

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: 236p165

Luminaire Tested: **2HBHD-654T5-CL-UNV-EBT3**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 236p165
Test Lab: METALUX LABORATORIES
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2HBHD-654T5-CL-UNV-EBT3
Description: 2HBHD SERIES LUMINAIRE WITH SPECULAR ALUMINUM MEDIUM
DISTRIBUTION REFLECTOR AND CLEAR ACRILIC LENS AND DOORFRAME
Light Source: SIX 54 WATTS EA T5HO - 4400 LUMENS EA - F54T5/841HO
Ballast/Driver: THREE ADVANCE ICN2S54

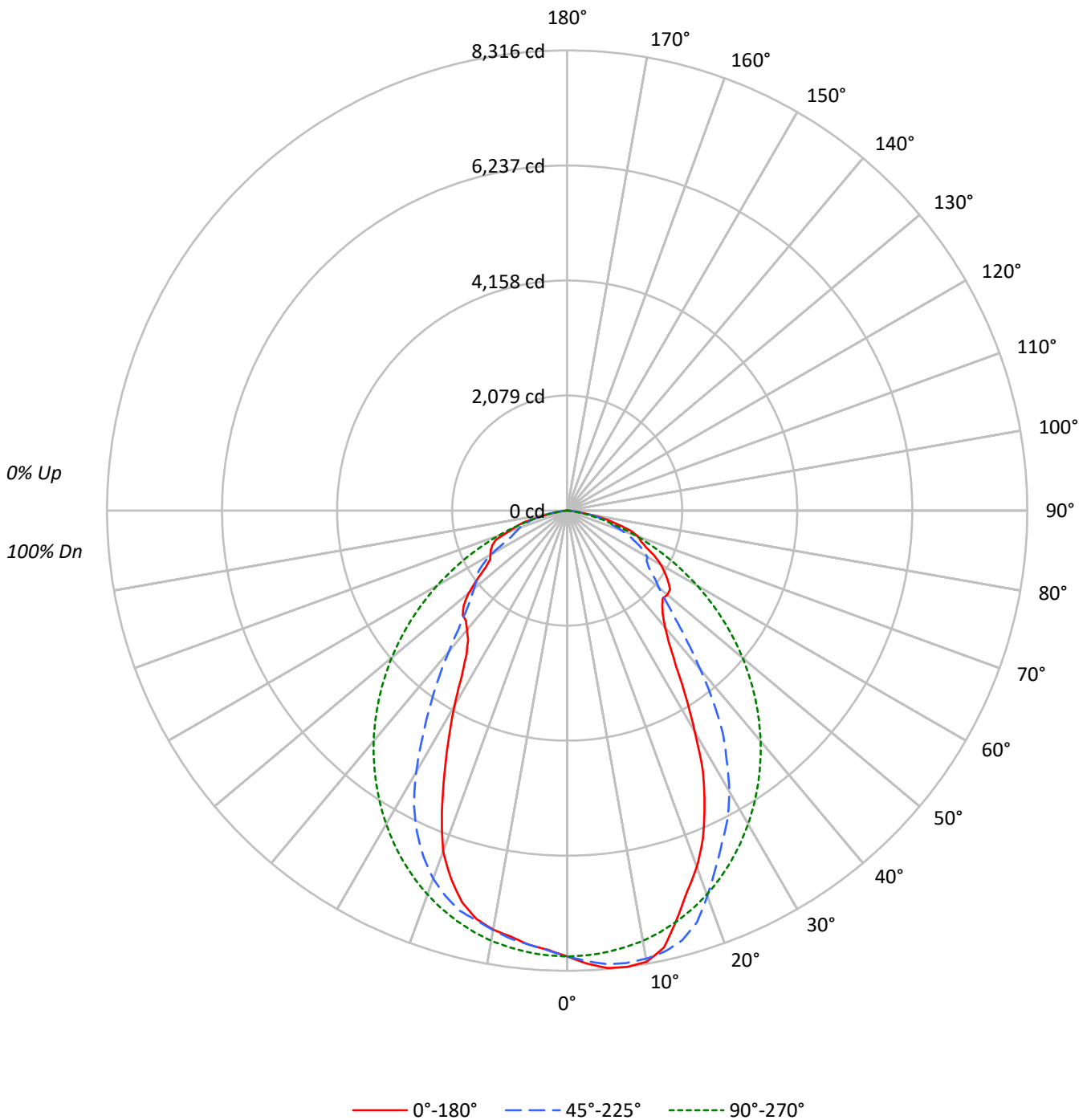
Summary

Lumens per Lamp: 4400 (6 lamps)
Luminaire Lumens: 15627.3 lumens
Efficiency: 59.2%
Efficacy: 52.4 lumens/watt
Spacing Criteria (0/90/45): 0.95 / 1.21 / 1.11
Luminous Opening: Rectangular (W 3.63' x L: 1.64' x H: 0')
CIE Type: Direct

Input Watts (W): 298
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: 236p165
CATALOG NUMBER: 2HBHD-654T5-CL-UNV-EBT3

