

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: P30535

Luminaire Tested: **2OPG-WO-217FB23W-UNV-HB81**

Issue Date: 3/3/2020

Test Information

Test Method: LM-41-14
Report Number: P30535
Test Lab: INNOVATION CENTER-P3
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2OPG-WO-217FB23W-UNV-HB81
Description: METALUX OPTICA HP SERIES RECESSED 2x2 FLUORECENT LUMINAIRE WITH WHITE OPTICS HOUSING, PAF BALLAST COVER & 6 CELL 2" DEEP STEEL LOUVER, FACETED MATTE WHITE CROSS BLADES, NO REFLECTOR
Light Source: TWO LINEAR FLUORESCENT LAMPS, F32T8 32W - 1450 LUMENS EA
Ballast/Driver: -
GE 232MAX-N/ULTRA

Summary

Lumens per Lamp: 1450 (2 lamps)
Luminaire Lumens: 2491.7 lumens
Efficiency: 85.9%
Efficacy: 79.1 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 1.39 / 1.42
Luminous Opening: Rectangular (W 1.79' x L: 1.79' x H: 0')
CIE Type: Direct

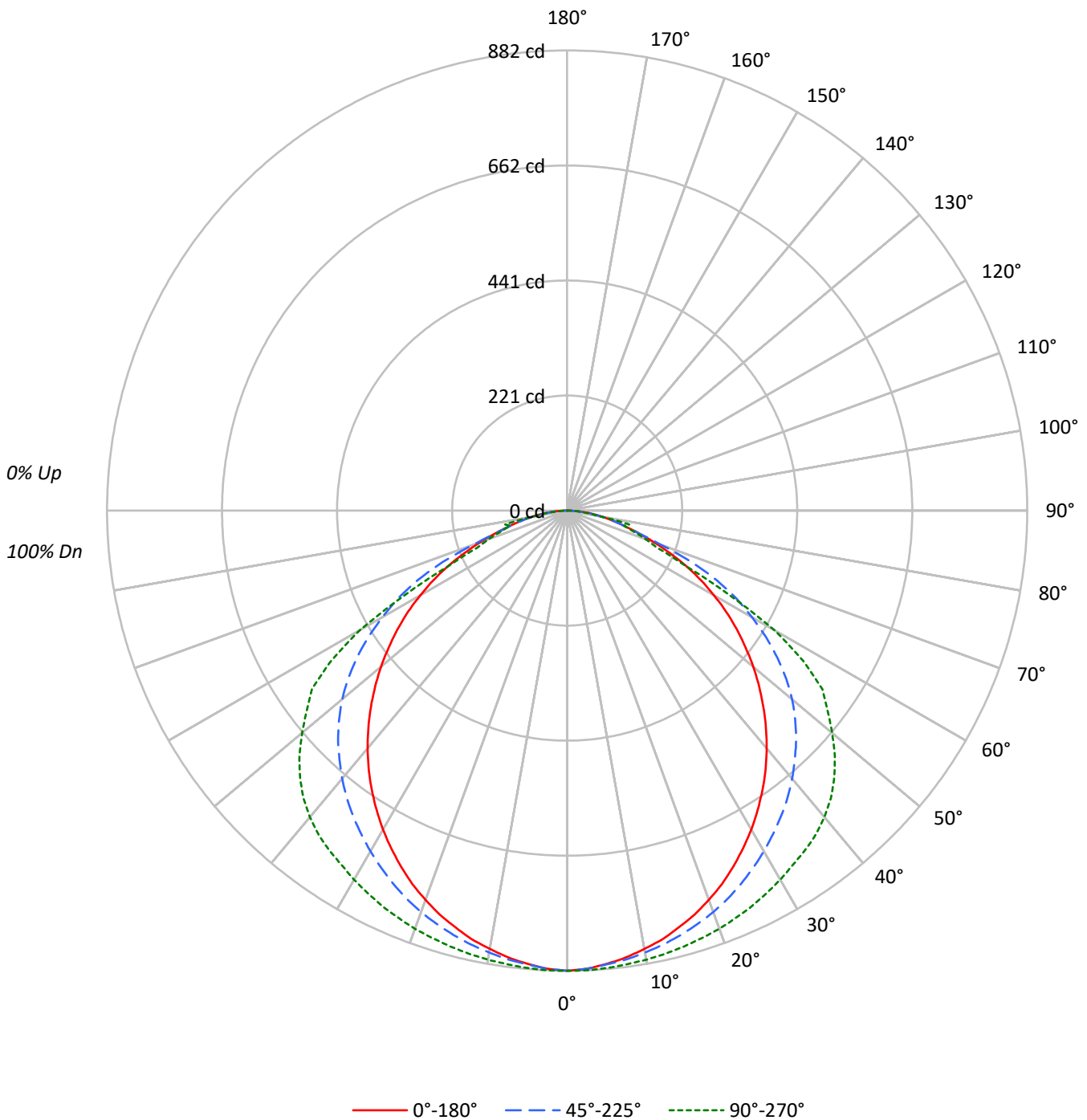
Input Watts (W): 31.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	102	102	102	102	100	100	100	100	95	95	95	91	91	91	88	88	88	86				86
1	94	90	86	83	92	88	85	82	84	82	79	81	79	77	78	76	75	73				73
2	86	79	73	68	83	77	72	67	74	70	66	71	68	64	69	66	63	61				61
3	78	69	62	57	76	68	62	56	65	60	55	63	58	54	61	57	54	52				52
4	72	61	54	48	70	60	53	48	58	52	47	56	51	47	54	50	46	44				44
5	66	55	47	42	64	54	47	41	52	46	41	50	45	40	49	44	40	38				38
6	61	49	42	36	59	48	41	36	47	40	36	45	40	35	44	39	35	33				33
7	56	45	37	32	55	44	37	32	43	36	32	41	36	31	40	35	31	29				29
8	52	41	33	28	51	40	33	28	39	33	28	38	32	28	37	32	28	26				26
9	49	37	30	25	48	37	30	25	36	30	25	35	29	25	34	29	25	23				23
10	46	34	28	23	45	34	27	23	33	27	23	32	27	23	31	26	23	21				21

