

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: 10866

Luminaire Tested: **VT3-228T5DR-UNV-EBT1-WL-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: 10866  
Test Lab: LUMINAIRE TESTING LABORATORY, INC.  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VT3-228T5DR-UNV-EBT1-WL-U  
Description: MOLDED ACRYLIC HOUSING, FORMED WHITE ENAMEL STEEL REFLECTOR,  
CLEAR LINEAR PRISMATIC AND PATTERNED LENS.  
Light Source: TWO - Philips - F28T5/841 - 28 WATTS Ea. - 2610 LUMENS Ea.

Ballast/Driver: ONE - ULT - B228PUNV-C

**Summary**

Lumens per Lamp: 2610 (2 lamps)  
Luminaire Lumens: 3852.4 lumens  
Efficiency: 73.8%  
Efficacy: 71.3 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.47 / 1.53  
Luminous Opening: Rectangular w/ Sides (W: 0.48' x L: 4.1' x H: 0.16')  
CIE Type: Direct

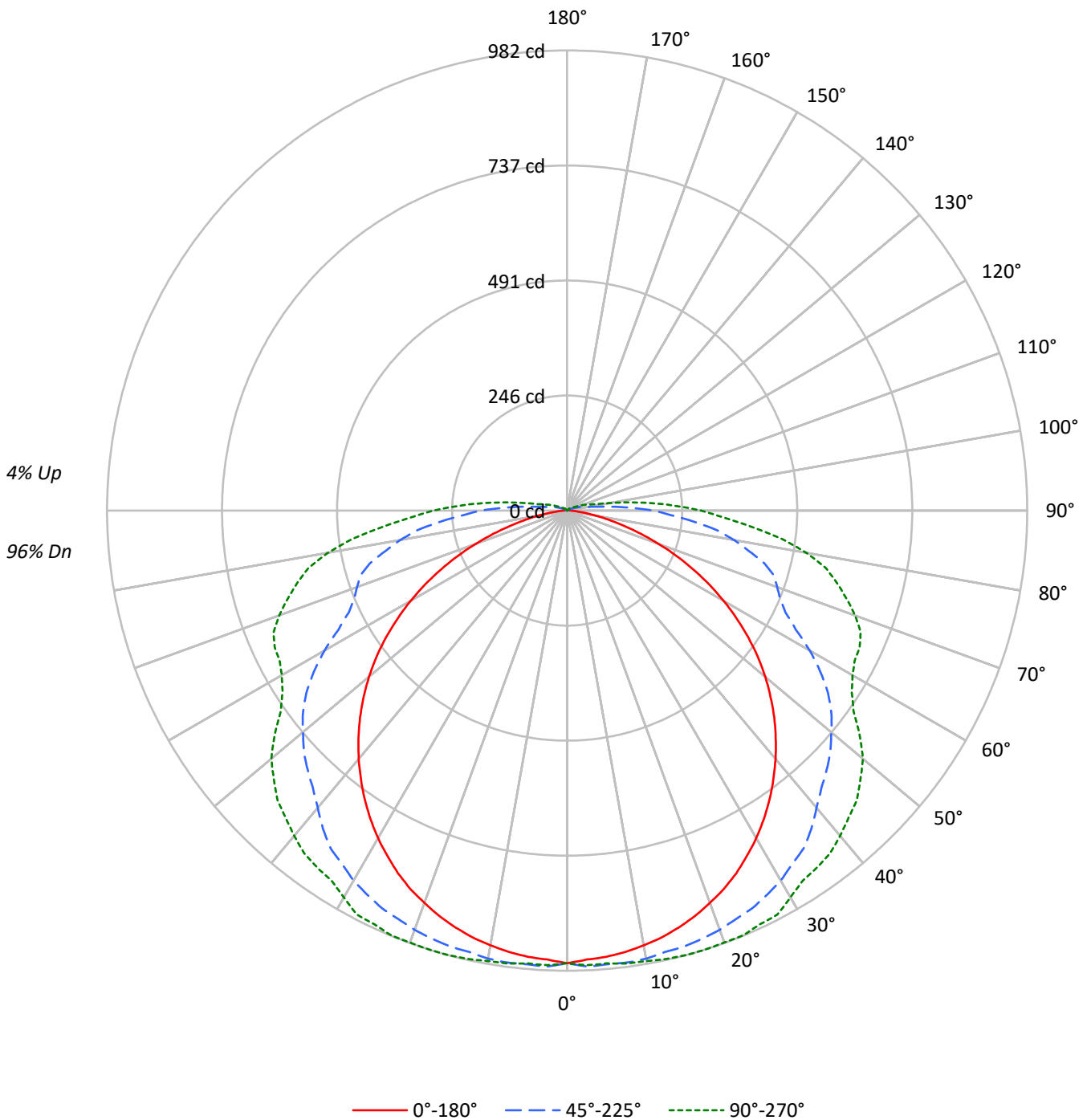
Input Watts (W): 54  
Input Voltage (V): NR  
Input Current (A<sub>in</sub>): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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### Luminous Intensity Polar Plot





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**COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:**

