

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: P30558

Luminaire Tested: **2HP3-WO-3U158S33I-UNV-HB81**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: P30558  
Test Lab: METALUX RESEARCH LABS  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 2HP3-WO-3U158S33I-UNV-HB81  
Description: METALUX HP3 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: 5508.4 lumens  
Efficiency: 66.2%  
Efficacy: 82.8 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.42 / 1.41  
Luminous Opening: Rectangular (W 1.75' x L: 1.75' x H: 0')  
CIE Type: Direct

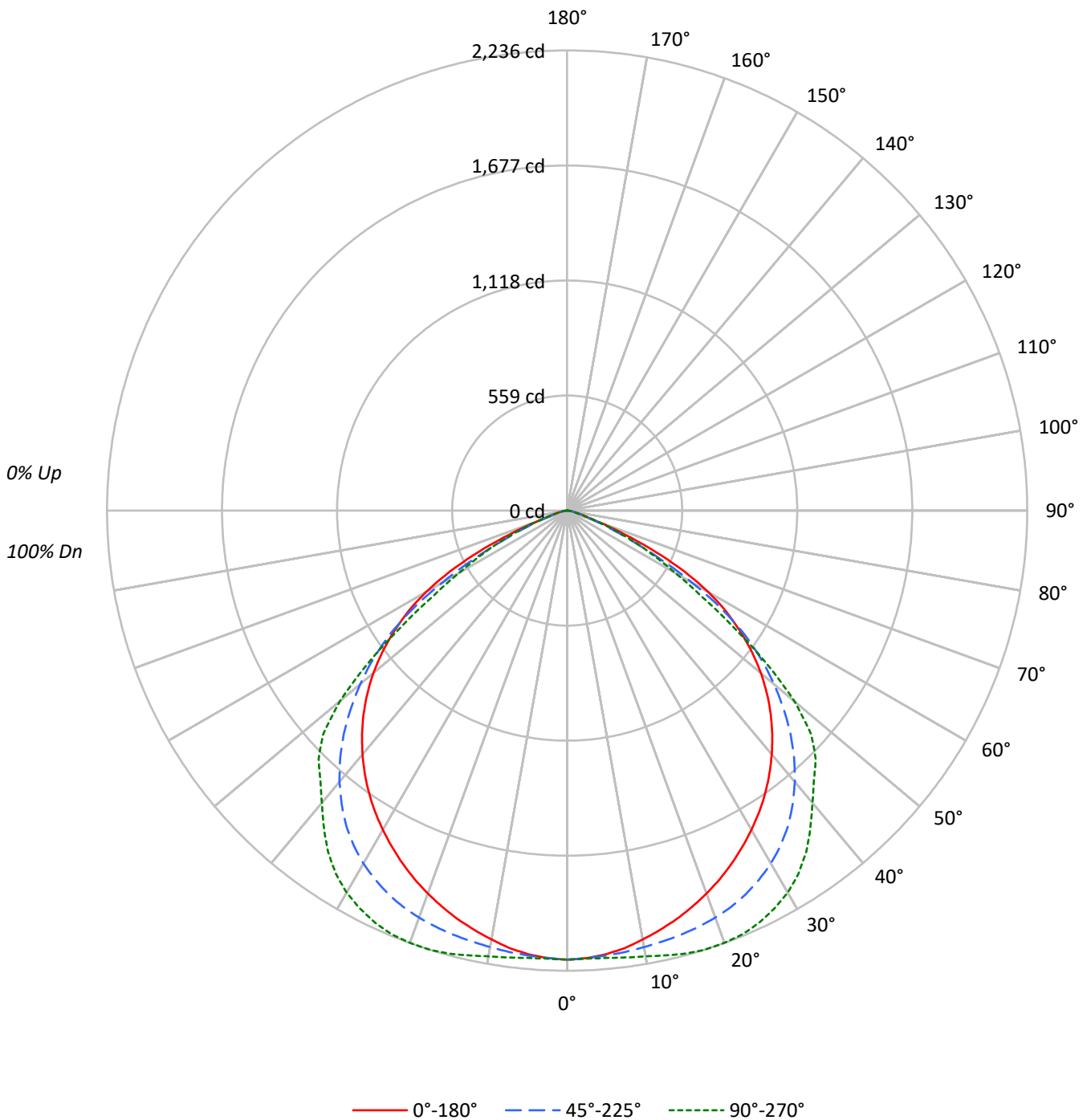
Input Watts (W): 66.5  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	0
RCR																				
0	79	79	79	79	77	77	77	77	74	74	74		70	70	70		68	68	68	66
1	73	71	68	66	72	69	67	65	67	65	63		64	63	61		62	61	60	58
2	68	63	59	56	66	62	58	55	59	56	54		57	55	53		55	53	52	50
3	62	56	51	47	61	55	51	47	53	49	46		51	48	45		50	47	45	43
4	57	50	45	41	56	49	44	41	48	43	40		46	42	39		45	42	39	38
5	53	45	39	35	51	44	39	35	43	38	35		42	38	35		40	37	34	33
6	49	41	35	31	48	40	35	31	39	34	31		38	34	30		37	33	30	29
7	45	37	31	28	44	36	31	27	35	31	27		34	30	27		34	30	27	26
8	42	34	28	25	41	33	28	25	32	28	24		32	27	24		31	27	24	23
9	39	31	26	22	38	31	26	22	30	25	22		29	25	22		28	25	22	21
10	37	29	23	20	36	28	23	20	28	23	20		27	23	20		26	23	20	19

