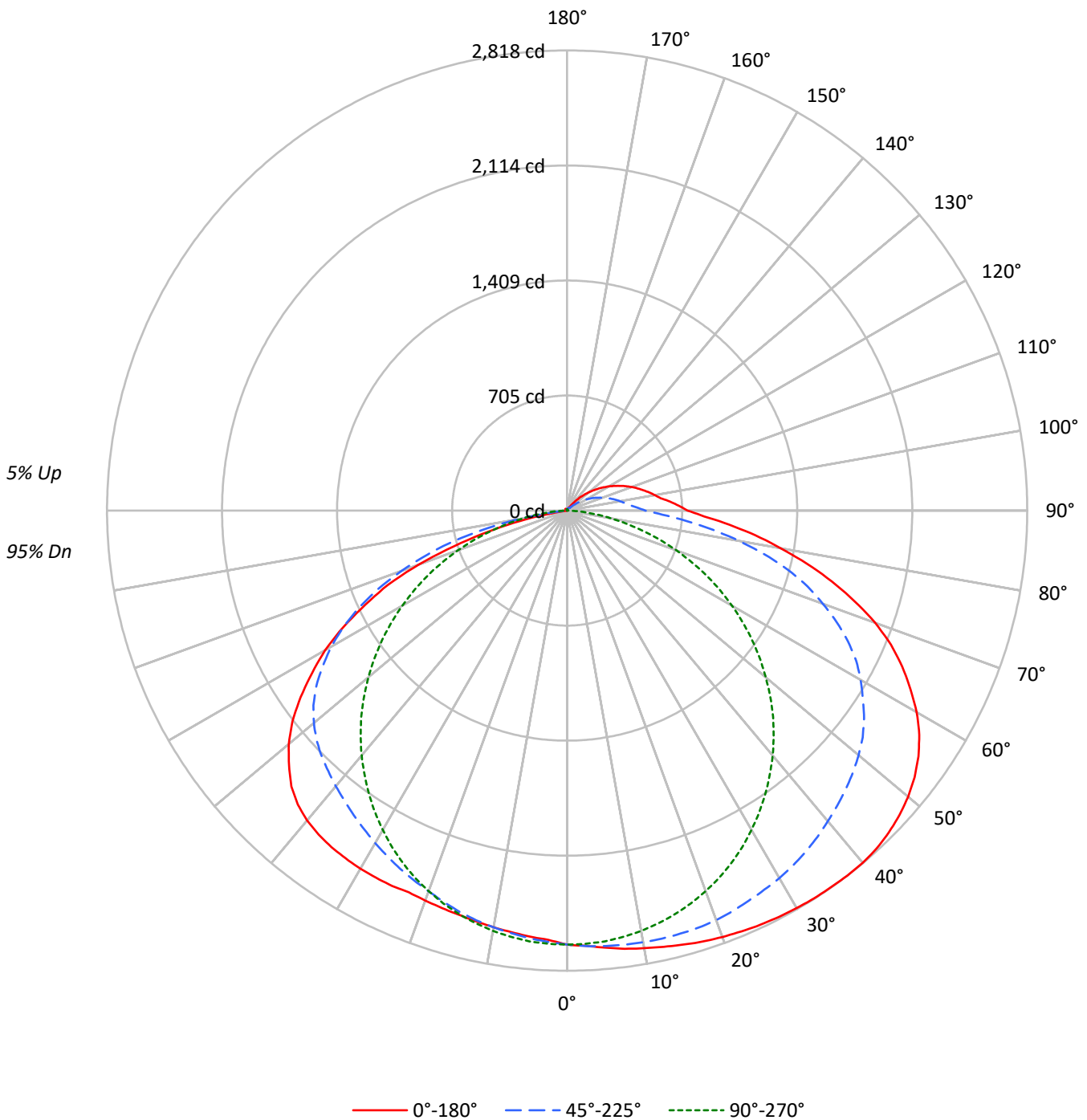
**Summary**

Lumens per Lamp: 4400 (3 lamps)  
Luminaire Lumens: 10568.3 lumens  
Efficiency: 80.1%  
Efficacy: 62.9 lumens/watt  
Spacing Criteria (0/90/45): 1.53 / 1.26 / 1.56  
Luminous Opening: Rectangular w/ Sides (W: 0.43' x L: 3.76' x H: 0.1')  
CIE Type: Direct

