

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: 17082

Luminaire Tested: **BSX-SB-232**

Issue Date: 3/3/2020



**Test Information**

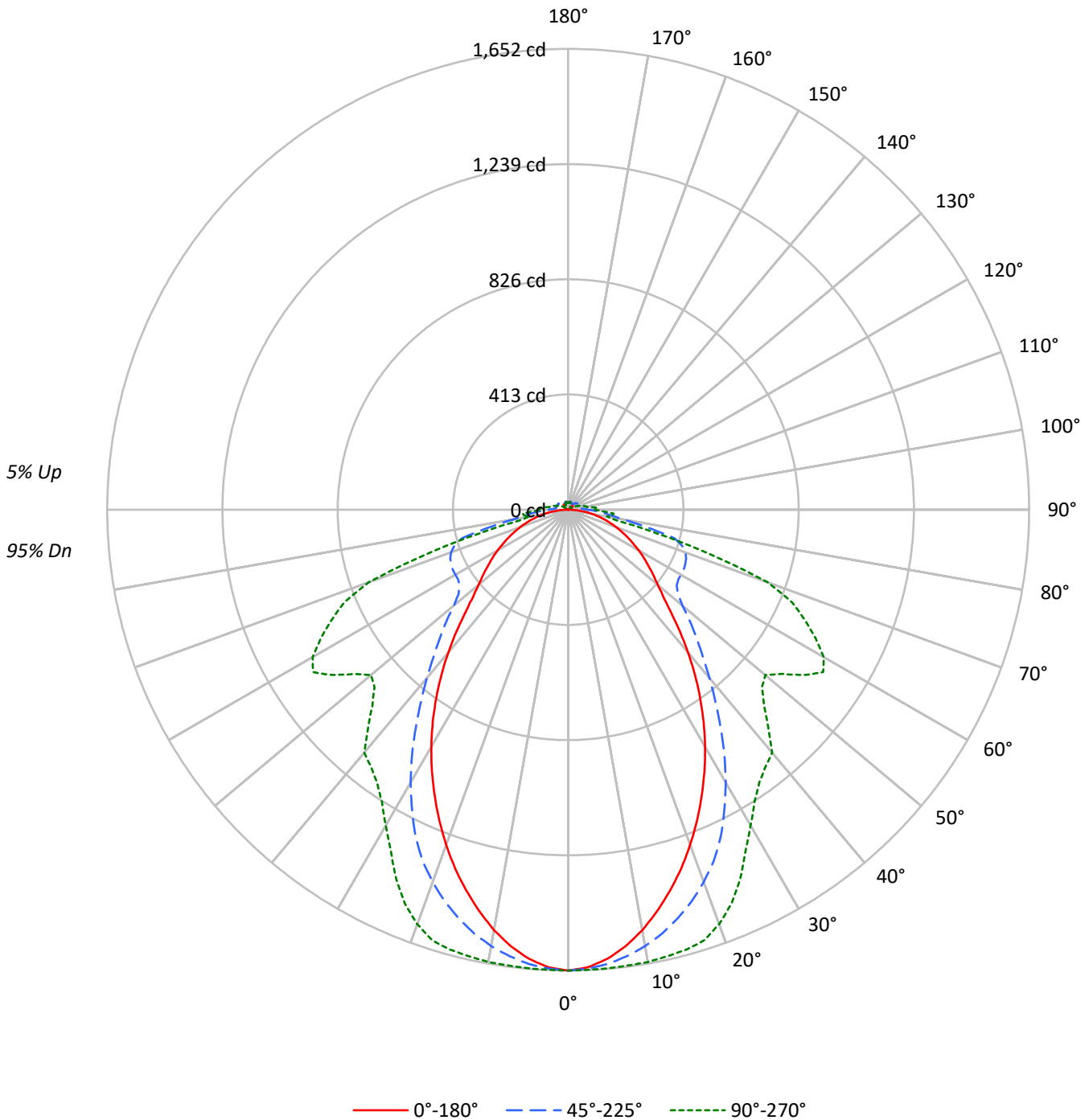
Test Method: LM-41-14  
Report Number: 17082  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: BSX-SB-232  
Description: WITH WHITE INTERIOR AND 24 CELL WHITE LOUVER  
  
Light Source: TWO PHILIPS 32 WATT T8 LAMPS  
  
F32T8/TL841. LUMEN RATING = 3000 LMS.  
  
