

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: 236p155

Luminaire Tested: **2HBHD-632-CL-UNV-EB82**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 236p155
Test Lab: METALUXLABORATORIES
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2HBHD-632-CL-UNV-EB82
Description: 2HBHD SERIES LUMINAIRE WITH SPECULAR ALUMINUM MEDIUM
DISTRIBUTION REFLECTOR AND CLEAR ACRYLIC LENS AND DOORFRAME
Light Source: SIX 32 WATT T8 - 3000 LUMENS EA - F32T8/TL835
Ballast/Driver: ONE GE 4X32MAXH/ULTRA AND ONE GE 2X32MAXH/ULTRA

Summary

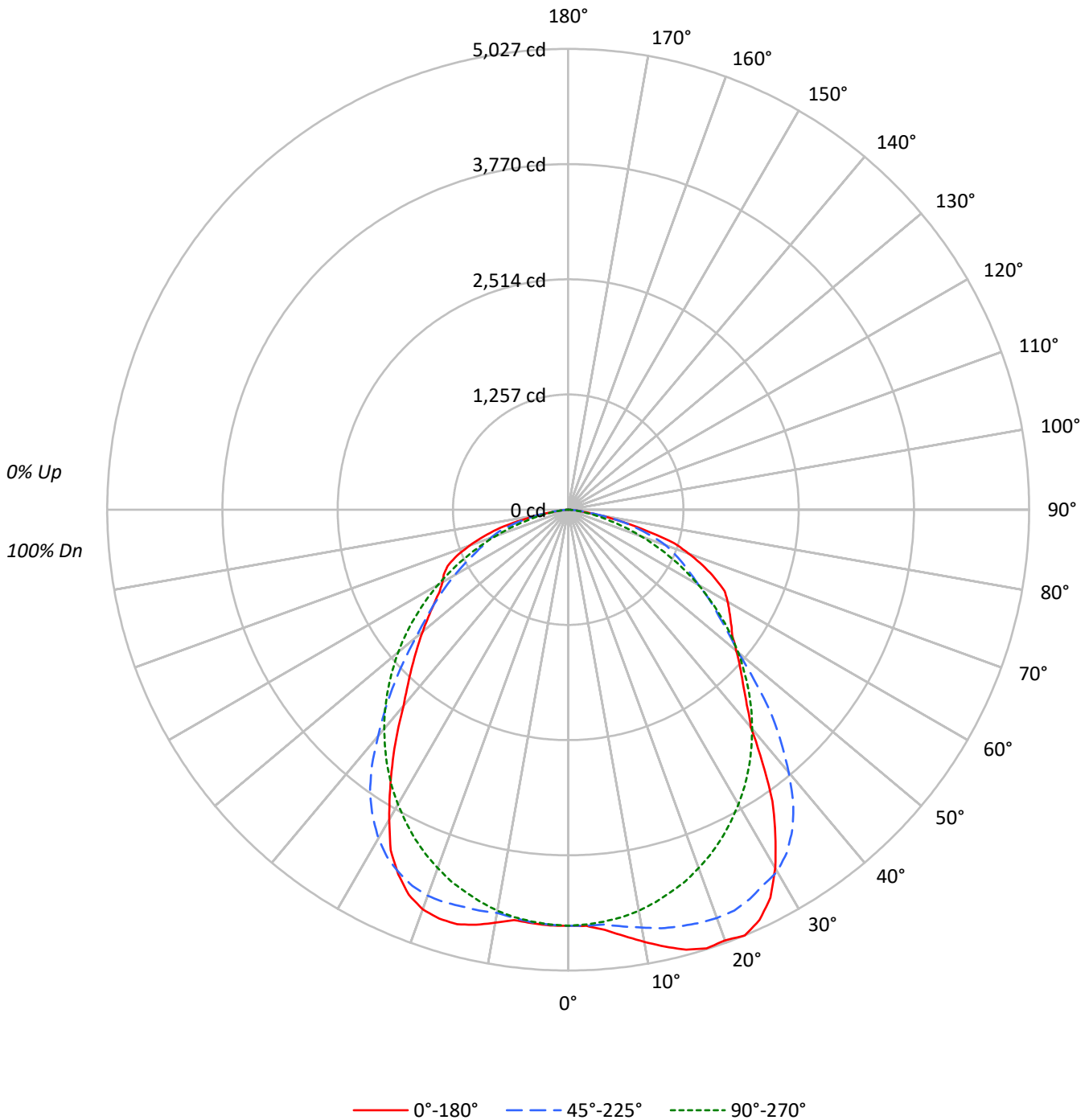
Lumens per Lamp: 3000 (6 lamps)
Luminaire Lumens: 12256.4 lumens
Efficiency: 68.1%
Efficacy: 63.2 lumens/watt
Spacing Criteria (0/90/45): 1.3 / 1.22 / 1.37
Luminous Opening: Rectangular (W 3.63' x L: 1.65' x H: 0')
CIE Type: Direct

