

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: 165P104

Luminaire Tested: **UT-232A**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: 165P104
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: UT-232A
Description: UT Series Surface Luminaire with a pattern 12
acrylic lens.
Light Source: Two-FO32T8/35K - 2850 Lumens ea. - 32 Watts ea.
Ballast/Driver: Triad B232I120RH Electronic; L.O.B.F. = 87.16

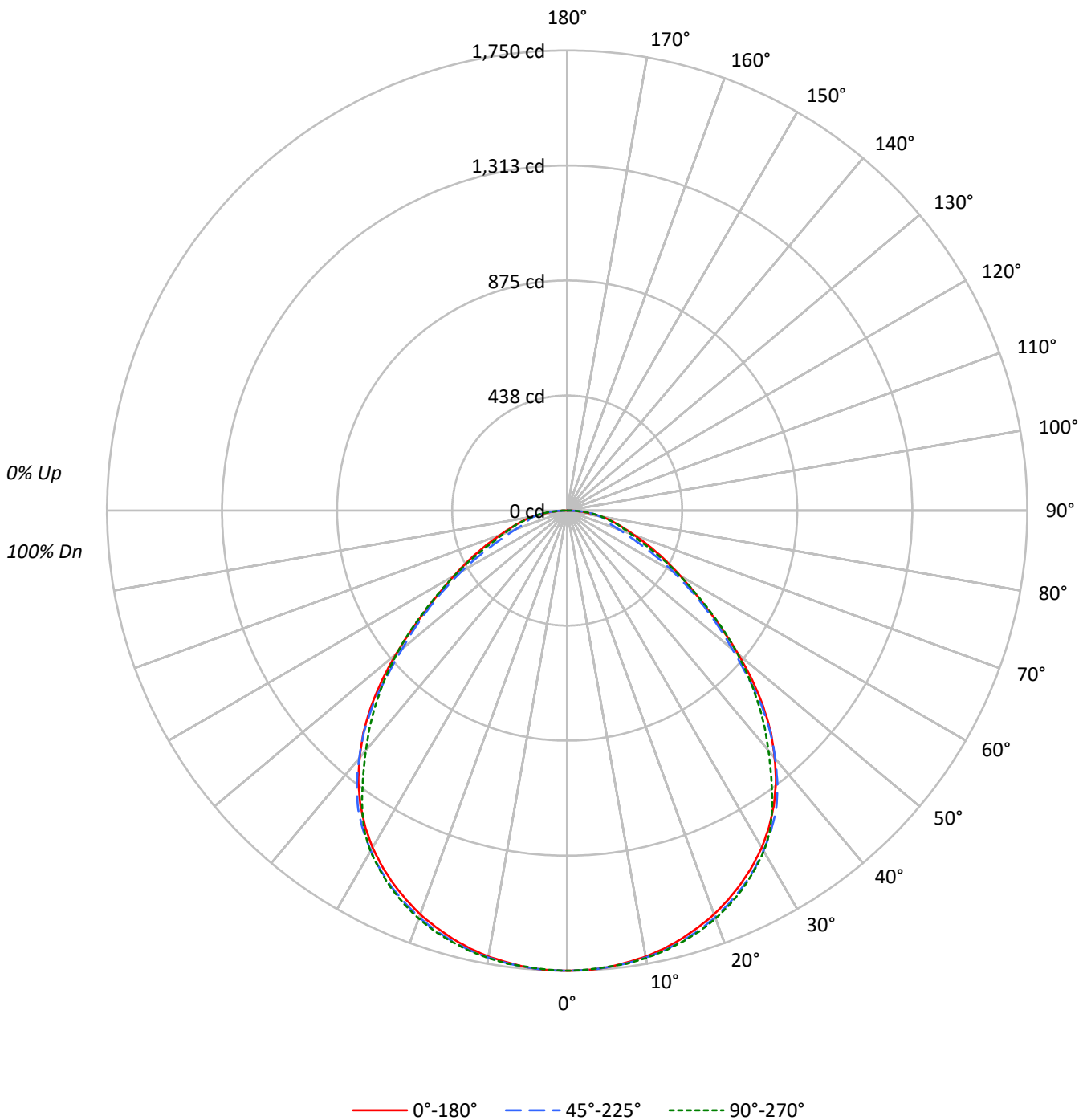
Summary

Lumens per Lamp: 2850 (2 lamps)
Luminaire Lumens: 4207.2 lumens
Efficiency: 73.8%
Efficacy: 73.3 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.26 / 1.32
Luminous Opening: Rectangular (W 0.75' x L: 3.93' x H: 0')
CIE Type: Direct