Ballast/Driver: -

**Summary**

Lumens per Lamp: 3000 (2 lamps)  
Luminaire Lumens: 4057.4 lumens  
Efficiency: 67.6%  
Efficacy: 71.2 lumens/watt  
Spacing Criteria (0/90/45): 0.95 / 1.18 / 1.12  
Luminous Opening: Rectangular (W 1.38' x L: 4' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 57  
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	80	80	80	80	77	77	77	77	73	73	73		69	69	69		66	66	66	64
1	72	69	66	63	70	67	64	62	63	61	59		60	58	57		57	56	54	53
2	66	60	55	51	63	58	54	50	55	52	49		53	50	47		50	47	45	44
3	60	53	47	43	58	51	46	42	49	44	41		46	43	40		44	41	38	37
4	55	47	41	36	53	46	40	36	43	39	35		41	37	34		40	36	33	32
5	51	42	36	31	49	41	35	31	39	34	30		37	33	30		36	32	29	28
6	47	38	32	28	45	37	31	27	35	31	27		34	30	26		33	29	26	24
7	44	35	29	25	42	34	28	24	32	28	24		31	27	24		30	26	23	22
8	41	32	26	22	39	31	26	22	30	25	22		29	24	21		28	24	21	20
9	38	29	24	20	37	29	23	20	28	23	20		27	22	19		26	22	19	18
10	36	27	22	18	35	27	22	18	26	21	18		25	21	18		24	20	17	16

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

	0°	45°	90°
0°	3222	3222	3222
5°	3163	3199	3230
10°	3030	3145	3260
15°	2851	3062	3296
20°	2653	2946	3281
25°	2435	2783	3140
30°	2209	2543	2943
35°	1963	2265	2842
40°	1700	2003	2893
45°	1436	1794	2736
50°	1268	1621	2797
55°	1193	1613	3512
60°	1139	1819	4124
65°	1088	2134	4317
70°	1047	2547	4326
75°	1011	2969	2515
80°	976	2239	1579
85°	890	2772	3654