Input Watts (W): 168  
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									
RC	80									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	94	94	94	94	92	92	92	92	87	87	87	82	82	82	78	78	78	76																			
1	85	80	76	73	82	78	75	71	74	71	68	70	68	66	67	65	63	61																			
2	76	69	63	58	74	67	61	57	63	59	55	60	56	53	57	54	51	49																			
3	69	60	53	47	67	58	51	46	55	49	45	52	48	44	50	46	42	40																			
4	63	52	45	39	60	51	44	38	48	42	37	46	41	36	44	39	36	34																			
5	57	46	39	33	55	45	38	33	43	37	32	41	35	31	39	34	30	29																			
6	53	41	34	28	51	40	33	28	39	32	28	37	31	27	35	30	26	25																			
7	49	37	30	25	47	36	29	25	35	29	24	33	28	24	32	27	23	21																			
8	45	34	27	22	44	33	26	22	32	26	21	30	25	21	29	24	21	19																			
9	42	31	24	19	41	30	24	19	29	23	19	28	23	19	27	22	18	17																			
10	39	28	22	18	38	28	22	17	27	21	17	26	21	17	25	20	17	15																			

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

	0°	90°	180°
0°	17696	17696	17696
5°	17915	17344	17462
10°	18309	16975	17434
15°	18834	16597	17533
20°	19500	16199	17830
25°	20309	15779	18401
30°	21283	15304	19178
35°	22468	14796	20075
40°	23939	14238	21066
45°	25560	13620	21910
50°	27367	12878	22347
55°	29365	12050	22275
60°	31465	11067	21792
65°	33756	9901	20313
70°	36407	8432	17541
75°	39289	6610	11677
80°	44242	4481	3198
85°	58403	2067	59



