

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: 175P161

Luminaire Tested: **BSX-FM-4**

Issue Date: 3/3/2020



**Test Information**

Test Method: LM-41-14  
Report Number: 175P161  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: BSX-FM-4  
Description: BASIX Frost Mono Luminaire with Acrylic lens.  
Light Source: Two - FO32/35K - 2800 Lumens ea. - 32 Watts ea.  
Ballast/Driver: Triad B232IUNVHP-B Electronic L.O.B.F. = Unknown

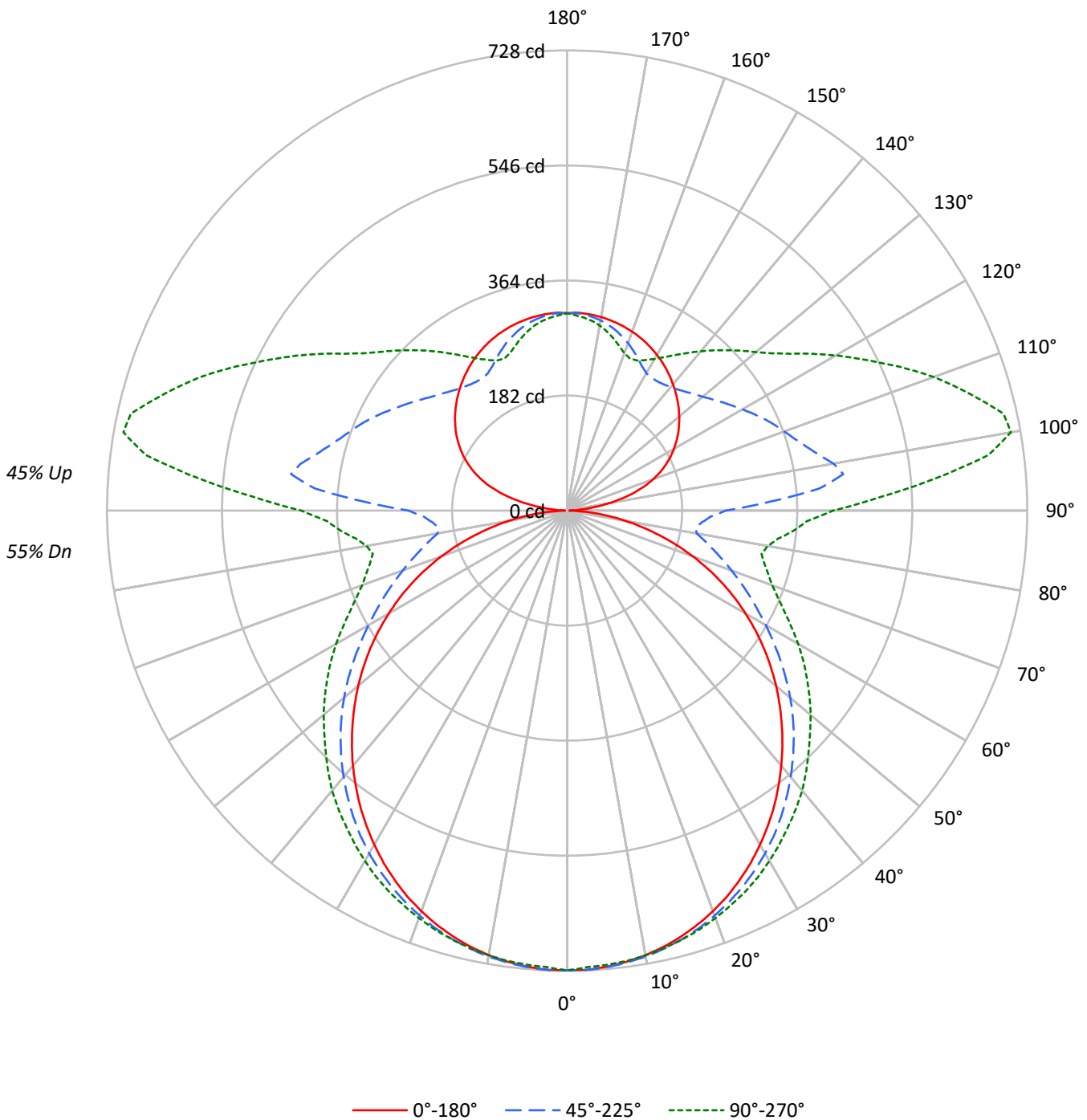
**Summary**

Lumens per Lamp: 2800 (2 lamps)  
Luminaire Lumens: 4538.7 lumens  
Efficiency: 81.0%  
Efficacy: 78.3 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.31 / 1.41  
Luminous Opening: Rectangular w/ Sides (W: 0.82' x L: 4.01' x H: 0.31')  
CIE Type: General Diffuse

