

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: 121P115

Luminaire Tested: **WS-432AT**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 121P115
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: WS-432AT
Description: WS Series (Wide Housing) wraparound with
a tinted acrylic lens.
Light Source: Four - FO32T8/35K - 2800 Lumens ea. - 32 Watts ea.
Ballast/Driver: Magnetek B432I120RH Electronic - L.O.B.F. = 89.7

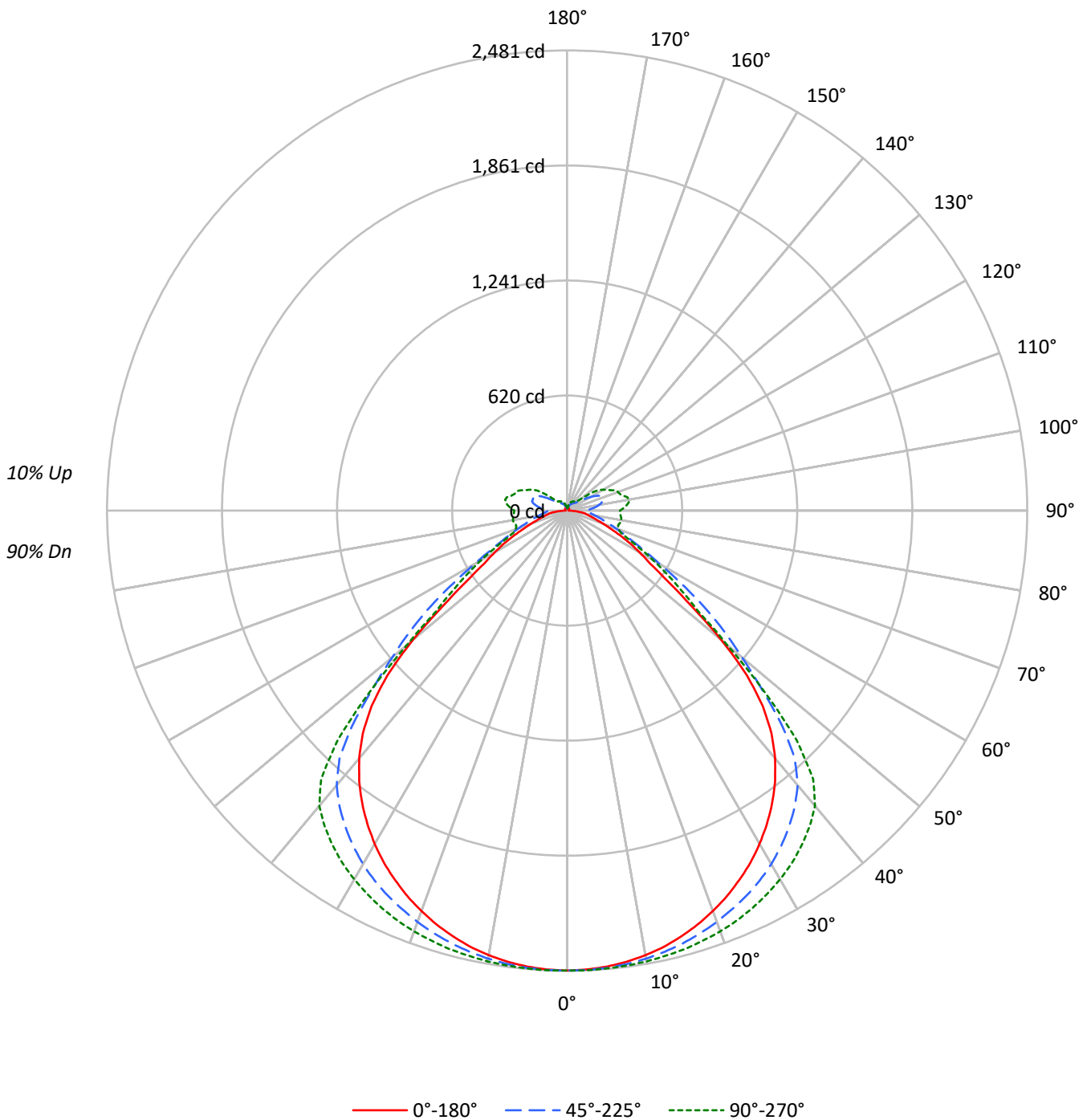
Summary

Lumens per Lamp: 2800 (4 lamps)
Luminaire Lumens: 6693.0 lumens
Efficiency: 59.8%
Efficacy: 61.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.37 / 1.38
Luminous Opening: Rectangular w/ Sides (W: 1.29' x L: 3.98' x H: 0.17')
CIE Type: Semi-Direct

Input Watts (W): 109.2
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	70	70	70	70	67	67	67	67	63	63	63	59	59	59	55	55	55	54
1	64	62	59	57	62	60	57	56	56	54	53	53	51	50	50	48	48	46
2	59	55	51	48	57	53	50	47	50	47	45	47	45	43	44	43	41	39
3	54	49	44	41	52	47	43	40	45	41	38	42	39	37	40	38	36	34
4	50	44	39	35	48	42	38	35	40	36	33	38	35	32	36	33	31	30
5	46	39	34	31	45	38	34	30	36	32	29	34	31	28	33	30	28	26
6	43	35	31	27	41	35	30	27	33	29	26	31	28	25	30	27	25	23
7	40	32	27	24	38	32	27	24	30	26	23	29	25	23	27	24	22	21
8	37	30	25	22	36	29	24	21	28	24	21	26	23	20	25	22	20	19
9	35	27	23	19	34	27	22	19	25	22	19	24	21	18	23	20	18	17
10	33	25	21	18	31	25	20	17	24	20	17	23	19	17	22	19	16	15