Input Watts (W): 57.4
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	50	30	10	0	
RCR																						
0	88	88	88	88	86	86	86	86	82	82	82	79	79	79	75	75	75	74				74
1	81	78	75	72	79	76	74	71	73	71	69	70	68	67	68	66	65	63				63
2	74	69	64	60	73	67	63	60	65	61	58	62	60	57	60	58	56	54				54
3	68	61	56	51	67	60	55	51	58	53	50	56	52	49	54	51	48	47				47
4	63	55	49	44	61	54	48	44	52	47	43	50	46	43	49	45	42	41				41
5	58	49	43	38	57	48	43	38	47	42	38	46	41	37	44	40	37	36				36
6	54	45	38	34	53	44	38	34	43	37	33	41	37	33	40	36	33	31				31
7	50	41	34	30	49	40	34	30	39	34	30	38	33	30	37	33	29	28				28
8	47	37	31	27	46	37	31	27	36	31	27	35	30	27	34	30	27	25				25
9	44	34	28	25	43	34	28	24	33	28	24	32	28	24	31	27	24	23				23
10	41	32	26	22	40	31	26	22	31	26	22	30	25	22	29	25	22	21				21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6396	6396	6396
5°	6398	6398	6391
10°	6390	6405	6413
15°	6375	6409	6421
20°	6355	6401	6421
25°	6311	6367	6387
30°	6246	6305	6313
35°	6112	6184	6068
40°	5858	5873	5682
45°	5453	5396	5287
50°	4833	4662	4804
55°	4142	4052	4192
60°	3633	3399	3603
65°	3251	2715	3061
70°	2896	2201	2735
75°	2768	2231	2725
80°	2778	2673	2757
85°	2600	3061	2935



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	165.9	3.9	2.9	0°	1750	1750	1750	1750	1750	
10°-20°	477.9	11.4	8.4	5°	1744	1743	1744	1746	1742	166
20°-30°	726.5	17.3	12.7	15°	1685	1687	1694	1699	1697	476
30°-40°	855.2	20.3	15.0	25°	1565	1571	1579	1585	1584	721
40°-50°	797.7	19.0	14.0	35°	1370	1377	1386	1369	1360	854
50°-60°	581.9	13.8	10.2	45°	1055	1047	1044	1040	1023	808
60°-70°	344.0	8.2	6.0	55°	650	653	636	650	658	588
70°-80°	185.7	4.4	3.3	65°	376	343	314	344	354	374
80°-90°	72.5	1.7	1.3	75°	196	168	158	172	193	209
90°-100°	0.0	0.0	0.0	85°	62	69	73	70	70	65
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	4
110°-120°	0.0	0.0	0.0	95°	0	0	0	0	0	0
120°-130°	0.0	0.0	0.0	105°	0	0	0	0	0	0
130°-140°	0.0	0.0	0.0	115°	0	0	0	0	0	0
140°-150°	0.0	0.0	0.0	125°	0	0	0	0	0	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	0	0	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	0	0	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	1370.3	32.6	24.0	165°	0	0	0	0	0	0
0°-40°	2225.5	52.9	39.0	175°	0	0	0	0	0	0
0°-60°	3605.0	85.7	63.2	180°	0	0	0	0	0	0
0°-90°	4207.2	100.0	73.8							
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°	4207.2	100.0	73.8							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1750	1750	1750	1750	1750
2.5°	1749	1748	1749	1750	1748
5°	1744	1743	1744	1746	1742
7.5°	1734	1734	1737	1739	1738
10°	1722	1723	1726	1730	1728
12.5°	1706	1707	1713	1717	1715
15°	1685	1687	1694	1699	1697
17.5°	1661	1665	1672	1678	1677
20°	1634	1637	1646	1653	1651
22.5°	1601	1607	1614	1622	1620
25°	1565	1571	1579	1585	1584
27.5°	1525	1531	1539	1545	1542
30°	1480	1485	1494	1498	1496
32.5°	1428	1434	1443	1443	1438
35°	1370	1377	1386	1369	1360
37.5°	1304	1310	1314	1283	1275
40°	1228	1233	1231	1201	1191
42.5°	1147	1145	1144	1122	1110
45°	1055	1047	1044	1040	1023
47.5°	955	939	927	940	935
50°	850	834	820	832	845
52.5°	745	739	726	737	752
55°	650	653	636	650	658
57.5°	568	570	549	565	571
60°	497	489	465	485	493
62.5°	434	411	386	412	422
65°	376	343	314	344	354
67.5°	320	281	253	287	298
70°	271	231	206	239	256
72.5°	230	194	174	201	223
75°	196	168	158	172	193
77.5°	166	145	145	148	162
80°	132	125	127	126	131
82.5°	97	100	103	101	101
85°	62	69	73	70	70
87.5°	31	32	34	33	32
90°	0	0	0	0	0
92.5°	0	0	0	0	0
95°	0	0	0	0	0
97.5°	0	0	0	0	0
100°	0	0	0	0	0
102.5°	0	0	0	0	0
105°	0	0	0	0	0
107.5°	0	0	0	0	0
110°	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	0	0	0	0	0
115°	0	0	0	0	0
117.5°	0	0	0	0	0
120°	0	0	0	0	0
122.5°	0	0	0	0	0
125°	0	0	0	0	0
127.5°	0	0	0	0	0
130°	0	0	0	0	0
132.5°	0	0	0	0	0
135°	0	0	0	0	0
137.5°	0	0	0	0	0
140°	0	0	0	0	0
142.5°	0	0	0	0	0
145°	0	0	0	0	0
147.5°	0	0	0	0	0
150°	0	0	0	0	0
152.5°	0	0	0	0	0
155°	0	0	0	0	0
157.5°	0	0	0	0	0
160°	0	0	0	0	0
162.5°	0	0	0	0	0
165°	0	0	0	0	0
167.5°	0	0	0	0	0
170°	0	0	0	0	0
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)