

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: 154P112

Luminaire Tested: **P3-2BX18S22I-RS**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: 154P112  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: P3-2BX18S22I-RS  
Description: Prototype 1 X 1 Recessed Luminaire with a 3" deep  
4 cell semi-specular low iridescent parabolic  
louver. Lamps spaced 2-3/4" laterally from center  
line of fixture.  
Light Source: Two-F18BX/SPX35/RS - 1250 Lumens ea. - 18 Watts ea.  
Ballast/Driver:

**Summary**

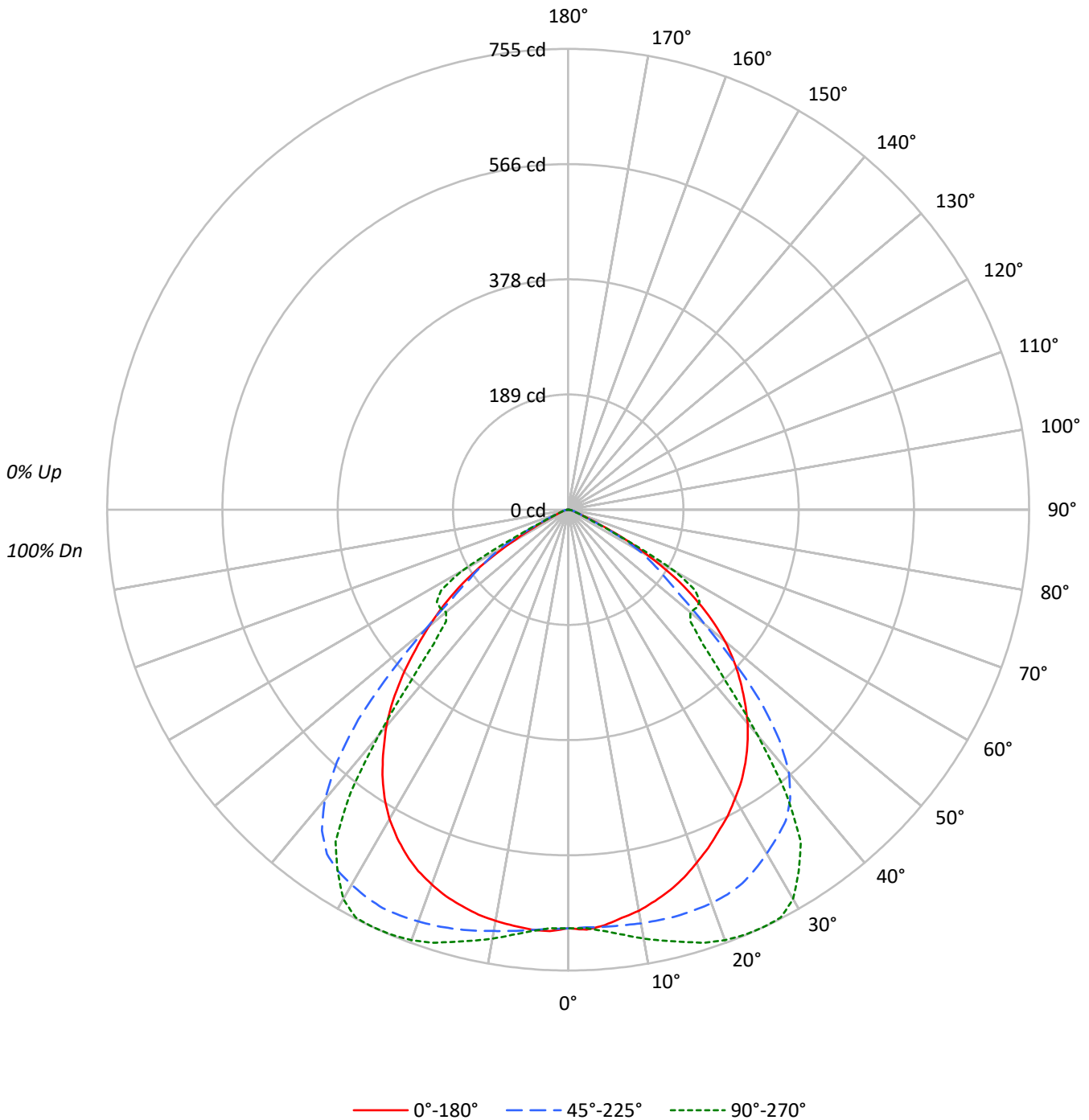
Lumens per Lamp: 1250 (2 lamps)  
Luminaire Lumens: 1561.8 lumens  
Efficiency: 62.5%  
Efficacy: 34.7 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.44 / 1.38  
Luminous Opening: Rectangular (W 0.93' x L: 0.93' x H: 0')  
CIE Type: Direct

