

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: 144P113

Luminaire Tested: **SA-232IMA**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: 144P113
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: SA-232IMA
Description: Surface Mount Architectural Wrap with an
injection molded acrylic lens.
Light Source: Two-F32T8/35K - 2850 Lumens ea. - 32 Watts ea.
Ballast/Driver: Triad-Utrad B232I120RH Electronic

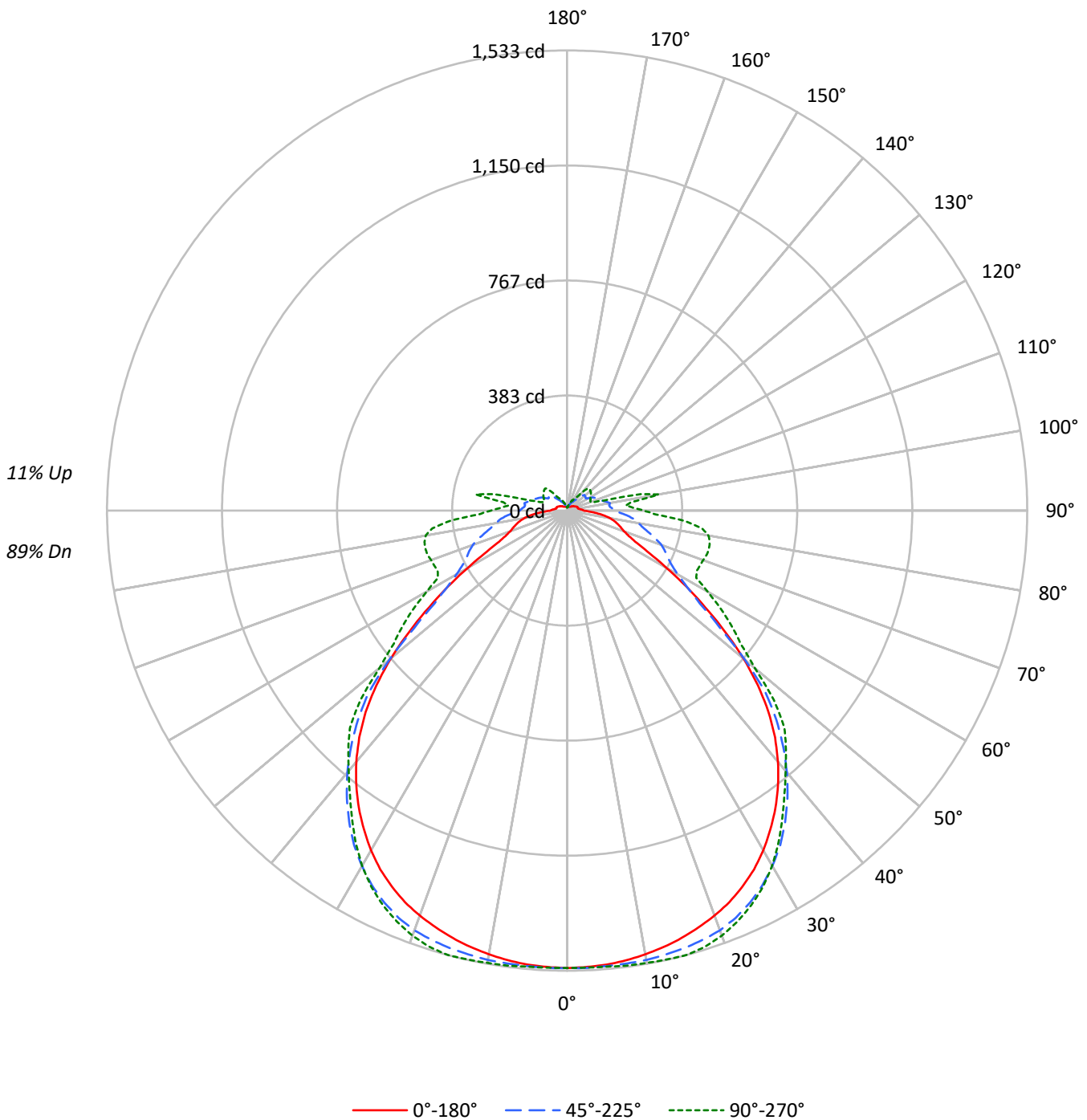
Summary

Lumens per Lamp: 2850 (2 lamps)
Luminaire Lumens: 4801.9 lumens
Efficiency: 84.2%
Efficacy: 80.6 lumens/watt
Spacing Criteria (0/90/45): 1.27 / 1.3 / 1.36
Luminous Opening: Rectangular w/ Sides (W: 0.92' x L: 4.07' x H: 0.2')
CIE Type: Semi-Direct

Input Watts (W): 59.6
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	98	98	98	98	95	95	95	95	89	89	89	83	83	83	78	78	78	75				
1	89	84	80	77	85	81	78	75	76	73	71	71	69	67	67	65	63	61				
2	81	74	68	63	78	71	66	61	67	62	58	63	59	56	59	56	53	51				
3	74	65	58	52	71	63	56	51	59	54	49	55	51	47	52	49	45	43				
4	68	58	50	45	65	56	49	44	53	47	42	50	45	41	47	43	39	37				
5	62	52	44	39	60	50	43	38	47	41	37	45	40	36	42	38	34	32				
6	58	47	39	34	56	45	38	33	43	37	32	41	35	31	39	34	31	29				
7	54	42	35	30	52	41	35	30	39	33	29	37	32	28	35	31	27	25				
8	50	39	32	27	48	38	31	27	36	30	26	34	29	25	33	28	24	23				
9	47	36	29	24	45	35	28	24	33	27	23	32	26	23	30	26	22	21				
10	44	33	26	22	42	32	26	22	31	25	21	29	24	21	28	23	20	19				

