

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: 134p135

Luminaire Tested: **WN-328T5-UNV-EBT2-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 134p135
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: WN-328T5-UNV-EBT2-U
Description: WRAPAROUND SERIES, 3 LAMP T5, WITH PRISMATIC WRAP LENS
Light Source: THREE LINEAR FLUORESCENT LAMPS, F28T5 28 W - 2600 LUMENS EA
Ballast/Driver: -

Summary

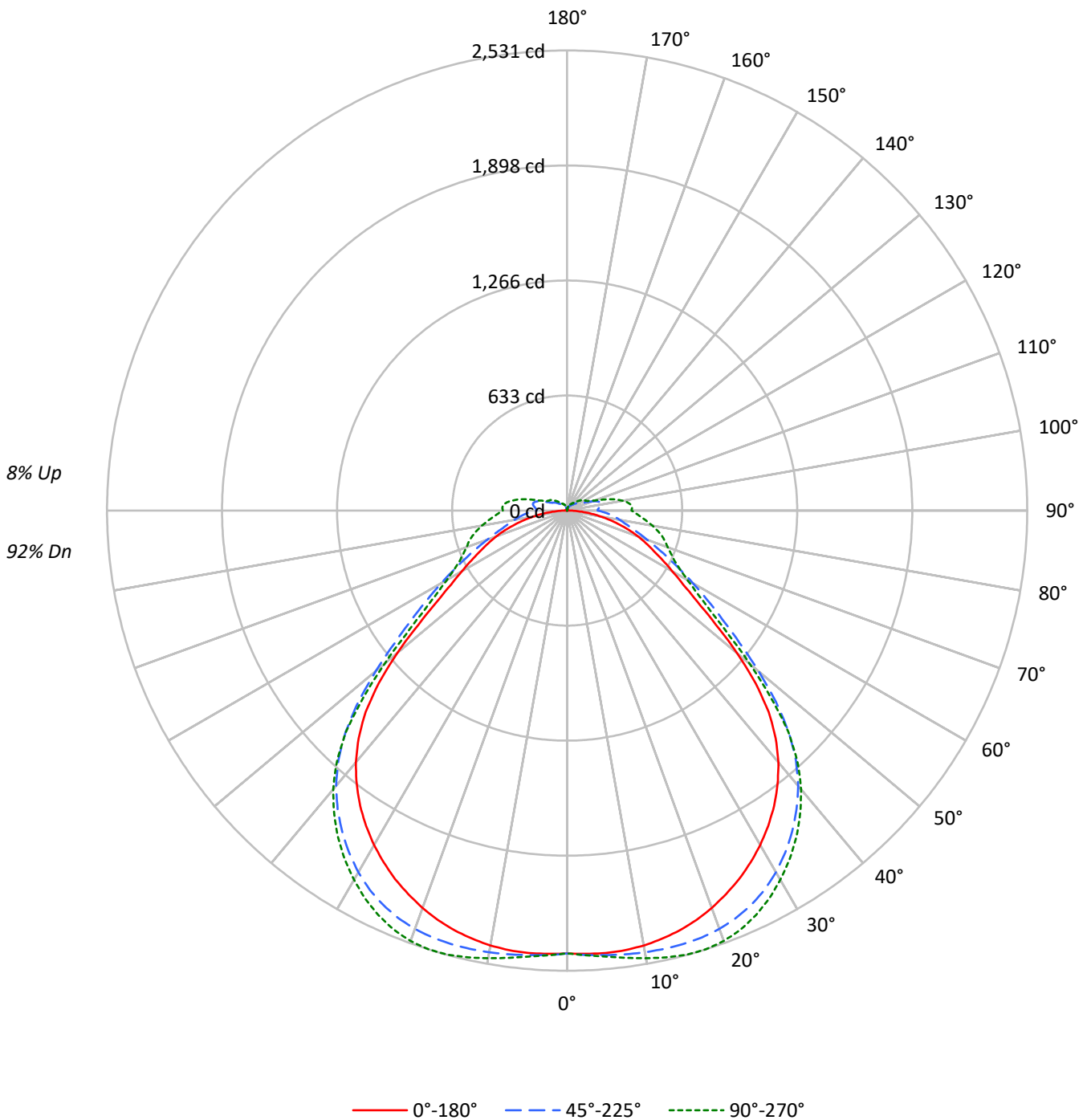
Lumens per Lamp: 2600 (3 lamps)
Luminaire Lumens: 7368.1 lumens
Efficiency: 94.5%
Efficacy: 76.0 lumens/watt
Spacing Criteria (0/90/45): 1.29 / 1.39 / 1.41
Luminous Opening: Rectangular (W 0.98' x L: 3.98' x H: 0')
CIE Type: Direct

Input Watts (W): 97
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	111	111	111	111	107	107	107	107	101	101	101	95	95	95	90	90	90	87
1	101	96	92	89	98	94	90	87	88	85	83	83	81	79	79	77	75	73
2	92	85	78	73	89	82	77	72	78	73	69	74	70	66	70	67	64	61
3	84	75	67	62	82	73	66	61	69	63	59	65	61	57	62	58	55	52
4	78	67	59	53	75	65	58	52	62	55	50	59	53	49	56	51	48	45
5	72	60	52	46	69	58	51	45	56	49	44	53	47	43	51	46	42	40
6	66	54	46	40	64	53	45	40	50	44	39	48	42	38	46	41	37	35
7	61	49	41	36	59	48	40	35	46	39	34	44	38	34	42	37	33	31
8	57	45	37	32	55	44	37	31	42	36	31	40	34	30	39	34	30	28
9	54	41	34	29	52	40	33	28	39	32	28	37	31	27	36	31	27	25
10	50	38	31	26	49	37	30	26	36	30	25	35	29	25	33	28	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6730	6730	6730
5°	6775	6805	6830
10°	6814	6921	7013
15°	6838	7059	7233
20°	6838	7200	7406
25°	6819	7297	7486
30°	6776	7327	7481
35°	6691	7275	7409
40°	6520	7130	7220
45°	6122	6732	6716
50°	5243	5901	5622
55°	4205	5019	4633
60°	3696	4415	4216
65°	3445	3981	4256
70°	3344	3772	4758
75°	3192	3885	5764
80°	2991	4677	7573
85°	2853	7449	12933



