

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: ITL44158

Luminaire Tested: **STW-296T8**

Issue Date: 3/3/2020



**Test Information**

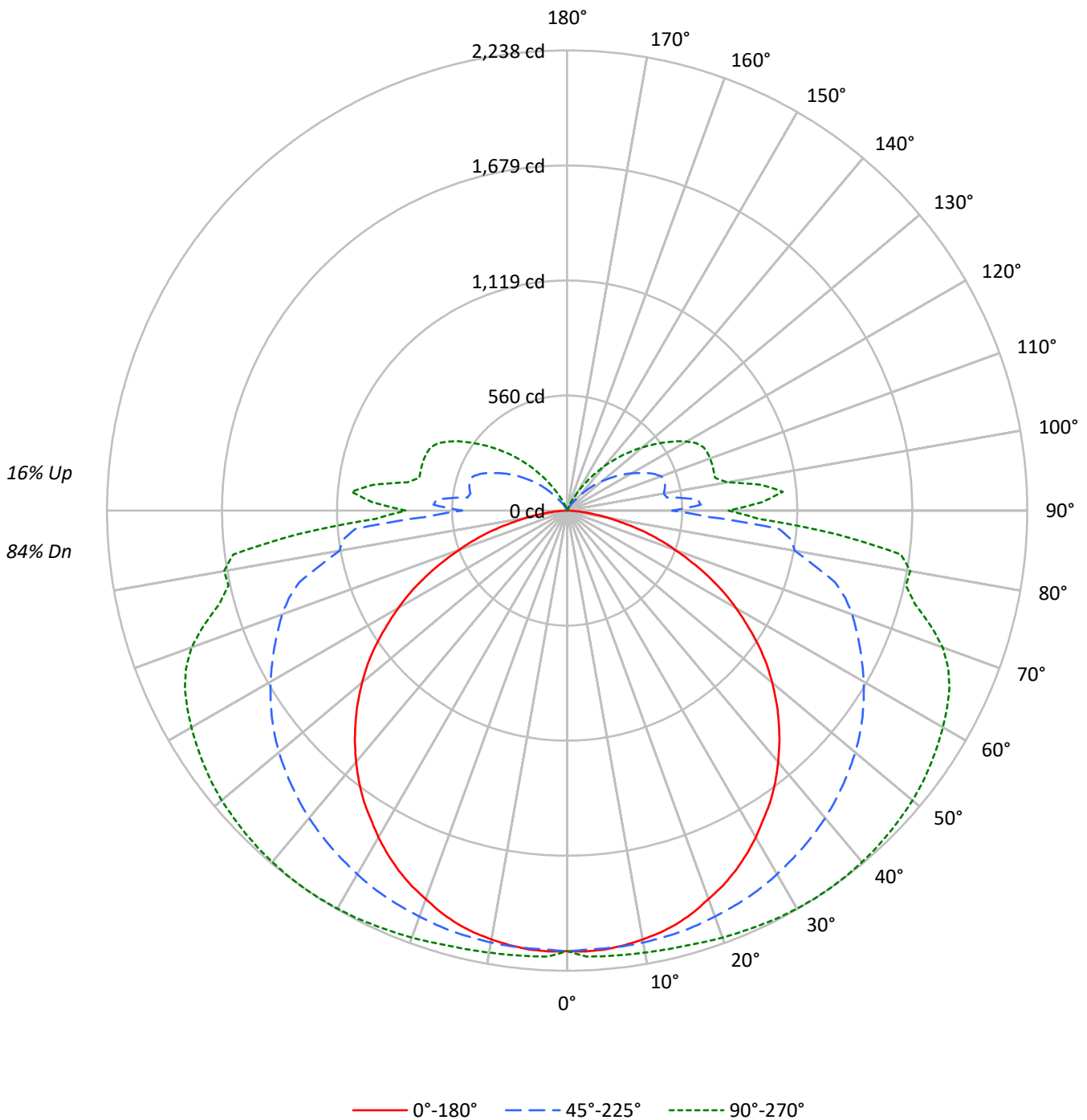
Test Method: LM-41-14  
Report Number: ITL44158  
Test Lab:  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: STW-296T8  
Description: WHITE PAINTED FABRICATED METAL BALLAST HOUSING WITH FLAT  
WHITE PAINTED REFLECTOR AND WHITE PAINTED END PLATES.  
Light Source: TWO 59-WATT F96T8/SPX35 FLUORESCENTS.  
Ballast/Driver: MAGNETEK TRIAD B259I120HP (BALLAST FACTOR 96.6 %).

**Summary**

Lumens per Lamp: 5950 (2 lamps)  
Luminaire Lumens: 11532.3 lumens  
Efficiency: 96.9%  
Efficacy: 93.4 lumens/watt  
Spacing Criteria (0/90/45): 1.27 / 1.59 / 1.61  
Luminous Opening: Rectangular w/ Sides (W: 0.77' x L: 8' x H: 0.12')  
CIE Type: Semi-Direct  
  
Input Watts (W): 123.5  
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	112	112	112	112	107	107	107	107	99	99	99	92	92	92	85	85	85	81
1	98	92	87	82	94	88	84	79	81	77	74	75	72	69	69	66	64	61
2	88	78	70	64	84	75	68	62	69	63	58	63	58	54	58	54	51	47
3	79	67	58	51	75	65	56	50	59	52	47	55	49	44	50	45	41	38
4	72	59	49	42	68	56	48	41	52	45	39	48	42	36	44	39	34	31
5	66	52	42	35	62	50	41	35	46	38	33	42	36	31	39	34	29	27
6	60	46	37	30	57	45	36	30	41	34	28	38	32	27	35	30	25	23
7	56	42	33	26	53	40	32	26	37	30	24	34	28	23	32	26	22	20
8	52	38	29	23	49	36	28	23	34	27	22	31	25	21	29	24	19	17
9	48	35	26	21	46	33	25	20	31	24	19	29	23	18	27	21	17	15
10	45	32	24	18	43	31	23	18	29	22	17	27	21	16	25	20	16	14