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	154.6	3.8	2.6	0°	1652	1652	1652	1652	1652	
10°-20°	427.6	10.5	7.1	5°	1616	1624	1634	1647	1650	152
20°-30°	591.2	14.6	9.9	15°	1412	1443	1517	1598	1633	396
30°-40°	613.9	15.1	10.2	25°	1132	1176	1294	1402	1460	520
40°-50°	550.2	13.6	9.2	35°	825	862	951	1099	1194	514
50°-60°	528.5	13.0	8.8	45°	521	540	650	880	992	408
60°-70°	521.9	12.9	8.7	55°	351	349	474	835	1033	316
70°-80°	323.5	8.0	5.4	65°	236	246	462	820	936	234
80°-90°	128.9	3.2	2.1	75°	134	182	394	422	334	142
90°-100°	59.5	1.5	1.0	85°	40	88	124	176	163	43
100°-110°	43.5	1.1	0.7	90°	0	44	70	109	96	3
110°-120°	33.0	0.8	0.6	95°	0	28	47	92	96	1
120°-130°	25.8	0.6	0.4	105°	5	20	43	72	54	6
130°-140°	19.0	0.5	0.3	115°	11	19	42	50	29	11
140°-150°	14.5	0.4	0.2	125°	19	23	39	38	13	16
150°-160°	11.7	0.3	0.2	135°	22	24	31	26	10	17
160°-170°	7.7	0.2	0.1	145°	25	26	24	22	13	15
170°-180°	2.4	0.1	0.0	155°	25	28	26	23	20	12
0°-30°	1173.4	28.9	19.6	165°	26	26	30	29	28	7
0°-40°	1787.3	44.0	29.8	175°	25	25	24	26	26	2
0°-60°	2865.9	70.6	47.8	180°	25	25	25	25	25	
0°-90°	3840.3	94.6	64.0							
90°-120°	136.0	3.4	2.3							
90°-150°	195.3	4.8	3.3							
90°-180°	217.0	5.3	3.6							
0°-180°	4057.4	100.0	67.6							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1652.2	1652.2	1652.2	1652.2	1652.2
2.5°	1641.6	1647.5	1646.5	1650.6	1651.1
5°	1616.1	1623.7	1634.4	1647.0	1650.2
7.5°	1578.3	1595.3	1614.2	1640.3	1647.9
10°	1530.1	1550.3	1588.1	1630.3	1646.2
12.5°	1473.9	1505.0	1555.8	1617.4	1639.8
15°	1412.3	1443.3	1516.6	1597.5	1632.7
17.5°	1347.9	1387.5	1471.7	1576.4	1619.1
20°	1278.3	1318.7	1419.9	1535.0	1581.0
22.5°	1206.8	1249.5	1362.8	1473.8	1528.4
25°	1131.6	1176.2	1293.6	1402.0	1459.5
27.5°	1057.1	1097.0	1212.2	1312.5	1376.8
30°	981.0	1022.8	1129.4	1236.3	1306.9
32.5°	903.1	940.1	1040.9	1157.8	1242.7
35°	824.6	862.4	951.3	1099.3	1193.7
37.5°	745.9	772.4	866.3	1039.4	1161.3
40°	667.9	697.7	786.7	999.4	1136.6
42.5°	592.9	614.5	713.4	945.5	1061.0
45°	520.6	539.8	650.5	880.3	992.3
47.5°	462.5	473.7	591.0	825.4	941.4
50°	417.9	417.4	534.4	794.4	922.0
52.5°	384.7	383.8	494.9	796.1	967.1
55°	350.9	349.1	474.5	835.4	1033.1
57.5°	321.3	322.7	467.4	867.7	1083.5
60°	292.1	293.4	466.4	879.8	1057.5
62.5°	262.4	269.5	466.5	855.5	999.5
65°	235.9	246.2	462.5	820.0	935.7
67.5°	208.4	226.9	457.6	779.0	869.0
70°	183.7	211.1	446.8	725.1	758.8
72.5°	158.5	195.8	427.0	583.4	537.1
75°	134.2	181.8	394.1	421.5	333.8
77.5°	109.9	167.3	282.6	273.5	175.9
80°	86.9	150.9	199.4	200.3	140.6
82.5°	64.5	118.0	151.3	192.6	158.4
85°	39.8	87.9	123.9	175.6	163.3
87.5°	18.5	64.1	95.0	134.2	120.3
90°	0.5	44.5	69.6	109.2	95.6
92.5°	0.5	32.5	55.5	100.4	105.5
95°	0.5	28.5	47.4	92.3	95.5
97.5°	1.5	25.8	44.2	83.2	69.0
100°	2.8	23.1	43.7	78.8	64.6
102.5°	4.7	21.7	44.7	77.6	59.6
105°	4.7	19.5	43.3	71.6	54.2
107.5°	6.9	19.0	43.7	65.8	46.4
110°	8.6	19.0	43.0	60.4	39.8



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	10.1	19.0	42.0	55.0	34.3
115°	11.3	19.0	42.0	49.7	29.0
117.5°	11.8	20.4	41.1	47.4	24.9
120°	14.1	21.2	41.1	43.3	23.1
122.5°	16.8	21.7	40.2	39.7	18.2
125°	18.7	23.1	39.3	37.5	12.8
127.5°	18.7	23.1	37.1	34.4	10.1
130°	20.9	23.1	37.1	30.8	8.7
132.5°	20.9	23.5	33.4	27.6	9.2
135°	22.2	23.5	30.7	26.2	10.1
137.5°	24.1	24.9	29.4	24.9	10.9
140°	23.1	25.8	27.6	22.2	12.3
142.5°	24.8	25.8	26.7	21.2	12.3
145°	24.9	25.8	24.4	21.7	12.8
147.5°	24.9	26.3	25.8	21.2	14.0
150°	25.3	28.5	24.4	22.1	17.2
152.5°	25.8	29.5	27.1	22.1	17.7
155°	25.3	28.5	25.8	22.6	19.5
157.5°	25.3	28.5	27.1	23.9	22.2
160°	25.8	26.7	27.6	25.8	24.1
162.5°	25.8	26.3	29.4	26.7	25.8
165°	26.3	26.2	29.8	29.4	28.0
167.5°	25.8	24.9	29.0	28.1	28.5
170°	25.3	24.8	28.0	27.5	28.5
172.5°	25.8	24.4	24.9	26.7	26.3
175°	24.9	24.8	24.1	26.2	25.8
177.5°	25.8	24.8	25.3	25.3	24.9
180°	25.3	25.3	25.3	25.3	25.3

(END OF REPORT)