

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: 236P253

Luminaire Tested: **HBL-854T5-N-UNV-EBT2-UPL-U**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 236P253
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: HBL-854T5-N-UNV-EBT2-UPL-U
Description: OPEN HIGH BAY LUMINAIRE WITH SPECULAR REFLECTOR, NARROW
DISTRIBUTION WITH UPLIGHT
Light Source: EIGHT 54 WATT T5HO - 4400 LUMENS EA
Ballast/Driver: -

Summary

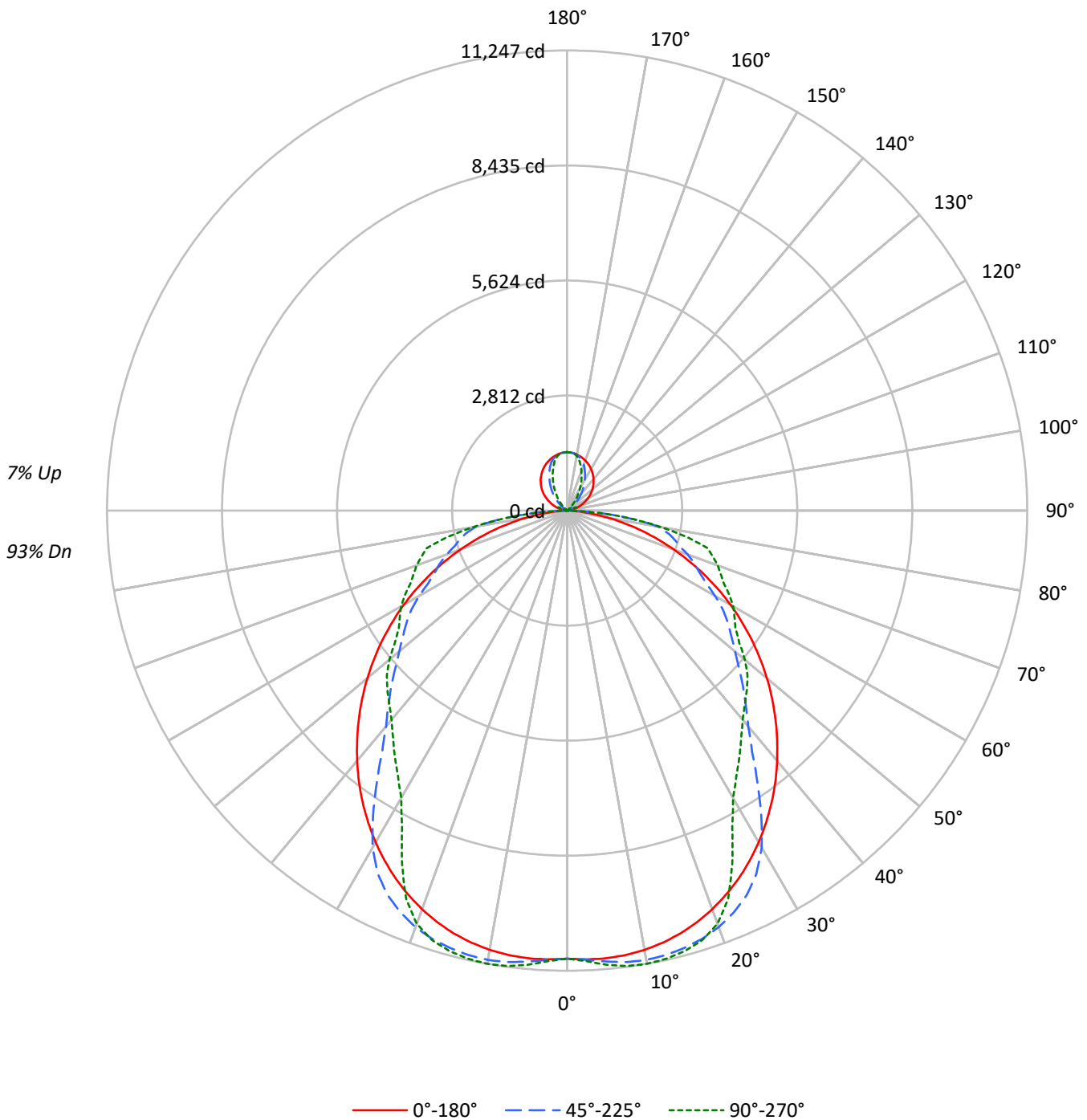
Lumens per Lamp: 4400 (8 lamps)
Luminaire Lumens: 33097.6 lumens
Efficiency: 94.0%
Efficacy: 71.2 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.12 / 1.26
Luminous Opening: Rectangular (W 2.08' x L: 3.75' x H: 0')
CIE Type: Direct