Luminous Intensity Polar Plot





TEST NUMBER: 236p165

CATALOG NUMBER: 2HBHD-654T5-CL-UNV-EBT3

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	70	70	70	70	69	69	69	69	66	66	66	63	63	63	60	60	60	59
1	65	63	61	59	64	61	59	58	59	57	56	57	55	54	55	54	53	51
2	60	56	52	49	59	55	51	49	53	50	47	51	48	46	49	47	45	44
3	55	50	45	42	54	49	45	42	47	44	41	46	43	40	44	42	39	38
4	51	45	40	36	50	44	40	36	42	39	36	41	38	35	40	37	35	34
5	47	40	36	32	46	40	35	32	39	35	31	37	34	31	36	33	31	30
6	44	37	32	28	43	36	32	28	35	31	28	34	31	28	33	30	28	26
7	41	34	29	26	40	33	29	25	32	28	25	32	28	25	31	27	25	24
8	38	31	26	23	38	31	26	23	30	26	23	29	25	23	28	25	23	22
9	36	29	24	21	35	28	24	21	28	24	21	27	23	21	27	23	21	20
10	34	27	22	19	33	26	22	19	26	22	19	25	22	19	25	21	19	18

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	14563	14563	14563
5°	15054	14539	14292
10°	15197	14487	14114
15°	14308	14372	13719
20°	13180	14198	12598
25°	11710	13959	10451
30°	9623	13652	8498
35°	7563	13278	6994
40°	6490	12834	6641
45°	6213	12294	6824
50°	6650	11643	6529
55°	7017	10823	5675
60°	7074	9814	5787
65°	6744	8544	6385
70°	7176	6917	6093
75°	6410	4937	5607
80°	4330	2810	2800
85°	1804	995	1161



TEST NUMBER: 236p165

CATALOG NUMBER: 2HBHD-654T5-CL-UNV-EBT3

ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	765.3	4.9	2.9	0°	8058	8058	8058	8058	8058	
10°-20°	2149.2	13.8	8.1	5°	8298	8229	8014	7875	7878	790
20°-30°	2945.0	18.8	11.2	15°	7647	8038	7681	7490	7332	2140
30°-40°	2928.0	18.7	11.1	25°	5872	6624	7000	6420	5241	2670
40°-50°	2549.8	16.3	9.7	35°	3428	4902	6018	4322	3170	2194
50°-60°	2037.7	13.0	7.7	45°	2431	2770	4810	2588	2670	1911
60°-70°	1405.7	9.0	5.3	55°	2227	1806	3435	1972	1801	1976
70°-80°	733.7	4.7	2.8	65°	1577	1388	1998	1109	1493	1599
80°-90°	112.9	0.7	0.4	75°	918	734	707	652	803	977
90°-100°	0.0	0.0	0.0	85°	87	84	48	55	56	140
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°	5859.5	37.5	22.2							
0°-40°	8787.6	56.2	33.3							
0°-60°	13375.1	85.6	50.7							
0°-90°	15627.3	100.0	59.2							
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°	15627.3	100.0	59.2							



TEST NUMBER: 236p165

CATALOG NUMBER: 2HBHD-654T5-CL-UNV-EBT3

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	8058	8058	8058	8058	8058	8058	8058	8058	8058
2.5°	8193	8183	8148	8109	8047	7981	7955	7959	7944
5°	8298	8283	8229	8136	8014	7911	7875	7890	7878
7.5°	8316	8296	8245	8149	7961	7830	7804	7791	7765
10°	8281	8261	8222	8130	7894	7758	7699	7689	7691
12.5°	8088	8133	8162	8070	7798	7648	7579	7593	7561
15°	7647	7794	8038	7978	7681	7516	7490	7385	7332
17.5°	7213	7347	7799	7861	7544	7362	7305	7091	6978
20°	6853	6947	7410	7718	7382	7180	7077	6718	6550
22.5°	6413	6598	7002	7541	7202	7000	6779	6220	5916
25°	5872	6117	6624	7334	7000	6816	6420	5560	5241
27.5°	5315	5593	6282	7076	6780	6598	5997	4933	4628
30°	4611	5011	5867	6755	6542	6336	5456	4355	4072
32.5°	3985	4350	5371	6373	6288	6050	4871	3813	3535
35°	3428	3761	4902	5958	6018	5743	4322	3341	3170
37.5°	3023	3245	4324	5553	5735	5400	3812	3016	2937
40°	2751	2869	3736	5171	5440	5027	3326	2827	2815
42.5°	2557	2624	3213	4803	5128	4631	2902	2705	2705
45°	2431	2440	2770	4406	4810	4187	2588	2578	2670
47.5°	2344	2291	2413	3971	4476	3714	2360	2525	2533
50°	2365	2203	2164	3529	4141	3225	2197	2404	2322
52.5°	2344	2218	1981	3073	3790	2764	2060	2156	2050
55°	2227	2160	1806	2596	3435	2337	1972	1883	1801
57.5°	2096	2027	1702	2122	3075	1940	1805	1639	1649
60°	1957	1887	1671	1748	2715	1613	1583	1511	1601
62.5°	1785	1725	1549	1400	2351	1360	1318	1438	1555
65°	1577	1540	1388	1165	1998	1145	1109	1381	1493
67.5°	1442	1341	1219	967	1644	977	1004	1309	1403
70°	1358	1227	1043	808	1309	825	911	1139	1153
72.5°	1201	1141	858	693	989	652	819	912	969
75°	918	885	734	540	707	477	652	741	803
77.5°	703	671	598	401	465	336	472	485	455
80°	416	400	394	278	270	248	309	299	269
82.5°	187	204	210	179	125	147	155	125	103
85°	87	84	84	84	48	64	55	56	56
87.5°	34	34	32	27	20	22	25	26	25
90°	0	0	0	0	0	0	0	0	0

(END OF REPORT)