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	234.5	3.2	3.0	0°	2436	2436	2436	2436	2436	
10°-20°	696.4	9.5	8.9	5°	2443	2446	2454	2458	2463	233
20°-30°	1091.5	14.8	14.0	15°	2391	2414	2468	2511	2529	675
30°-40°	1327.2	18.0	17.0	25°	2237	2298	2394	2443	2456	1030
40°-50°	1285.1	17.4	16.5	35°	1984	2068	2157	2192	2197	1238
50°-60°	900.4	12.2	11.5	45°	1567	1651	1723	1736	1719	1191
60°-70°	592.1	8.0	7.6	55°	873	989	1042	1004	962	804
70°-80°	404.6	5.5	5.2	65°	527	526	609	633	651	527
80°-90°	262.6	3.6	3.4	75°	299	280	364	457	540	316
90°-100°	193.9	2.6	2.5	85°	90	133	235	348	408	93
100°-110°	158.5	2.2	2.0	90°	4	54	167	300	354	7
110°-120°	90.1	1.2	1.2	95°	0	53	176	314	353	1
120°-130°	58.9	0.8	0.8	105°	3	66	185	237	241	3
130°-140°	35.2	0.5	0.5	115°	5	56	105	123	124	5
140°-150°	20.6	0.3	0.3	125°	7	37	76	97	101	6
150°-160°	11.3	0.2	0.1	135°	8	28	50	63	68	6
160°-170°	4.8	0.1	0.1	145°	8	21	36	44	47	5
170°-180°	0.3	0.0	0.0	155°	9	15	26	33	35	4
0°-30°	2022.5	27.4	25.9	165°	12	12	16	20	24	3
0°-40°	3349.6	45.5	42.9	175°	0	0	0	0	0	0
0°-60°	5535.1	75.1	71.0	180°	0	0	0	0	0	0
0°-90°	6794.4	92.2	87.1							
90°-120°	442.6	6.0	5.7							
90°-150°	557.3	7.6	7.1							
90°-180°	574.0	7.8	7.4							
0°-180°	7368.1	100.0	94.5							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2436	2436	2436	2436	2436
2.5°	2440	2442	2447	2446	2448
5°	2443	2446	2454	2458	2463
7.5°	2439	2445	2462	2473	2481
10°	2429	2440	2467	2489	2500
12.5°	2412	2429	2469	2502	2517
15°	2391	2414	2468	2511	2529
17.5°	2362	2394	2462	2511	2531
20°	2326	2369	2449	2501	2519
22.5°	2283	2336	2426	2477	2494
25°	2237	2298	2394	2443	2456
27.5°	2183	2254	2351	2395	2406
30°	2124	2202	2297	2338	2345
32.5°	2057	2140	2232	2269	2276
35°	1984	2068	2157	2192	2197
37.5°	1901	1985	2073	2105	2105
40°	1808	1889	1977	2002	2002
42.5°	1698	1779	1863	1883	1876
45°	1567	1651	1723	1736	1719
47.5°	1406	1499	1557	1555	1518
50°	1220	1328	1373	1354	1308
52.5°	1030	1151	1195	1161	1116
55°	873	989	1042	1004	962
57.5°	757	847	911	881	848
60°	669	726	799	782	763
62.5°	593	620	698	700	699
65°	527	526	609	633	651
67.5°	469	447	533	578	617
70°	414	381	467	529	589
72.5°	358	327	411	490	566
75°	299	280	364	457	540
77.5°	242	237	325	428	509
80°	188	200	294	401	476
82.5°	136	166	265	375	441
85°	90	133	235	348	408
87.5°	45	94	202	322	380
90°	4	54	167	300	354
92.5°	0	51	169	307	357
95°	0	53	176	314	353
97.5°	1	57	185	308	337
100°	2	60	191	292	312
102.5°	3	63	192	268	280
105°	3	66	185	237	241
107.5°	4	67	170	199	198
110°	4	68	149	165	163



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	4	63	125	140	140
115°	5	56	105	123	124
117.5°	6	50	93	113	116
120°	6	44	87	109	112
122.5°	7	40	82	105	108
125°	7	37	76	97	101
127.5°	8	35	67	88	92
130°	7	33	60	80	83
132.5°	7	30	55	71	76
135°	8	28	50	63	68
137.5°	8	26	46	56	61
140°	8	25	43	53	55
142.5°	8	23	39	48	52
145°	8	21	36	44	47
147.5°	9	19	34	41	44
150°	9	18	31	38	41
152.5°	9	17	29	36	38
155°	9	15	26	33	35
157.5°	10	14	23	31	33
160°	10	13	21	28	30
162.5°	11	12	17	25	27
165°	12	12	16	20	24
167.5°	12	12	14	17	19
170°	12	13	12	14	16
172.5°	0	0	0	0	0
175°	0	0	0	0	0
177.5°	0	0	0	0	0
180°	0	0	0	0	0

(END OF REPORT)