

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: 10864

Luminaire Tested: **VT3-232DR-UNV-EB81-WL-U**

Issue Date: 3/3/2020

**Test Information**

Test Method: LM-41-14  
Report Number: 10864  
Test Lab: LUMINAIRE TESTING LABORATORY, INC.  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: VT3-232DR-UNV-EB81-WL-U  
Description: MOLDED ACRYLIC HOUSING, FORMED WHITE ENAMEL STEEL REFLECTOR,  
CLEAR LINEAR PRISMATIC AND PATTERNED LENS.  
Light Source: TWO - Philips - F32T8/TL841/ALTO - 32 WATT ea. - 2850 LUMENS ea.  
PHILIPS  
Ballast/Driver: ONE - GE-232-MV-N

**Summary**

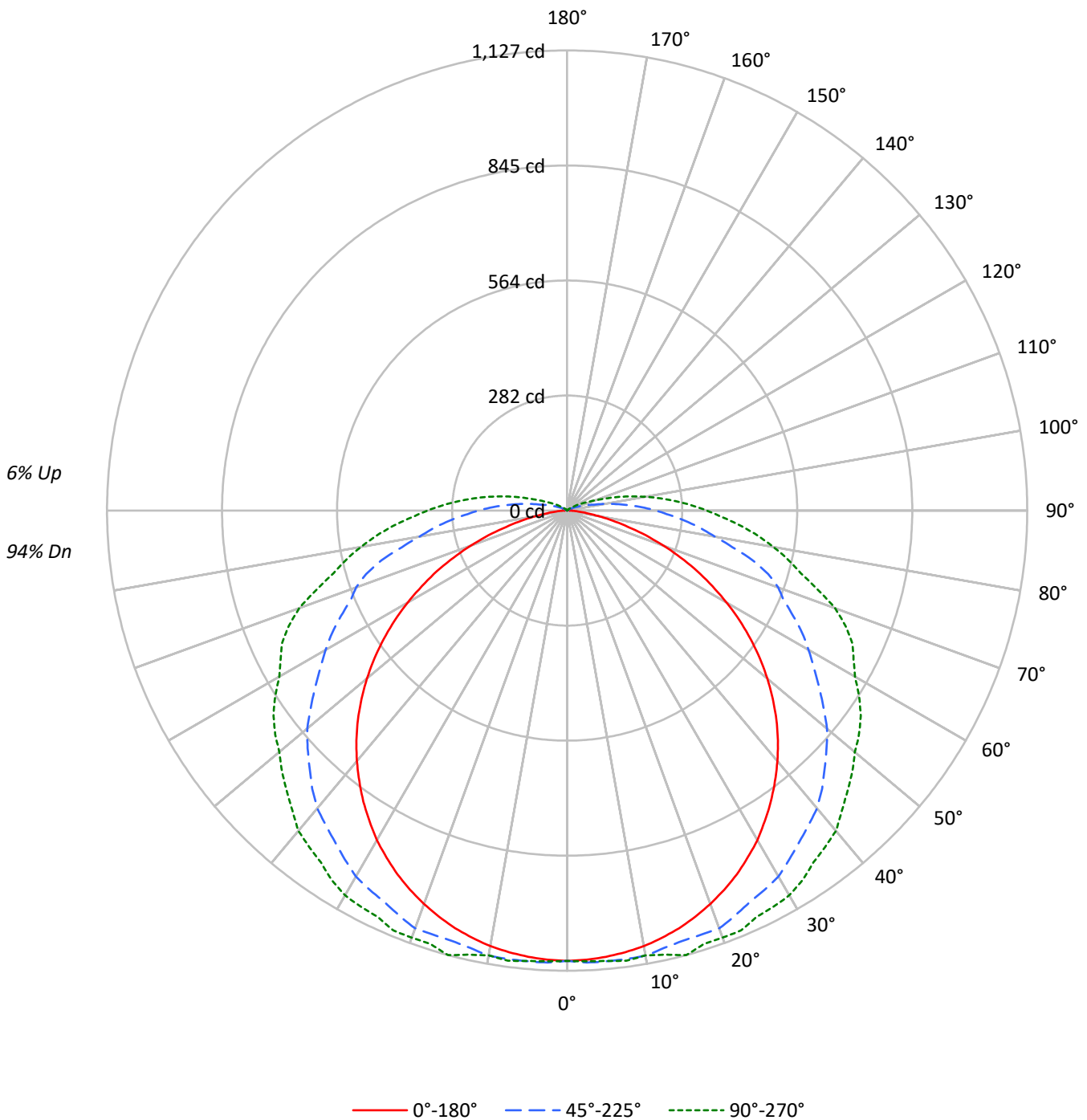
Lumens per Lamp: 2850 (2 lamps)  
Luminaire Lumens: 4414.0 lumens  
Efficiency: 77.4%  
Efficacy: 81.7 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.46 / 1.52  
Luminous Opening: Rectangular w/ Sides (W: 0.48' x L: 4.1' x H: 0.16')  
CIE Type: Direct