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5215	5215	5215
5°	5190	5169	5172
10°	5159	5128	5152
15°	5117	5092	5150
20°	5063	5058	5158
25°	4999	5029	5172
30°	4919	4994	5186
35°	4805	4931	5187
40°	4624	4816	5147
45°	4255	4347	4602
50°	3380	3516	3182
55°	2259	2797	2329
60°	1764	1995	1844
65°	1424	1536	1417
70°	1125	1277	1337
75°	984	1135	1572
80°	978	1091	2073
85°	881	1213	2810



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	235.4	3.5	2.1	0°	2480	2480	2480	2480	2480	
10°-20°	681.7	10.2	6.1	5°	2468	2471	2475	2474	2478	235
20°-30°	1053.5	15.7	9.4	15°	2377	2390	2415	2434	2448	671
30°-40°	1295.6	19.4	11.6	25°	2197	2225	2290	2343	2364	1012
40°-50°	1227.6	18.3	11.0	35°	1927	1974	2084	2173	2204	1202
50°-60°	728.3	10.9	6.5	45°	1491	1559	1639	1712	1748	1126
60°-70°	384.4	5.7	3.4	55°	653	827	895	761	753	620
70°-80°	229.9	3.4	2.1	65°	312	363	389	416	364	314
80°-90°	166.0	2.5	1.5	75°	140	162	203	269	287	152
90°-100°	165.0	2.5	1.5	85°	54	74	120	241	289	54
100°-110°	184.2	2.8	1.6	90°	8	30	103	237	285	7
110°-120°	159.9	2.4	1.4	95°	7	31	139	274	321	6
120°-130°	89.5	1.3	0.8	105°	9	57	196	284	311	10
130°-140°	40.8	0.6	0.4	115°	12	86	189	241	260	11
140°-150°	27.1	0.4	0.2	125°	13	51	98	150	178	12
150°-160°	15.9	0.2	0.1	135°	15	37	60	66	70	11
160°-170°	6.6	0.1	0.1	145°	16	29	46	59	61	10
170°-180°	1.4	0.0	0.0	155°	17	23	34	47	50	8
0°-30°	1970.6	29.4	17.6	165°	16	18	21	27	30	5
0°-40°	3266.2	48.8	29.2	175°	15	14	13	13	15	1
0°-60°	5222.2	78.0	46.6	180°	13	13	13	13	13	
0°-90°	6002.6	89.7	53.6							
90°-120°	509.1	7.6	4.5							
90°-150°	666.5	10.0	6.0							
90°-180°	690.0	10.3	6.2							
0°-180°	6693.0	100.0	59.8							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2480	2480	2480	2480	2480
2.5°	2476	2478	2479	2477	2481
5°	2468	2471	2475	2474	2478
7.5°	2454	2459	2466	2469	2474
10°	2434	2440	2453	2461	2468
12.5°	2409	2418	2436	2450	2458
15°	2377	2390	2415	2434	2448
17.5°	2340	2356	2389	2418	2432
20°	2297	2318	2360	2397	2414
22.5°	2251	2274	2326	2372	2392
25°	2197	2225	2290	2343	2364
27.5°	2140	2171	2249	2307	2332
30°	2075	2112	2201	2267	2296
32.5°	2004	2046	2146	2224	2254
35°	1927	1974	2084	2173	2204
37.5°	1841	1893	2015	2114	2147
40°	1744	1803	1933	2038	2079
42.5°	1631	1698	1817	1917	1964
45°	1491	1559	1639	1712	1748
47.5°	1315	1371	1421	1434	1439
50°	1085	1168	1230	1154	1123
52.5°	840	988	1065	926	888
55°	653	827	895	761	753
57.5°	530	677	724	653	639
60°	450	547	574	561	537
62.5°	382	441	466	481	441
65°	312	363	389	416	364
67.5°	250	299	327	370	314
70°	204	244	277	333	295
72.5°	167	199	238	297	287
75°	140	162	203	269	287
77.5°	117	135	175	252	295
80°	100	117	152	243	297
82.5°	79	98	135	241	294
85°	54	74	120	241	289
87.5°	28	51	108	239	287
90°	8	30	103	237	285
92.5°	7	30	120	255	305
95°	7	31	139	274	321
97.5°	7	33	158	290	335
100°	8	36	173	301	339
102.5°	9	44	189	301	333
105°	9	57	196	284	311
107.5°	10	74	194	271	298
110°	10	86	195	266	292



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	11	90	198	261	282
115°	12	86	189	241	260
117.5°	12	78	171	226	241
120°	12	70	148	212	226
122.5°	13	60	123	189	207
125°	13	51	98	150	178
127.5°	13	45	80	110	133
130°	14	41	69	85	98
132.5°	14	38	64	72	79
135°	15	37	60	66	70
137.5°	15	35	56	63	65
140°	16	33	53	62	63
142.5°	16	31	50	60	62
145°	16	29	46	59	61
147.5°	17	27	44	56	58
150°	17	25	41	53	56
152.5°	17	24	38	50	53
155°	17	23	34	47	50
157.5°	17	21	30	43	46
160°	17	20	27	38	41
162.5°	16	19	24	33	36
165°	16	18	21	27	30
167.5°	16	17	19	22	25
170°	15	16	16	18	21
172.5°	15	15	15	15	17
175°	15	14	13	13	15
177.5°	15	14	13	12	13
180°	13	13	13	13	13

(END OF REPORT)