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

	0°	45°	90°
0°	7669	7669	7669
5°	7635	7656	7698
10°	7552	7688	7848
15°	7478	7765	8107
20°	7406	7873	8360
25°	7337	7973	8567
30°	7269	8036	8697
35°	7200	8028	8689
40°	7098	7896	8506
45°	6954	7630	8490
50°	6720	7179	7885
55°	6318	6465	6042
60°	5574	4942	4267
65°	3950	2853	2986
70°	1675	1428	1572
75°	828	760	788
80°	546	546	486
85°	403	403	282



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	206.9	3.8	2.5	0°	2182	2182	2182	2182	2182	
10°-20°	604.6	11.0	7.3	5°	2164	2166	2170	2180	2182	205
20°-30°	946.0	17.2	11.4	15°	2055	2077	2134	2200	2228	580
30°-40°	1162.4	21.1	14.0	25°	1892	1948	2056	2156	2209	872
40°-50°	1189.2	21.6	14.3	35°	1678	1769	1871	1960	2025	1049
50°-60°	919.0	16.7	11.0	45°	1399	1498	1535	1608	1708	1077
60°-70°	395.2	7.2	4.7	55°	1031	1080	1055	1003	986	915
70°-80°	72.2	1.3	0.9	65°	475	452	343	340	359	467
80°-90°	12.4	0.2	0.1	75°	61	57	56	59	58	77
90°-100°	0.4	0.0	0.0	85°	10	9	10	10	7	12
100°-110°	0.0	0.0	0.0	90°	3	2	4	4	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°	1757.4	31.9	21.1	165°	0	0	0	0	0	0
0°-40°	2919.9	53.0	35.1	175°	0	0	0	0	0	0
0°-60°	5028.1	91.3	60.4	180°	0	0	0	0	0	0
0°-90°	5508.0	100.0	66.2							
90°-120°	0.4	0.0	0.0							
90°-150°	0.4	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	5508.4	100.0	66.2							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2182	2182	2182	2182	2182
2.5°	2177	2178	2176	2179	2179
5°	2164	2166	2170	2180	2182
7.5°	2144	2149	2163	2183	2190
10°	2116	2126	2154	2186	2199
12.5°	2087	2103	2144	2193	2214
15°	2055	2077	2134	2200	2228
17.5°	2019	2048	2121	2202	2236
20°	1980	2018	2105	2194	2235
22.5°	1938	1984	2084	2179	2228
25°	1892	1948	2056	2156	2209
27.5°	1843	1909	2021	2122	2180
30°	1791	1867	1980	2078	2143
32.5°	1737	1820	1930	2025	2092
35°	1678	1769	1871	1960	2025
37.5°	1614	1713	1800	1880	1942
40°	1547	1649	1721	1787	1854
42.5°	1475	1577	1633	1694	1775
45°	1399	1498	1535	1608	1708
47.5°	1317	1409	1427	1519	1608
50°	1229	1311	1313	1400	1442
52.5°	1134	1202	1191	1223	1222
55°	1031	1080	1055	1003	986
57.5°	919	945	894	786	771
60°	793	796	703	598	607
62.5°	642	630	510	455	476
65°	475	452	343	340	359
67.5°	302	283	222	240	250
70°	163	150	139	157	153
72.5°	94	86	85	91	90
75°	61	57	56	59	58
77.5°	42	39	39	40	38
80°	27	27	27	27	24
82.5°	17	17	18	17	14
85°	10	9	10	10	7
87.5°	5	4	6	5	2
90°	3	2	4	4	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)