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

	0°	45°	90°
0°	3741	3741	3741
5°	3748	3704	3758
10°	3744	3699	3762
15°	3740	3710	3798
20°	3713	3732	3876
25°	3698	3779	3982
30°	3666	3837	4119
35°	3636	3917	4283
40°	3592	4024	4475
45°	3539	4153	4707
50°	3471	4322	4991
55°	3370	4523	5330
60°	3226	4776	5751
65°	3029	5111	6285
70°	2745	5595	6860
75°	2403	6193	7353
80°	1828	6590	8870
85°	1088	8506	9229



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	204.3	1.8	1.7	0°	2143	2143	2143	2143	2143	
10°-20°	601.3	5.2	5.1	5°	2142	2126	2137	2148	2175	204
20°-30°	958.7	8.3	8.1	15°	2078	2083	2122	2157	2193	586
30°-40°	1248.1	10.8	10.5	25°	1934	1976	2077	2168	2224	891
40°-50°	1444.0	12.5	12.1	35°	1725	1819	2000	2163	2238	1078
50°-60°	1529.2	13.3	12.9	45°	1456	1622	1894	2120	2216	1123
60°-70°	1493.4	12.9	12.5	55°	1132	1389	1753	2044	2157	1010
70°-80°	1300.2	11.3	10.9	65°	758	1133	1571	1928	2051	748
80°-90°	908.7	7.9	7.6	75°	377	849	1349	1666	1750	396
90°-100°	570.8	4.9	4.8	85°	64	485	1035	1339	1315	81
100°-110°	455.7	4.0	3.8	90°	0	229	511	726	785	3
110°-120°	383.0	3.3	3.2	95°	0	206	635	935	1053	0
120°-130°	250.4	2.2	2.1	105°	0	192	493	671	738	0
130°-140°	129.5	1.1	1.1	115°	0	110	432	652	731	0
140°-150°	46.1	0.4	0.4	125°	0	41	293	486	577	0
150°-160°	8.5	0.1	0.1	135°	0	11	158	304	380	0
160°-170°	0.3	0.0	0.0	145°	0	0	49	137	189	0
170°-180°	0.0	0.0	0.0	155°	0	0	8	30	49	0
0°-30°	1764.4	15.3	14.8	165°	0	0	0	0	1	0
0°-40°	3012.5	26.1	25.3	175°	0	0	0	0	0	0
0°-60°	5985.7	51.9	50.3	180°	0	0	0	0	0	0
0°-90°	9688.0	84.0	81.4							
90°-120°	1409.5	12.2	11.8							
90°-150°	1835.5	15.9	15.4							
90°-180°	1844.0	16.0	15.5							
0°-180°	11532.3	100.0	96.9							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2143	2143	2143	2143	2143
2.5°	2146	2128	2137	2146	2171
5°	2142	2126	2137	2148	2175
7.5°	2132	2121	2136	2151	2179
10°	2118	2112	2133	2153	2183
12.5°	2101	2099	2128	2155	2188
15°	2078	2083	2122	2157	2193
17.5°	2048	2063	2113	2160	2201
20°	2010	2040	2101	2163	2210
22.5°	1976	2009	2089	2166	2217
25°	1934	1976	2077	2168	2224
27.5°	1887	1942	2061	2169	2231
30°	1835	1902	2042	2168	2235
32.5°	1778	1862	2021	2167	2238
35°	1725	1819	2000	2163	2238
37.5°	1663	1774	1977	2156	2236
40°	1597	1726	1952	2146	2231
42.5°	1528	1676	1924	2134	2225
45°	1456	1622	1894	2120	2216
47.5°	1381	1568	1862	2104	2205
50°	1302	1508	1830	2086	2193
52.5°	1222	1453	1793	2067	2177
55°	1132	1389	1753	2044	2157
57.5°	1039	1328	1710	2019	2134
60°	949	1266	1666	1992	2110
62.5°	857	1203	1618	1961	2083
65°	758	1133	1571	1928	2051
67.5°	656	1059	1522	1888	2007
70°	561	988	1475	1843	1943
72.5°	468	919	1419	1772	1852
75°	377	849	1349	1666	1750
77.5°	278	777	1229	1567	1687
80°	198	707	1123	1529	1694
82.5°	127	619	1102	1552	1638
85°	64	485	1035	1339	1315
87.5°	19	447	680	951	931
90°	0	229	511	726	785
92.5°	0	254	651	905	950
95°	0	206	635	935	1053
97.5°	0	217	488	789	954
100°	0	224	478	666	789
102.5°	0	213	486	667	736
105°	0	192	493	671	738
107.5°	0	171	496	674	740
110°	0	150	487	674	740



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	0	130	462	670	738
115°	0	110	432	652	731
117.5°	0	91	396	617	709
120°	0	73	362	579	671
122.5°	0	56	328	533	627
125°	0	41	293	486	577
127.5°	0	31	257	442	527
130°	0	23	223	395	478
132.5°	0	16	190	350	428
135°	0	11	158	304	380
137.5°	0	6	122	260	328
140°	0	3	92	218	283
142.5°	0	1	66	175	233
145°	0	0	49	137	189
147.5°	0	0	36	99	147
150°	0	0	25	71	107
152.5°	0	0	15	48	74
155°	0	0	8	30	49
157.5°	0	0	3	16	31
160°	0	0	1	6	17
162.5°	0	0	0	1	7
165°	0	0	0	0	1
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)