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	252.7	2.4	1.9	0°	2658	2658	2658	2658	2658	
10°-20°	738.8	7.0	5.6	5°	2687	2677	2648	2629	2619	258
20°-30°	1167.8	11.1	8.8	15°	2752	2682	2558	2544	2562	781
30°-40°	1506.7	14.3	11.4	25°	2799	2635	2381	2420	2536	1295
40°-50°	1718.3	16.3	13.0	35°	2816	2549	2117	2278	2516	1769
50°-60°	1736.7	16.4	13.2	45°	2787	2413	1783	2127	2389	2153
60°-70°	1511.4	14.3	11.5	55°	2626	2220	1383	1876	1992	2345
70°-80°	1001.8	9.5	7.6	65°	2265	1899	942	1405	1363	2236
80°-90°	412.3	3.9	3.1	75°	1679	1399	480	716	499	1768
90°-100°	197.9	1.9	1.5	85°	997	735	99	13	1	883
100°-110°	142.1	1.3	1.1	90°	737	478	8	5	1	411
110°-120°	93.3	0.9	0.7	95°	632	382	1	5	4	497
120°-130°	51.7	0.5	0.4	105°	483	280	1	10	8	511
130°-140°	22.2	0.2	0.2	115°	358	184	1	12	12	357
140°-150°	7.8	0.1	0.1	125°	235	95	2	12	12	212
150°-160°	4.2	0.0	0.0	135°	119	28	3	7	14	93
160°-170°	2.0	0.0	0.0	145°	30	19	4	4	9	23
170°-180°	0.6	0.0	0.0	155°	18	16	5	4	6	8
0°-30°	2159.4	20.4	16.4	165°	10	8	6	5	5	3
0°-40°	3666.0	34.7	27.8	175°	4	7	7	5	3	0
0°-60°	7121.0	67.4	53.9	180°	6	6	6	6	6	
0°-90°	10046.6	95.1	76.1							
90°-120°	433.3	4.1	3.3							
90°-150°	515.0	4.9	3.9							
90°-180°	522.0	4.9	4.0							
0°-180°	10568.3	100.0	80.1							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	2658	2658	2658	2658	2658	2658	2658	2658	2658
2.5°	2668	2678	2670	2661	2655	2649	2644	2643	2631
5°	2687	2694	2677	2659	2648	2635	2629	2629	2619
7.5°	2707	2707	2682	2653	2633	2617	2611	2614	2604
10°	2721	2716	2684	2645	2614	2595	2592	2599	2591
12.5°	2736	2726	2685	2632	2588	2566	2570	2584	2577
15°	2752	2739	2682	2615	2558	2535	2544	2566	2562
17.5°	2767	2752	2678	2591	2522	2500	2512	2543	2552
20°	2779	2759	2669	2562	2480	2460	2481	2521	2541
22.5°	2789	2762	2654	2529	2434	2414	2451	2511	2531
25°	2799	2766	2635	2490	2381	2366	2420	2501	2536
27.5°	2806	2770	2617	2444	2323	2311	2386	2487	2535
30°	2811	2770	2599	2396	2258	2253	2351	2474	2533
32.5°	2815	2764	2576	2345	2190	2191	2314	2462	2525
35°	2816	2755	2549	2290	2117	2125	2278	2447	2516
37.5°	2818	2747	2518	2231	2039	2054	2240	2432	2501
40°	2816	2738	2484	2170	1958	1982	2203	2406	2478
42.5°	2806	2722	2449	2106	1872	1910	2165	2373	2441
45°	2787	2701	2413	2040	1783	1836	2127	2330	2389
47.5°	2760	2670	2374	1971	1687	1761	2081	2273	2310
50°	2726	2628	2330	1898	1588	1684	2025	2192	2226
52.5°	2682	2582	2281	1822	1488	1606	1959	2098	2121
55°	2626	2520	2220	1741	1383	1528	1876	1983	1992
57.5°	2557	2449	2148	1657	1276	1452	1775	1856	1852
60°	2472	2372	2076	1575	1166	1378	1669	1722	1712
62.5°	2371	2274	1996	1496	1056	1304	1545	1568	1546
65°	2265	2165	1899	1418	942	1220	1405	1397	1363
67.5°	2146	2053	1788	1335	826	1130	1250	1215	1187
70°	2007	1922	1666	1238	710	1022	1078	1034	967
72.5°	1846	1767	1543	1130	594	897	899	811	726
75°	1679	1601	1399	1010	480	759	716	576	499
77.5°	1504	1427	1237	871	372	603	497	360	298
80°	1328	1250	1068	742	271	439	290	181	96
82.5°	1162	1082	897	607	179	278	119	8	1
85°	997	919	735	457	99	114	13	4	1
87.5°	841	765	583	315	39	27	10	4	1
90°	737	668	478	211	8	11	5	2	1
92.5°	684	617	427	166	1	6	4	2	3
95°	632	564	382	145	1	7	5	4	4
97.5°	577	522	355	128	0	9	6	5	5
100°	545	495	330	112	1	10	8	6	6
102.5°	514	466	304	97	1	11	9	7	7
105°	483	434	280	83	1	10	10	8	8
107.5°	452	405	256	70	1	10	10	9	9
110°	421	374	231	56	1	10	12	10	10



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	390	344	207	43	1	10	13	11	11
115°	358	314	184	32	1	9	12	12	12
117.5°	327	284	160	23	1	7	11	13	13
120°	296	254	137	18	1	5	11	13	14
122.5°	265	224	116	16	2	4	11	12	13
125°	235	195	95	15	2	3	12	12	12
127.5°	204	167	73	15	2	3	12	12	13
130°	174	140	53	15	2	3	10	12	13
132.5°	146	113	38	15	3	3	9	13	14
135°	119	87	28	14	3	3	7	13	14
137.5°	92	62	23	14	3	4	6	12	14
140°	66	43	20	13	3	4	4	10	13
142.5°	44	30	19	12	4	4	3	9	11
145°	30	24	19	11	4	4	4	7	9
147.5°	23	21	19	10	4	5	4	5	8
150°	20	20	19	9	5	5	4	4	6
152.5°	18	19	18	8	5	5	4	4	6
155°	18	19	16	7	5	5	4	4	6
157.5°	17	18	14	7	6	5	5	4	6
160°	16	16	12	7	6	5	5	4	5
162.5°	13	13	11	7	6	5	5	3	5
165°	10	11	8	7	6	6	5	4	5
167.5°	8	8	7	7	6	6	5	4	5
170°	5	7	7	7	7	6	5	4	4
172.5°	4	6	7	7	7	6	5	4	4
175°	4	6	7	7	7	6	5	4	3
177.5°	3	5	6	7	7	7	6	4	3
180°	6	6	6	6	6	6	6	6	6

(END OF REPORT)