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				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	91	91	91	91	89	89	89	89	84	84	84	79	79	79	75	75	75	73
1	81	77	72	69	78	74	71	67	70	67	64	66	64	61	63	61	59	57
2	73	66	59	54	70	64	58	53	60	55	51	57	53	49	54	51	48	46
3	66	57	50	44	64	55	49	43	52	47	42	49	45	41	47	43	39	37
4	60	50	42	37	58	49	42	36	46	40	35	44	38	34	41	37	33	31
5	55	44	37	31	53	43	36	31	41	35	30	39	34	29	37	32	29	27
6	51	40	32	27	49	39	32	27	37	31	26	35	30	25	33	29	25	23
7	47	36	29	24	45	35	28	23	33	27	23	32	26	22	30	26	22	20
8	43	33	26	21	42	32	25	21	30	24	20	29	24	20	28	23	19	18
9	41	30	23	19	39	29	23	18	28	22	18	27	22	18	26	21	17	16
10	38	27	21	17	37	27	21	17	26	20	16	25	20	16	24	19	16	14

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

	0°	45°	90°
0°	6033	6033	6033
5°	6002	5946	5906
10°	5974	5875	5802
15°	5934	5771	5858
20°	5882	5784	5777
25°	5826	5687	5735
30°	5756	5674	5762
35°	5654	5587	5695
40°	5538	5567	5713
45°	5397	5462	5633
50°	5204	5382	5603
55°	4950	5218	5672
60°	4621	5131	5645
65°	4204	5054	5819
70°	3625	5104	5826
75°	2859	5020	5575
80°	1986	4636	5590
85°	1215	4539	5571



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	105.2	2.4	1.8	0°	1103	1103	1103	1103	1103	
10°-20°	308.6	7.0	5.4	5°	1097	1100	1108	1104	1107	104
20°-30°	484.7	11.0	8.5	15°	1059	1074	1091	1115	1127	299
30°-40°	612.8	13.9	10.8	25°	983	1005	1058	1093	1098	453
40°-50°	673.0	15.2	11.8	35°	870	921	991	1039	1052	544
50°-60°	660.7	15.0	11.6	45°	725	798	892	948	971	558
60°-70°	585.2	13.3	10.3	55°	548	650	753	841	878	489
70°-80°	448.6	10.2	7.9	65°	352	469	611	729	771	347
80°-90°	289.0	6.5	5.1	75°	155	288	471	554	592	167
90°-100°	156.7	3.5	2.7	85°	28	143	290	391	427	33
100°-110°	63.8	1.4	1.1	90°	6	88	217	308	342	5
110°-120°	19.7	0.4	0.3	95°	10	43	151	235	266	8
120°-130°	4.8	0.1	0.1	105°	6	10	51	104	129	7
130°-140°	0.9	0.0	0.0	115°	2	2	15	35	43	2
140°-150°	0.2	0.0	0.0	125°	0	0	3	10	13	0
150°-160°	0.0	0.0	0.0	135°	0	0	0	2	4	0
160°-170°	0.0	0.0	0.0	145°	0	0	0	1	1	0
170°-180°	0.0	0.0	0.0	155°	0	0	0	0	0	0
0°-30°	898.5	20.4	15.8	165°	0	0	0	0	0	0
0°-40°	1511.3	34.2	26.5	175°	0	0	0	0	0	0
0°-60°	2845.0	64.5	49.9	180°	0	0	0	0	0	0
0°-90°	4167.9	94.4	73.1							
90°-120°	240.2	5.4	4.2							
90°-150°	246.1	5.6	4.3							
90°-180°	246.0	5.6	4.3							
0°-180°	4414.0	100.0	77.4							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1103	1103	1103	1103	1103
2.5°	1101	1102	1108	1104	1105
5°	1097	1100	1108	1104	1107
7.5°	1091	1096	1108	1110	1112
10°	1083	1089	1107	1102	1106
12.5°	1072	1083	1097	1104	1114
15°	1059	1074	1091	1115	1127
17.5°	1043	1062	1089	1110	1113
20°	1025	1044	1089	1100	1113
22.5°	1005	1025	1074	1098	1113
25°	983	1005	1058	1093	1098
27.5°	958	987	1047	1076	1094
30°	932	969	1035	1068	1088
32.5°	901	949	1013	1059	1073
35°	870	921	991	1039	1052
37.5°	836	890	971	1016	1038
40°	801	859	952	998	1024
42.5°	764	829	924	979	996
45°	725	798	892	948	971
47.5°	683	762	862	921	947
50°	640	724	831	892	920
52.5°	595	686	791	864	901
55°	548	650	753	841	878
57.5°	501	610	716	814	848
60°	451	565	683	779	814
62.5°	401	516	649	746	791
65°	352	469	611	729	771
67.5°	301	421	574	697	738
70°	251	375	550	660	698
72.5°	202	331	516	612	643
75°	155	288	471	554	592
77.5°	114	255	415	513	554
80°	77	224	367	476	513
82.5°	48	182	330	434	471
85°	28	143	290	391	427
87.5°	14	114	251	347	381
90°	6	88	217	308	342
92.5°	7	63	183	272	304
95°	10	43	151	235	266
97.5°	11	31	121	199	229
100°	10	21	93	165	194
102.5°	8	14	68	133	160
105°	6	10	51	104	129
107.5°	5	7	38	78	98
110°	3	4	28	60	73



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**CANDELA DISTRIBUTION (continued):**

	0°	22.5°	45°	67.5°	90°
112.5°	3	3	21	46	55
115°	2	2	15	35	43
117.5°	1	2	11	27	33
120°	1	1	7	20	25
122.5°	0	0	4	14	18
125°	0	0	3	10	13
127.5°	0	0	2	7	10
130°	0	0	0	4	6
132.5°	0	0	0	3	5
135°	0	0	0	2	4
137.5°	0	0	0	2	3
140°	0	0	0	2	1
142.5°	0	0	0	1	1
145°	0	0	0	1	1
147.5°	0	0	0	1	1
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)