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4394	4394	4394
5°	4374	4337	4332
10°	4357	4308	4315
15°	4343	4289	4325
20°	4329	4274	4287
25°	4299	4216	4193
30°	4232	4107	4043
35°	4118	3940	3822
40°	3952	3705	3607
45°	3690	3387	3434
50°	3252	2835	2911
55°	2637	2142	2566
60°	2037	1851	2266
65°	1582	1802	2220
70°	1502	1860	2550
75°	1650	1843	3017
80°	1887	1942	3568
85°	2105	2151	3730



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	145.2	3.0	2.5	0°	1524	1524	1524	1524	1524	
10°-20°	425.6	8.9	7.5	5°	1518	1520	1523	1524	1525	144
20°-30°	657.1	13.7	11.5	15°	1474	1486	1509	1527	1533	416
30°-40°	779.0	16.2	13.7	25°	1382	1403	1441	1450	1451	636
40°-50°	748.5	15.6	13.1	35°	1210	1240	1266	1259	1250	755
50°-60°	544.2	11.3	9.5	45°	949	941	986	1016	1024	726
60°-70°	394.3	8.2	6.9	55°	561	576	540	656	668	505
70°-80°	335.1	7.0	5.9	65°	256	341	370	487	476	267
80°-90°	255.5	5.3	4.5	75°	175	215	281	439	489	184
90°-100°	163.6	3.4	2.9	85°	99	147	204	365	391	90
100°-110°	124.0	2.6	2.2	90°	55	98	158	259	254	32
110°-120°	76.6	1.6	1.3	95°	46	88	143	215	196	36
120°-130°	62.1	1.3	1.1	105°	37	73	124	165	134	39
130°-140°	48.7	1.0	0.9	115°	32	60	101	86	86	32
140°-150°	24.7	0.5	0.4	125°	25	44	75	95	96	23
150°-160°	12.0	0.3	0.2	135°	19	32	69	98	104	15
160°-170°	4.6	0.1	0.1	145°	16	26	40	50	53	10
170°-180°	1.1	0.0	0.0	155°	14	18	27	33	36	7
0°-30°	1227.8	25.6	21.5	165°	13	13	15	18	19	4
0°-40°	2006.8	41.8	35.2	175°	12	12	12	11	10	1
0°-60°	3299.6	68.7	57.9	180°	12	12	12	12	12	
0°-90°	4284.4	89.2	75.2							
90°-120°	364.2	7.6	6.4							
90°-150°	499.7	10.4	8.8							
90°-180°	517.0	10.8	9.1							
0°-180°	4801.9	100.0	84.2							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1524	1524	1524	1524	1524
2.5°	1522	1523	1525	1524	1524
5°	1518	1520	1523	1524	1525
7.5°	1511	1515	1522	1526	1529
10°	1501	1507	1520	1527	1530
12.5°	1489	1498	1515	1528	1532
15°	1474	1486	1509	1527	1533
17.5°	1456	1471	1500	1521	1524
20°	1436	1453	1488	1504	1507
22.5°	1412	1429	1468	1482	1482
25°	1382	1403	1441	1450	1451
27.5°	1348	1372	1408	1414	1413
30°	1307	1335	1367	1368	1366
32.5°	1260	1291	1321	1316	1311
35°	1210	1240	1266	1259	1250
37.5°	1154	1180	1206	1196	1189
40°	1093	1108	1139	1135	1132
42.5°	1025	1028	1065	1076	1079
45°	949	941	986	1016	1024
47.5°	862	849	896	931	934
50°	767	751	773	816	816
52.5°	663	656	641	721	728
55°	561	576	540	656	668
57.5°	469	514	472	609	605
60°	383	457	425	565	540
62.5°	310	399	392	523	485
65°	256	341	370	487	476
67.5°	222	293	353	455	479
70°	202	257	334	442	482
72.5°	188	233	308	441	488
75°	175	215	281	439	489
77.5°	161	199	258	434	487
80°	145	184	241	426	478
82.5°	124	168	225	407	453
85°	99	147	204	365	391
87.5°	74	121	177	301	295
90°	55	98	158	259	254
92.5°	51	93	151	236	220
95°	46	88	143	215	196
97.5°	41	83	141	215	215
100°	37	79	145	231	309
102.5°	37	76	135	188	251
105°	37	73	124	165	134
107.5°	36	71	117	143	95
110°	35	68	113	101	83



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	34	65	107	86	84
115°	32	60	101	86	86
117.5°	30	56	94	89	87
120°	28	52	82	92	91
122.5°	27	48	75	93	94
125°	25	44	75	95	96
127.5°	24	40	76	98	100
130°	22	37	77	98	101
132.5°	20	34	77	99	103
135°	19	32	69	98	104
137.5°	18	31	56	88	99
140°	17	30	50	71	84
142.5°	16	29	45	58	64
145°	16	26	40	50	53
147.5°	15	24	37	45	48
150°	15	22	33	41	43
152.5°	14	20	30	37	39
155°	14	18	27	33	36
157.5°	14	16	24	29	31
160°	14	14	21	25	27
162.5°	13	13	18	21	23
165°	13	13	15	18	19
167.5°	13	13	13	15	16
170°	12	13	12	12	13
172.5°	12	12	11	11	11
175°	12	12	12	11	10
177.5°	12	13	11	11	11
180°	12	12	12	12	12

(END OF REPORT)