Input Watts (W): 58  
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	88	88	88	88	82	82	82	82	70	70	70	59	59	59	50	50	50	45
1	79	74	70	67	73	69	66	63	59	56	54	50	48	46	41	40	38	34
2	71	64	58	54	65	59	54	50	51	47	44	43	40	37	35	33	31	28
3	64	56	49	44	59	52	46	41	44	40	36	37	34	31	31	28	26	23
4	59	49	42	37	54	46	40	35	39	34	30	33	29	26	27	25	22	19
5	54	44	37	31	50	41	34	30	35	30	26	30	26	23	25	22	19	17
6	50	39	32	27	46	36	30	26	31	26	23	27	23	20	22	19	17	14
7	46	35	28	24	42	33	27	22	28	23	20	24	20	17	20	17	15	13
8	42	32	25	21	39	30	24	20	26	21	18	22	18	15	19	15	13	11
9	40	29	23	19	37	27	22	18	24	19	16	20	16	14	17	14	12	10
10	37	27	21	17	34	25	19	16	22	17	14	19	15	12	16	13	11	9

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

	0°	45°	90°
0°	2381	2381	2381
5°	2364	2317	2294
10°	2342	2253	2227
15°	2316	2190	2162
20°	2285	2127	2101
25°	2250	2062	2044
30°	2208	1997	1985
35°	2164	1925	1927
40°	2116	1850	1876
45°	2064	1776	1815
50°	2012	1696	1765
55°	1954	1609	1716
60°	1882	1525	1670
65°	1796	1458	1624
70°	1670	1404	1620
75°	1485	1376	1693
80°	1231	1388	1932
85°	816	1715	2545