Input Watts (W): 194
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	81	81	81	81	79	79	79	79	76	76	76	72	72	72	69	69	69	68
1	75	72	69	66	73	70	68	65	67	65	63	65	63	61	62	61	60	58
2	68	63	58	55	66	62	58	54	59	56	53	57	54	52	55	53	50	49
3	62	56	50	46	61	54	50	46	52	48	45	51	47	44	49	46	43	42
4	57	49	44	39	56	49	43	39	47	42	38	45	41	38	44	40	37	36
5	53	44	38	34	51	44	38	34	42	37	33	41	37	33	40	36	33	31
6	49	40	34	30	48	39	34	30	38	33	29	37	33	29	36	32	29	28
7	45	36	31	27	44	36	30	26	35	30	26	34	29	26	33	29	26	25
8	42	33	28	24	41	33	27	24	32	27	24	31	27	23	30	26	23	22
9	40	31	25	21	39	30	25	21	29	25	21	29	24	21	28	24	21	20
10	37	28	23	19	36	28	23	19	27	23	19	27	22	19	26	22	19	18

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	8150	8150	8150
5°	8294	8130	8161
10°	8730	8100	8343
15°	9239	8030	8705
20°	9554	7950	8866
25°	9785	7843	8693
30°	9361	7696	8094
35°	8511	7529	7307
40°	7268	7317	6543
45°	6847	7066	6101
50°	6683	6761	5792
55°	6791	6372	5580
60°	7212	5883	5682
65°	7488	5248	6170
70°	7351	4426	5996
75°	6071	3365	5350
80°	3671	2182	3154
85°	1587	989	1010



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	433.6	3.5	2.4	0°	4538	4538	4538	4538	4538	
10°-20°	1296.2	10.6	7.2	5°	4601	4543	4510	4518	4527	445
20°-30°	2032.8	16.6	11.3	15°	4969	4705	4319	4481	4682	1404
30°-40°	2350.1	19.2	13.1	25°	4938	4685	3958	4368	4387	2249
40°-50°	2189.2	17.9	12.2	35°	3882	4262	3434	3768	3333	2397
50°-60°	1809.8	14.8	10.1	45°	2696	3118	2782	2683	2402	2097
60°-70°	1331.0	10.9	7.4	55°	2169	1992	2035	1773	1782	1950
70°-80°	705.0	5.8	3.9	65°	1762	1377	1235	1115	1452	1728
80°-90°	108.7	0.9	0.6	75°	875	772	485	629	771	937
90°-100°	0.0	0.0	0.0	85°	77	76	48	60	49	121
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°	3762.6	30.7	20.9							
0°-40°	6112.7	49.9	34.0							
0°-60°	10111.7	82.5	56.2							
0°-90°	12256.4	100.0	68.1							
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°	12256.4	100.0	68.1							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	4538	4538	4538	4538	4538	4538	4538	4538	4538
2.5°	4544	4548	4542	4537	4528	4526	4531	4536	4540
5°	4601	4582	4543	4522	4510	4511	4518	4530	4527
7.5°	4691	4656	4585	4503	4483	4487	4491	4511	4515
10°	4787	4747	4628	4491	4442	4449	4467	4555	4575
12.5°	4882	4814	4677	4469	4386	4401	4478	4594	4637
15°	4969	4891	4705	4450	4319	4358	4481	4640	4682
17.5°	5017	4943	4728	4418	4250	4317	4489	4647	4677
20°	4999	4943	4740	4386	4160	4269	4481	4617	4639
22.5°	5027	4928	4733	4339	4065	4225	4441	4541	4545
25°	4938	4895	4685	4282	3958	4164	4368	4419	4387
27.5°	4773	4782	4613	4203	3839	4086	4273	4247	4189
30°	4514	4586	4559	4125	3711	4002	4139	4015	3903
32.5°	4204	4305	4436	4035	3579	3893	3968	3719	3613
35°	3882	3996	4262	3936	3434	3765	3768	3447	3333
37.5°	3479	3672	4033	3820	3279	3613	3514	3165	3060
40°	3100	3284	3739	3671	3121	3440	3224	2897	2791
42.5°	2883	2936	3435	3515	2955	3252	2952	2659	2586
45°	2696	2721	3118	3365	2782	3031	2683	2449	2402
47.5°	2542	2521	2749	3199	2600	2786	2418	2258	2232
50°	2392	2375	2414	2992	2420	2550	2167	2102	2073
52.5°	2255	2208	2196	2750	2230	2297	1958	1922	1921
55°	2169	2072	1992	2493	2035	2038	1773	1762	1782
57.5°	2086	1976	1825	2199	1837	1778	1600	1619	1662
60°	2008	1878	1643	1891	1638	1542	1431	1494	1582
62.5°	1923	1784	1498	1585	1436	1338	1267	1422	1530
65°	1762	1671	1377	1285	1235	1126	1115	1345	1452
67.5°	1590	1495	1252	1060	1036	939	993	1247	1315
70°	1400	1312	1131	875	843	771	900	1081	1142
72.5°	1210	1123	954	696	658	633	787	911	962
75°	875	869	772	550	485	506	629	745	771
77.5°	598	582	593	421	337	384	476	514	514
80°	355	357	360	301	211	268	314	313	305
82.5°	163	171	191	180	109	159	160	144	131
85°	77	75	76	79	48	66	60	52	49
87.5°	29	29	28	24	18	20	23	25	25
90°	0	0	0	0	0	0	0	0	0

(END OF REPORT)