

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: P30557

Luminaire Tested: **2HP2-WO-3U158S33I-UNV-HB81**

Issue Date: 3/3/2020



Test Information

Test Method: LM-41-14
Report Number: P30557
Test Lab: METALUX RESEARCH LABS
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 2HP2-WO-3U158S33I-UNV-HB81
Description: METALUX HP2 HIGH PERFORMANCE RECESSED 2x4 FLUORESCENT LUMINAIRE
WHITE OPTICS HOUSING, 9 CELL SEMI-SPECULAR LOUVER, PAF BALLAST COVER
Light Source: (3) THREE 31-WATT T-8 1.625" U-LAMP FLUORESCENTS - 2775 LUMENS EA
Ballast/Driver: -
B332IUNVEL-A

Summary

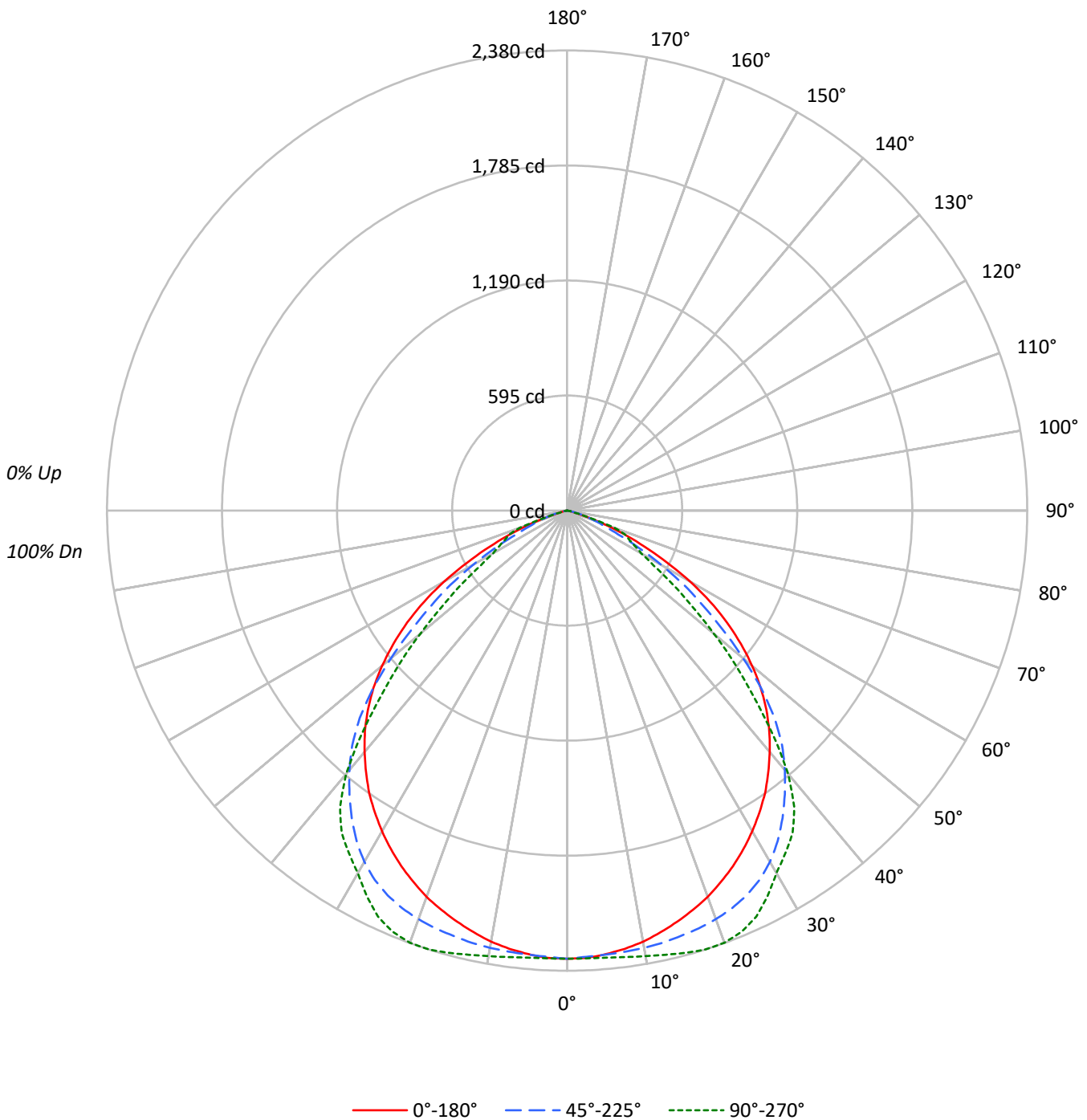
Lumens per Lamp: 2775 (3 lamps)
Luminaire Lumens: 5400.4 lumens
Efficiency: 64.9%
Efficacy: 81.5 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.36 / 1.37
Luminous Opening: Rectangular (W 1.75' x L: 1.75' x H: 0')
CIE Type: Direct