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	68.9	1.5	1.2	0°	728	728	728	728	728	
10°-20°	198.1	4.4	3.5	5°	724	725	725	725	721	69
20°-30°	302.7	6.7	5.4	15°	698	700	702	704	703	197
30°-40°	369.8	8.1	6.6	25°	645	649	657	665	666	297
40°-50°	393.2	8.7	7.0	35°	571	577	590	605	610	357
50°-60°	373.6	8.2	6.7	45°	480	488	507	532	540	371
60°-70°	320.2	7.1	5.7	55°	380	388	412	448	463	340
70°-80°	255.9	5.6	4.6	65°	270	286	318	362	380	267
80°-90°	235.2	5.2	4.2	75°	151	188	240	297	323	160
90°-100°	374.2	8.2	6.7	85°	41	110	214	317	360	44
100°-110°	408.3	9.0	7.3	90°	4	119	251	371	420	5
110°-120°	341.5	7.5	6.1	95°	27	187	400	533	586	31
120°-130°	272.2	6.0	4.9	105°	110	161	392	595	677	115
130°-140°	216.8	4.8	3.9	115°	172	172	344	498	552	170
140°-150°	169.4	3.7	3.0	125°	215	189	299	396	432	192
150°-160°	126.2	2.8	2.3	135°	247	216	266	333	359	191
160°-170°	83.2	1.8	1.5	145°	273	255	249	285	301	171
170°-180°	29.5	0.6	0.5	155°	294	285	265	260	262	136
0°-30°	569.6	12.6	10.2	165°	307	304	296	287	282	87
0°-40°	939.5	20.7	16.8	175°	313	313	312	309	306	30
0°-60°	1706.2	37.6	30.5	180°	312	312	312	312	312	
0°-90°	2517.5	55.5	45.0							
90°-120°	1124.0	24.8	20.1							
90°-150°	1782.4	39.3	31.8							
90°-180°	2021.0	44.5	36.1							
0°-180°	4538.7	100.0	81.0							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	727.5	727.5	727.5	727.5	727.5
2.5°	726.9	727.9	727.5	726.5	723.0
5°	724.4	725.3	725.1	724.8	721.2
7.5°	720.1	721.1	721.4	721.5	718.7
10°	714.1	715.5	716.3	716.9	714.6
12.5°	706.7	708.1	709.9	711.1	709.0
15°	697.5	699.5	702.1	704.5	702.6
17.5°	686.7	689.4	692.8	696.4	695.0
20°	674.4	677.6	682.0	686.6	686.0
22.5°	660.8	664.1	669.9	676.2	676.0
25°	645.3	649.2	656.7	664.9	665.7
27.5°	628.6	632.9	641.9	652.2	653.8
30°	610.3	615.4	626.4	638.0	639.9
32.5°	591.1	596.8	609.1	621.9	625.4
35°	570.9	577.0	590.4	605.4	609.8
37.5°	549.4	555.8	570.7	588.6	594.7
40°	527.2	533.8	550.0	571.0	578.3
42.5°	504.1	511.1	528.9	552.0	559.8
45°	480.3	487.6	507.1	532.0	540.3
47.5°	456.1	463.4	484.2	511.7	521.3
50°	431.5	438.8	460.9	491.1	502.8
52.5°	406.0	413.6	436.5	470.3	483.5
55°	380.1	388.3	411.5	448.4	463.0
57.5°	353.4	362.5	386.8	426.1	443.1
60°	326.0	336.9	362.9	404.6	422.1
62.5°	298.5	311.5	339.7	382.7	400.4
65°	270.3	286.0	318.1	361.7	379.7
67.5°	241.0	260.6	296.8	341.8	361.1
70°	211.6	235.5	276.5	324.3	345.0
72.5°	181.2	210.9	257.5	309.7	333.5
75°	151.3	187.5	239.5	297.3	322.8
77.5°	122.3	166.9	223.5	285.2	315.0
80°	93.9	148.0	208.1	287.8	322.2
82.5°	67.3	130.2	205.3	297.3	337.4
85°	40.9	110.1	213.7	316.8	360.5
87.5°	15.3	110.8	226.6	334.0	380.0
90°	3.6	119.0	251.1	371.2	420.5
92.5°	12.1	167.3	320.2	445.1	496.2
95°	27.2	187.1	400.4	532.9	585.9
97.5°	46.0	175.2	440.6	613.8	672.0
100°	67.7	168.0	427.7	637.6	712.9
102.5°	89.6	163.4	407.4	621.6	707.3
105°	110.0	160.8	391.7	594.8	677.3
107.5°	128.5	160.8	377.4	572.5	647.3
110°	144.8	164.4	365.5	550.2	617.6



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	159.3	168.3	354.9	524.8	584.6
115°	172.3	171.8	343.7	497.6	551.5
117.5°	184.3	175.6	331.8	471.1	520.0
120°	195.1	180.0	320.0	444.9	490.6
122.5°	205.2	184.5	309.2	419.5	461.5
125°	214.6	189.1	299.0	396.2	432.3
127.5°	223.2	194.1	289.3	376.6	408.5
130°	231.5	199.9	280.2	359.9	390.1
132.5°	239.3	206.8	272.3	345.9	374.3
135°	246.8	215.6	265.6	332.9	358.8
137.5°	253.9	225.9	259.7	320.1	343.8
140°	260.7	236.0	255.1	307.5	329.0
142.5°	267.2	245.7	251.5	295.8	314.4
145°	273.4	254.8	249.4	285.0	300.6
147.5°	279.1	263.3	248.7	275.4	287.9
150°	284.4	271.1	250.8	267.7	277.0
152.5°	289.2	278.0	257.0	262.2	268.3
155°	293.7	284.7	265.3	259.5	262.1
157.5°	297.6	290.5	273.9	262.2	260.1
160°	301.2	295.7	281.8	270.0	264.8
162.5°	304.1	300.2	289.1	278.8	273.3
165°	306.7	303.8	295.6	287.2	282.4
167.5°	309.0	306.9	301.1	294.5	290.3
170°	310.7	309.6	305.6	300.9	297.2
172.5°	312.1	311.7	308.9	305.9	302.6
175°	313.1	312.6	311.6	309.3	306.3
177.5°	313.6	312.9	312.6	311.3	309.1
180°	312.1	312.1	312.1	312.1	312.1

(END OF REPORT)