Input Watts (W): 45  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): 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	74	74	74	74	73	73	73	73	69	69	69	66	66	66	64	64	64	62
1	70	67	65	64	68	66	64	63	63	62	61	61	60	59	59	58	57	56
2	65	61	57	54	63	59	56	54	57	55	53	55	53	51	54	52	50	49
3	60	54	50	47	58	54	50	47	52	49	46	50	47	45	49	46	44	43
4	55	49	45	41	54	48	44	41	47	43	40	46	42	40	44	41	39	38
5	51	44	40	36	50	44	39	36	43	39	36	41	38	35	40	37	35	34
6	48	40	36	32	47	40	35	32	39	35	32	38	34	31	37	34	31	30
7	44	37	32	29	43	36	32	29	36	31	28	35	31	28	34	31	28	27
8	42	34	29	26	41	33	29	26	33	29	26	32	28	25	31	28	25	24
9	39	31	26	23	38	31	26	23	30	26	23	30	26	23	29	25	23	22
10	36	29	24	21	36	29	24	21	28	24	21	27	24	21	27	23	21	20

**AVERAGE LUMINANCE (cd/sqm):**

	0°	90°	180°
0°	8590	8590	8590
5°	8591	8716	8682
10°	8484	9074	8698
15°	8365	9503	8714
20°	8203	9999	8707
25°	8041	10432	8640
30°	7901	10650	8462
35°	7739	10156	8109
40°	7474	7893	7574
45°	7067	5517	6781
50°	6536	5087	5804
55°	5530	5740	4609
60°	3852	5079	2667
65°	1653	1292	1019
70°	644	626	546
75°	440	426	392
80°	346	339	310
85°	345	330	287