Input Watts (W): 465
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	110	110	110	110	107	107	107	107	101	101	101		95	95	95		90	90	90	88
1	100	95	91	87	97	93	89	85	87	84	81		83	80	78		78	76	74	72
2	91	83	76	71	88	81	75	69	76	71	67		72	68	64		68	65	62	60
3	83	73	65	59	80	71	64	58	67	61	56		64	58	54		60	56	52	50
4	76	65	56	50	73	63	55	49	60	53	48		57	51	46		54	49	45	43
5	70	58	49	43	67	56	48	42	54	47	41		51	45	40		49	44	39	37
6	65	52	44	38	62	51	43	37	48	42	36		46	40	36		44	39	35	33
7	60	47	39	33	58	46	38	33	44	37	32		42	36	32		40	35	31	29
8	56	43	35	30	54	42	35	29	40	34	29		39	33	28		37	32	28	26
9	52	40	32	27	51	39	32	27	37	31	26		36	30	26		34	29	25	23
10	49	37	29	24	47	36	29	24	35	28	24		33	27	23		32	27	23	21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15088	15088	15088
5°	15191	15302	15414
10°	15254	15602	15735
15°	15262	15786	15890
20°	15203	15885	15753
25°	15082	15769	14509
30°	14899	15131	12902
35°	14657	13629	12349
40°	14360	12383	12002
45°	14029	11841	12100
50°	13667	11480	12151
55°	13231	11523	12061
60°	12717	11502	12918
65°	12030	11622	13784
70°	11126	12601	15763
75°	9949	14426	18908
80°	8212	17979	18582
85°	5153	15745	15160



