

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: 236p269

Luminaire Tested: **HBL-454T5-N-UNV-EBT1-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 236p269
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBL-454T5-N-UNV-EBT1-U
Description: OPEN HIGH BAY LUMINAIRE WITH SPECULAR REFLECTOR, NARROW DISTRIBUTION
NO UPLIGHT
Light Source: -
FOUR 54 WATT T5HO - 4400 LUMENS EA
Ballast/Driver: -

Summary

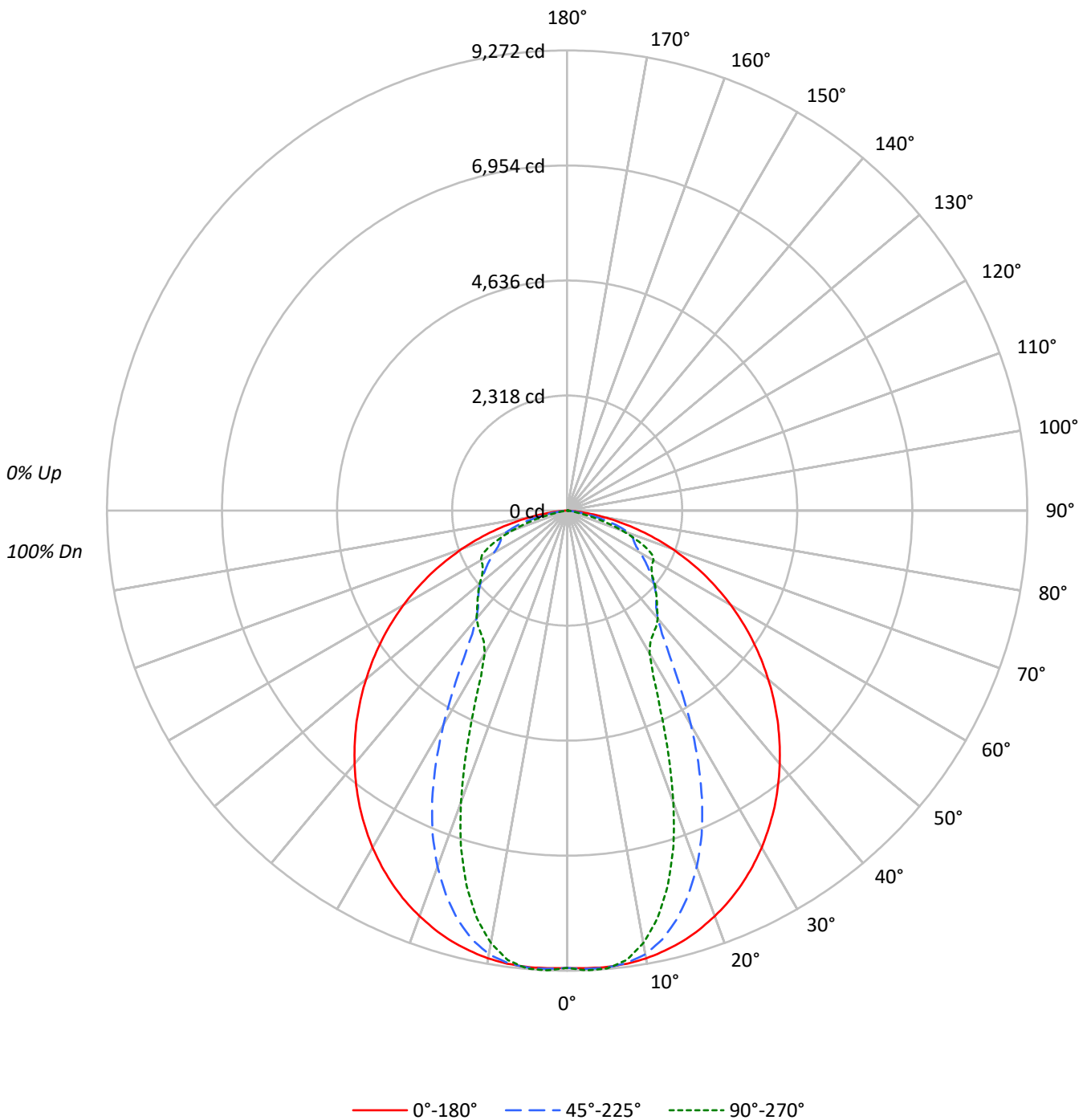
Lumens per Lamp: 4400 (4 lamps)
Luminaire Lumens: 16507.6 lumens
Efficiency: 93.8%
Efficacy: 74.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 0.79 / 0.93
Luminous Opening: Rectangular (W 1.56' x L: 3.75' x H: 0')
CIE Type: Direct