Input Watts (W): 66.3
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	77	77	77	77	75	75	75	75	72	72	72	69	69	69	66	66	66	65
1	72	70	67	65	70	68	66	64	65	64	62	63	62	60	61	60	59	57
2	67	62	58	55	65	61	58	55	59	56	53	57	54	52	55	53	51	50
3	61	56	51	47	60	55	50	47	53	49	46	51	48	45	49	47	45	43
4	57	50	45	41	55	49	44	41	47	43	40	46	43	40	45	42	39	38
5	52	45	40	36	51	44	39	36	43	39	35	42	38	35	41	37	35	33
6	49	41	35	32	47	40	35	32	39	35	31	38	34	31	37	34	31	30
7	45	37	32	28	44	37	32	28	36	31	28	35	31	28	34	30	28	26
8	42	34	29	25	41	34	29	25	33	28	25	32	28	25	31	28	25	24
9	39	31	26	23	39	31	26	23	30	26	23	30	26	23	29	25	23	21
10	37	29	24	21	36	29	24	21	28	24	21	27	23	21	27	23	21	19

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	8147	8147	8147
5°	8125	8132	8189
10°	8080	8198	8351
15°	8009	8285	8617
20°	7952	8412	8894
25°	7869	8516	8982
30°	7772	8515	8787
35°	7655	8333	8727
40°	7479	8038	8158
45°	7242	7540	6795
50°	6830	6507	5424
55°	6183	5276	4106
60°	5160	3979	3114
65°	3668	2420	2927
70°	2035	1541	2682
75°	502	842	380
80°	304	243	283
85°	121	40	121



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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	220.1	4.1	2.6	0°	2318	2318	2318	2318	2318	
10°-20°	645.4	12.0	7.8	5°	2303	2301	2305	2317	2321	219
20°-30°	1003.5	18.6	12.1	15°	2201	2221	2277	2342	2368	621
30°-40°	1199.0	22.2	14.4	25°	2029	2079	2196	2286	2316	935
40°-50°	1126.6	20.9	13.5	35°	1784	1857	1942	1989	2034	1114
50°-60°	768.3	14.2	9.2	45°	1457	1529	1517	1417	1367	1120
60°-70°	361.0	6.7	4.3	55°	1009	1021	861	707	670	895
70°-80°	72.3	1.3	0.9	65°	441	412	291	309	352	445
80°-90°	4.2	0.1	0.0	75°	37	38	62	36	28	70
90°-100°	0.0	0.0	0.0	85°	3	1	1	3	3	5
100°-110°	0.0	0.0	0.0	90°	0	0	0	1	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°	1869.1	34.6	22.5	165°	0	0	0	0	0	0
0°-40°	3068.0	56.8	36.9	175°	0	0	0	0	0	0
0°-60°	4962.9	91.9	59.6	180°	0	0	0	0	0	0
0°-90°	5400.3	100.0	64.9							
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°	5400.4	100.0	64.9							



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2318	2318	2318	2318	2318
2.5°	2316	2312	2310	2316	2318
5°	2303	2301	2305	2317	2321
7.5°	2286	2288	2301	2321	2329
10°	2264	2271	2297	2328	2340
12.5°	2234	2248	2289	2335	2353
15°	2201	2221	2277	2342	2368
17.5°	2165	2192	2265	2349	2380
20°	2126	2158	2249	2344	2378
22.5°	2079	2121	2227	2324	2358
25°	2029	2079	2196	2286	2316
27.5°	1974	2031	2154	2225	2246
30°	1915	1978	2098	2143	2165
32.5°	1851	1921	2027	2062	2101
35°	1784	1857	1942	1989	2034
37.5°	1709	1786	1849	1902	1929
40°	1630	1707	1752	1777	1778
42.5°	1548	1624	1646	1614	1579
45°	1457	1529	1517	1417	1367
47.5°	1359	1421	1362	1225	1182
50°	1249	1299	1190	1050	992
52.5°	1133	1163	1018	871	815
55°	1009	1021	861	707	670
57.5°	877	871	716	561	532
60°	734	719	566	436	443
62.5°	584	564	418	361	393
65°	441	412	291	309	352
67.5°	314	283	205	266	324
70°	198	178	150	222	261
72.5°	97	93	103	129	107
75°	37	38	62	36	28
77.5°	25	23	25	22	20
80°	15	12	12	14	14
82.5°	7	5	5	8	7
85°	3	1	1	3	3
87.5°	1	0	0	1	0
90°	0	0	0	1	0
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)