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	1057.7	3.2	3.0	0°	10951	10951	10951	10951	10951	
10°-20°	3103.2	9.4	8.8	5°	10984	11008	11064	11114	11145	###
20°-30°	4601.6	13.9	13.1	15°	10700	10907	11067	11103	11140	3018
30°-40°	5106.6	15.4	14.5	25°	9921	10233	10373	9871	9544	4569
40°-50°	5066.6	15.3	14.4	35°	8714	9074	8103	7397	7342	5447
50°-60°	4488.0	13.6	12.7	45°	7200	7392	6077	6105	6210	5553
60°-70°	3679.4	11.1	10.5	55°	5508	4931	4797	4944	5021	4921
70°-80°	2755.1	8.3	7.8	65°	3690	3154	3565	4103	4228	3650
80°-90°	974.1	2.9	2.8	75°	1869	1863	2710	3355	3552	1982
90°-100°	46.3	0.1	0.1	85°	326	901	996	982	959	419
100°-110°	103.2	0.3	0.3	90°	8	13	12	10	9	20
110°-120°	127.2	0.4	0.4	95°	34	39	48	41	28	51
120°-130°	211.3	0.6	0.6	105°	219	30	143	87	53	233
130°-140°	345.7	1.0	1.0	115°	450	146	38	40	40	447
140°-150°	461.0	1.4	1.3	125°	691	412	106	39	38	618
150°-160°	475.2	1.4	1.4	135°	907	707	372	184	135	700
160°-170°	361.8	1.1	1.0	145°	1092	992	696	505	445	683
170°-180°	133.9	0.4	0.4	155°	1242	1212	1029	873	824	572
0°-30°	8762.4	26.5	24.9	165°	1351	1347	1308	1240	1214	381
0°-40°	13869.0	41.9	39.4	175°	1416	1418	1416	1413	1417	134
0°-60°	23423.5	70.8	66.5	180°	1429	1429	1429	1429	1429	
0°-90°	30832.1	93.2	87.6							
90°-120°	276.7	0.8	0.8							
90°-150°	1294.6	3.9	3.7							
90°-180°	2265.0	6.8	6.4							
0°-180°	33097.6	100.0	94.0							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	10951	10951	10951	10951	10951
2.5°	10980	10979	10990	11009	11024
5°	10984	11008	11064	11114	11145
7.5°	10958	11026	11130	11193	11227
10°	10903	11017	11152	11218	11247
12.5°	10816	10981	11128	11188	11220
15°	10700	10907	11067	11103	11140
17.5°	10548	10794	10974	10986	11004
20°	10369	10643	10834	10790	10744
22.5°	10158	10452	10634	10442	10277
25°	9921	10233	10373	9871	9544
27.5°	9655	9986	10012	9126	8735
30°	9365	9701	9511	8363	8110
32.5°	9047	9392	8830	7790	7695
35°	8714	9074	8103	7397	7342
37.5°	8358	8727	7426	7032	6989
40°	7984	8340	6885	6674	6673
42.5°	7599	7892	6466	6362	6426
45°	7200	7392	6077	6105	6210
47.5°	6790	6815	5693	5881	5978
50°	6376	6190	5356	5637	5669
52.5°	5943	5539	5059	5310	5303
55°	5508	4931	4797	4944	5021
57.5°	5062	4393	4514	4684	4850
60°	4615	3954	4174	4517	4688
62.5°	4154	3537	3817	4338	4471
65°	3690	3154	3565	4103	4228
67.5°	3222	2806	3364	3849	4060
70°	2762	2504	3128	3696	3913
72.5°	2312	2182	2881	3510	3728
75°	1869	1863	2710	3355	3552
77.5°	1440	1617	2515	2980	2998
80°	1035	1387	2266	2344	2342
82.5°	653	1173	1657	1667	1646
85°	326	901	996	982	959
87.5°	89	374	369	342	324
90°	8	13	12	10	9
92.5°	43	58	62	42	24
95°	34	39	48	41	28
97.5°	72	64	45	39	34
100°	117	39	44	42	39
102.5°	164	34	107	44	45
105°	219	30	143	87	53
107.5°	276	34	48	210	168
110°	333	54	38	154	239



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	392	94	37	47	101
115°	450	146	38	40	40
117.5°	512	208	40	39	41
120°	572	273	46	39	40
122.5°	634	343	69	41	41
125°	691	412	106	39	38
127.5°	750	487	166	52	45
130°	804	558	229	76	55
132.5°	856	633	299	122	82
135°	907	707	372	184	135
137.5°	956	780	449	257	202
140°	1006	854	530	337	279
142.5°	1048	923	610	418	358
145°	1092	992	696	505	445
147.5°	1133	1053	778	593	536
150°	1171	1112	860	684	629
152.5°	1210	1166	946	780	727
155°	1242	1212	1029	873	824
157.5°	1271	1253	1111	967	923
160°	1300	1286	1188	1060	1020
162.5°	1327	1319	1255	1155	1118
165°	1351	1347	1308	1240	1214
167.5°	1372	1369	1348	1309	1294
170°	1390	1390	1379	1359	1355
172.5°	1405	1406	1401	1392	1394
175°	1416	1418	1416	1413	1417
177.5°	1425	1424	1424	1424	1427
180°	1429	1429	1429	1429	1429

(END OF REPORT)