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	45°	90°	135°	180°	Flux
0°-10°	65.9	4.2	2.6	0°	686	686	686	686	686	
10°-20°	197.6	12.7	7.9	5°	683	686	693	691	691	65
20°-30°	317.3	20.3	12.7	15°	645	689	733	711	672	182
30°-40°	384.0	24.6	15.4	25°	582	675	755	720	625	268
40°-50°	315.6	20.2	12.6	35°	506	622	664	689	530	316
50°-60°	206.8	13.2	8.3	45°	399	447	312	486	383	307
60°-70°	61.0	3.9	2.4	55°	253	194	263	196	211	223
70°-80°	10.8	0.7	0.4	65°	56	48	44	45	34	67
80°-90°	2.7	0.2	0.1	75°	9	10	9	10	8	10
90°-100°	0.0	0.0	0.0	85°	2	2	2	2	2	2
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	0
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°	580.8	37.2	23.2	165°	0	0	0	0	0	0
0°-40°	964.9	61.8	38.6	175°	0	0	0	0	0	0
0°-60°	1487.2	95.2	59.5	180°	0	0	0	0	0	0
0°-90°	1561.8	100.0	62.5							
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°	1561.8	100.0	62.5							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	685.9	685.9	685.9	685.9	685.9	685.9	685.9	685.9	685.9
2.5°	688.7	683.2	685.0	686.6	686.2	687.4	687.3	687.2	691.1
5°	683.4	680.1	685.9	691.3	693.3	694.0	691.2	688.2	690.6
7.5°	674.5	675.2	686.7	697.8	702.6	701.9	696.1	688.4	687.4
10°	667.2	669.3	688.2	706.0	713.6	712.0	700.9	688.0	684.0
12.5°	656.6	662.9	688.7	712.6	723.2	721.5	706.5	687.2	679.5
15°	645.2	656.0	689.2	718.7	733.0	729.5	711.2	685.7	672.1
17.5°	631.7	647.0	687.8	724.6	743.9	737.5	715.3	682.6	664.4
20°	615.5	636.2	686.2	726.8	750.3	745.8	717.8	678.0	653.3
22.5°	599.5	625.6	682.0	728.8	754.0	749.0	719.5	671.9	641.1
25°	581.9	613.9	675.3	725.6	755.0	750.7	719.9	664.3	625.3
27.5°	565.8	601.4	663.7	720.6	753.5	750.1	715.8	653.0	606.3
30°	546.4	588.0	650.5	709.9	736.5	743.5	709.5	638.4	585.2
32.5°	527.8	573.0	636.6	685.3	702.7	718.8	701.8	620.1	559.8
35°	506.2	557.6	621.6	648.7	664.3	682.2	688.8	597.8	530.4
37.5°	482.4	538.5	597.3	601.3	586.3	635.8	662.6	571.4	496.9
40°	457.2	518.0	562.7	517.1	482.8	554.6	620.0	540.8	463.3
42.5°	428.4	494.1	512.0	419.1	382.2	450.6	560.6	505.1	425.2
45°	399.0	465.0	446.7	332.5	311.5	356.8	486.0	463.5	382.9
47.5°	368.6	430.8	366.7	273.4	271.1	292.5	392.3	416.2	339.0
50°	335.5	387.4	290.8	241.2	261.1	256.7	305.3	366.1	297.9
52.5°	296.5	338.0	233.3	230.8	264.3	242.9	239.4	316.0	256.2
55°	253.3	278.4	193.6	223.9	262.9	234.4	195.9	258.2	211.1
57.5°	207.8	212.6	164.3	205.6	247.1	215.2	162.9	193.6	161.5
60°	153.8	143.6	134.8	165.2	202.8	172.2	130.4	124.3	106.5
62.5°	105.8	85.4	92.3	102.1	102.5	109.3	87.3	70.3	64.5
65°	55.8	50.2	48.5	48.7	43.6	51.9	45.3	41.8	34.4
67.5°	27.4	28.4	27.3	27.4	25.2	28.3	25.7	25.1	21.0
70°	17.6	18.3	18.7	18.6	17.1	19.0	17.9	17.3	14.9
72.5°	12.5	13.2	13.6	13.4	12.2	13.7	13.3	12.7	11.0
75°	9.1	9.7	10.1	9.8	8.8	10.0	9.9	9.6	8.1
77.5°	6.7	7.2	7.4	7.3	6.4	7.3	7.3	7.1	6.0
80°	4.8	5.3	5.4	5.2	4.7	5.3	5.4	5.2	4.3
82.5°	3.5	3.7	3.8	3.7	3.3	3.8	3.8	3.6	3.0
85°	2.4	2.4	2.5	2.5	2.3	2.5	2.5	2.4	2.0
87.5°	1.4	1.4	1.5	1.5	1.4	1.5	1.4	1.4	1.2
90°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
92.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
95°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
97.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
100°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
102.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
105°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
107.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
110°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
115°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
117.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
120°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
122.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
125°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
127.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
130°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
132.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
135°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
137.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
140°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
142.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
145°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
147.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
150°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
152.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
155°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
157.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
160°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
162.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
165°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
167.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
170°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
172.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
175°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
177.5°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
180°	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)