Input Watts (W): 221
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	112	112	112	112	109	109	109	109	104	104	104	100	100	100	96	96	96	94
1	103	99	96	92	101	97	94	91	93	90	88	90	87	85	86	84	83	81
2	95	88	82	77	92	86	81	76	83	78	74	80	76	73	77	74	71	69
3	87	78	71	66	85	77	70	65	74	68	64	71	67	63	69	65	62	60
4	81	70	63	57	78	69	62	56	67	61	56	65	59	55	63	58	54	52
5	75	63	56	50	73	62	55	50	61	54	49	59	53	49	57	52	48	46
6	69	58	50	44	68	57	50	44	55	49	44	54	48	44	52	47	43	41
7	65	53	45	40	63	52	45	40	51	44	40	50	44	39	48	43	39	37
8	61	49	41	36	59	48	41	36	47	41	36	46	40	36	45	40	36	34
9	57	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31
10	54	42	35	31	53	42	35	30	41	35	30	40	34	30	39	34	30	29

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	16930	16930	16930
5°	17024	17043	17080
10°	17092	16930	16505
15°	17088	16219	14878
20°	17002	14930	12236
25°	16854	13037	9038
30°	16633	10568	7030
35°	16340	8125	6782
40°	15983	6808	6803
45°	15583	6581	6635
50°	15121	6525	6596
55°	14608	6358	6649
60°	13995	6264	7385
65°	13219	6464	7572
70°	12074	7197	6300
75°	10398	6168	4195
80°	7744	3576	1365
85°	3857	569	422



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	875.7	5.3	5.0	0°	9216	9216	9216	9216	9216	
10°-20°	2363.5	14.3	13.4	5°	9232	9238	9242	9239	9262	879
20°-30°	2946.5	17.8	16.7	15°	8985	8932	8528	8040	7823	2534
30°-40°	2844.5	17.2	16.2	25°	8315	7924	6432	4959	4459	3829
40°-50°	2605.9	15.8	14.8	35°	7286	6271	3623	3026	3024	4554
50°-60°	2148.3	13.0	12.2	45°	5998	4117	2533	2578	2554	4624
60°-70°	1705.4	10.3	9.7	55°	4561	2172	1985	2021	2076	4075
70°-80°	891.0	5.4	5.1	65°	3041	1345	1487	1751	1742	3003
80°-90°	126.7	0.8	0.7	75°	1465	786	869	670	591	1555
90°-100°	0.0	0.0	0.0	85°	183	134	27	19	20	274
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°	6185.7	37.5	35.1							
0°-40°	9030.3	54.7	51.3							
0°-60°	13784.5	83.5	78.3							
0°-90°	16507.6	100.0	93.8							
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°	16507.6	100.0	93.8							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	9216	9216	9216	9216	9216
2.5°	9227	9233	9243	9247	9272
5°	9232	9238	9242	9239	9262
7.5°	9209	9215	9194	9145	9136
10°	9163	9160	9076	8911	8848
12.5°	9085	9066	8851	8533	8411
15°	8985	8932	8528	8040	7823
17.5°	8855	8751	8118	7413	7115
20°	8697	8523	7637	6665	6259
22.5°	8520	8246	7077	5828	5333
25°	8315	7924	6432	4959	4459
27.5°	8087	7562	5719	4159	3749
30°	7841	7167	4982	3554	3314
32.5°	7571	6731	4257	3189	3124
35°	7286	6271	3623	3026	3024
37.5°	6982	5772	3140	2923	2944
40°	6665	5245	2839	2852	2837
42.5°	6334	4686	2657	2746	2683
45°	5998	4117	2533	2578	2554
47.5°	5646	3556	2416	2425	2427
50°	5291	3015	2283	2292	2308
52.5°	4927	2547	2131	2168	2160
55°	4561	2172	1985	2021	2076
57.5°	4186	1883	1846	1936	2020
60°	3809	1674	1705	1886	2010
62.5°	3426	1502	1569	1862	1936
65°	3041	1345	1487	1751	1742
67.5°	2644	1196	1431	1530	1467
70°	2248	1048	1340	1246	1173
72.5°	1856	899	1134	957	879
75°	1465	786	869	670	591
77.5°	1090	693	599	396	329
80°	732	561	338	175	129
82.5°	411	348	124	49	37
85°	183	134	27	19	20
87.5°	50	16	16	19	21
90°	0	0	0	0	0

(END OF REPORT)