RF	20									20									20									20									
RC	80									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	87	87	87	87	85	85	85	85	80	80	80	76	76	76	73	73	73	71																			
1	77	73	69	65	75	71	67	64	67	64	61	64	61	59	61	59	57	55																			
2	69	62	56	51	67	61	55	51	57	53	49	54	51	47	52	49	46	44																			
3	63	54	47	42	61	53	46	41	50	44	40	47	43	39	45	41	38	36																			
4	57	47	40	35	55	46	40	34	44	38	34	42	37	33	40	35	32	30																			
5	52	42	35	30	51	41	34	29	39	33	29	37	32	28	36	31	27	26																			
6	48	38	31	25	47	37	30	25	35	29	25	34	28	24	32	27	24	22																			
7	45	34	27	22	43	33	27	22	32	26	22	30	25	21	29	25	21	19																			
8	41	31	24	20	40	30	24	20	29	23	19	28	23	19	27	22	19	17																			
9	39	28	22	18	37	28	22	18	27	21	17	26	21	17	25	20	17	15																			
10	36	26	20	16	35	26	20	16	25	19	16	24	19	15	23	18	15	14																			

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

	0°	45°	90°
0°	5284	5284	5284
5°	5231	5216	5175
10°	5196	5154	5120
15°	5161	5094	5105
20°	5113	5057	5092
25°	5062	5031	5087
30°	4984	5000	5047
35°	4894	4961	5035
40°	4784	4842	5055
45°	4653	4794	5070
50°	4488	4767	5018
55°	4263	4712	4819
60°	3955	4493	4875
65°	3547	4252	5200
70°	2990	4426	5459
75°	2306	4647	5613
80°	1573	4561	5645
85°	998	4242	5127



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	92.3	2.4	1.8	0°	966	966	966	966	966	
10°-20°	270.7	7.0	5.2	5°	956	967	972	968	970	91
20°-30°	426.9	11.1	8.2	15°	921	942	963	975	982	260
30°-40°	538.0	14.0	10.3	25°	854	887	936	964	974	393
40°-50°	594.4	15.4	11.4	35°	753	805	880	907	930	471
50°-60°	577.4	15.0	11.1	45°	625	701	783	849	874	482
60°-70°	511.5	13.3	9.8	55°	472	561	680	731	746	421
70°-80°	420.2	10.9	8.1	65°	297	415	514	637	689	294
80°-90°	268.4	7.0	5.1	75°	125	243	436	549	596	135
90°-100°	107.3	2.8	2.1	85°	23	133	271	364	393	27
100°-110°	30.6	0.8	0.6	90°	5	72	183	260	286	4
110°-120°	10.6	0.3	0.2	95°	8	30	94	157	181	6
120°-130°	3.1	0.1	0.1	105°	5	9	30	44	50	6
130°-140°	1.0	0.0	0.0	115°	2	2	9	17	19	2
140°-150°	0.1	0.0	0.0	125°	0	0	2	6	8	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	3	3	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°	789.9	20.5	15.1	165°	0	0	0	0	0	0
0°-40°	1327.9	34.5	25.4	175°	0	0	0	0	0	0
0°-60°	2499.7	64.9	47.9	180°	0	0	0	0	0	0
0°-90°	3699.8	96.0	70.9							
90°-120°	148.5	3.9	2.8							
90°-150°	152.6	4.0	2.9							
90°-180°	153.0	4.0	2.9							
0°-180°	3852.4	100.0	73.8							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	966	966	966	966	966
2.5°	959	968	974	970	971
5°	956	967	972	968	970
7.5°	950	963	973	974	975
10°	942	956	971	970	976
12.5°	933	950	965	973	980
15°	921	942	963	975	982
17.5°	907	931	958	972	982
20°	891	916	952	972	981
22.5°	874	903	943	969	981
25°	854	887	936	964	974
27.5°	831	870	924	956	972
30°	807	850	912	946	953
32.5°	781	829	894	925	936
35°	753	805	880	907	930
37.5°	723	782	856	898	922
40°	692	757	828	886	906
42.5°	659	729	803	867	889
45°	625	701	783	849	874
47.5°	589	669	762	830	849
50°	552	636	736	802	824
52.5°	513	600	711	773	787
55°	472	561	680	731	746
57.5°	429	523	641	689	720
60°	386	487	598	662	703
62.5°	342	450	550	645	692
65°	297	415	514	637	689
67.5°	252	375	492	633	678
70°	207	325	477	614	654
72.5°	165	278	463	586	625
75°	125	243	436	549	596
77.5°	90	221	397	519	565
80°	61	200	361	479	518
82.5°	39	169	323	425	462
85°	23	133	271	364	393
87.5°	12	101	222	306	333
90°	5	72	183	260	286
92.5°	5	47	137	207	232
95°	8	30	94	157	181
97.5°	9	23	61	110	133
100°	8	16	44	73	90
102.5°	7	12	36	54	64
105°	5	9	30	44	50
107.5°	5	6	22	37	41
110°	3	5	17	30	33



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	3	3	13	23	25
115°	2	2	9	17	19
117.5°	1	2	7	14	15
120°	2	1	5	10	12
122.5°	1	1	3	8	10
125°	0	0	2	6	8
127.5°	0	0	1	5	7
130°	0	0	1	4	6
132.5°	0	0	0	4	5
135°	0	0	0	3	3
137.5°	0	0	0	2	3
140°	0	0	0	1	2
142.5°	0	0	0	0	1
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)