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2957	2957	2957
5°	2935	2938	2962
10°	2904	2928	2976
15°	2871	2923	3003
20°	2833	2922	3044
25°	2786	2919	3097
30°	2734	2919	3163
35°	2673	2927	3254
40°	2604	2937	3357
45°	2523	2945	3433
50°	2431	2937	3459
55°	2321	2876	3490
60°	2180	2743	3078
65°	1999	2515	1984
70°	1735	1873	1559
75°	1464	1451	1464
80°	1313	1274	1255
85°	1154	1077	1000



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	83.1	3.3	2.9	0°	882	882	882	882	882	
10°-20°	238.2	9.6	8.2	5°	872	871	873	877	880	83
20°-30°	364.9	14.6	12.6	15°	827	830	842	856	865	233
30°-40°	449.9	18.1	15.5	25°	753	762	789	818	837	347
40°-50°	480.3	19.3	16.6	35°	653	670	715	766	795	408
50°-60°	436.7	17.5	15.1	45°	532	557	621	689	724	410
60°-70°	281.2	11.3	9.7	55°	397	426	492	553	597	354
70°-80°	124.7	5.0	4.3	65°	252	279	317	276	250	248
80°-90°	32.6	1.3	1.1	75°	113	119	112	110	113	123
90°-100°	0.1	0.0	0.0	85°	30	30	28	26	26	33
100°-110°	0.0	0.0	0.0	90°	1	1	1	1	1	2
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°	686.2	27.5	23.7	165°	0	0	0	0	0	0
0°-40°	1136.1	45.6	39.2	175°	0	0	0	0	0	0
0°-60°	2053.1	82.4	70.8	180°	0	0	0	0	0	0
0°-90°	2491.6	100.0	85.9							
90°-120°	0.1	0.0	0.0							
90°-150°	0.1	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	2491.7	100.0	85.9							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	882	882	882	882	882
2.5°	879	877	879	881	882
5°	872	871	873	877	880
7.5°	864	863	868	873	877
10°	853	854	860	868	874
12.5°	842	843	852	862	870
15°	827	830	842	856	865
17.5°	812	816	831	848	859
20°	794	800	819	839	853
22.5°	775	782	805	829	845
25°	753	762	789	818	837
27.5°	730	741	772	806	827
30°	706	719	754	794	817
32.5°	680	695	735	780	805
35°	653	670	715	766	795
37.5°	625	644	694	751	783
40°	595	616	671	733	767
42.5°	564	587	646	713	748
45°	532	557	621	689	724
47.5°	499	525	593	660	696
50°	466	493	563	627	663
52.5°	431	460	529	590	629
55°	397	426	492	553	597
57.5°	362	391	452	514	537
60°	325	355	409	453	459
62.5°	289	318	366	371	350
65°	252	279	317	276	250
67.5°	213	238	258	201	187
70°	177	196	191	158	159
72.5°	143	156	141	133	133
75°	113	119	112	110	113
77.5°	90	90	88	97	122
80°	68	68	66	66	65
82.5°	49	48	46	44	43
85°	30	30	28	26	26
87.5°	14	13	12	11	10
90°	1	1	1	1	1
92.5°	0	0	0	0	0
95°	0	0	0	0	0
97.5°	0	0	0	0	0
100°	0	0	0	0	0
102.5°	0	0	0	0	0
105°	0	0	0	0	0
107.5°	0	0	0	0	0
110°	0	0	0	0	0



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CANDELA DISTRIBUTION (continued):

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

(END OF REPORT)