

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: P30845

Luminaire Tested: **2GR8-332A19/156-UNV-EB81**

Issue Date: 3/3/2020



**Test Information**

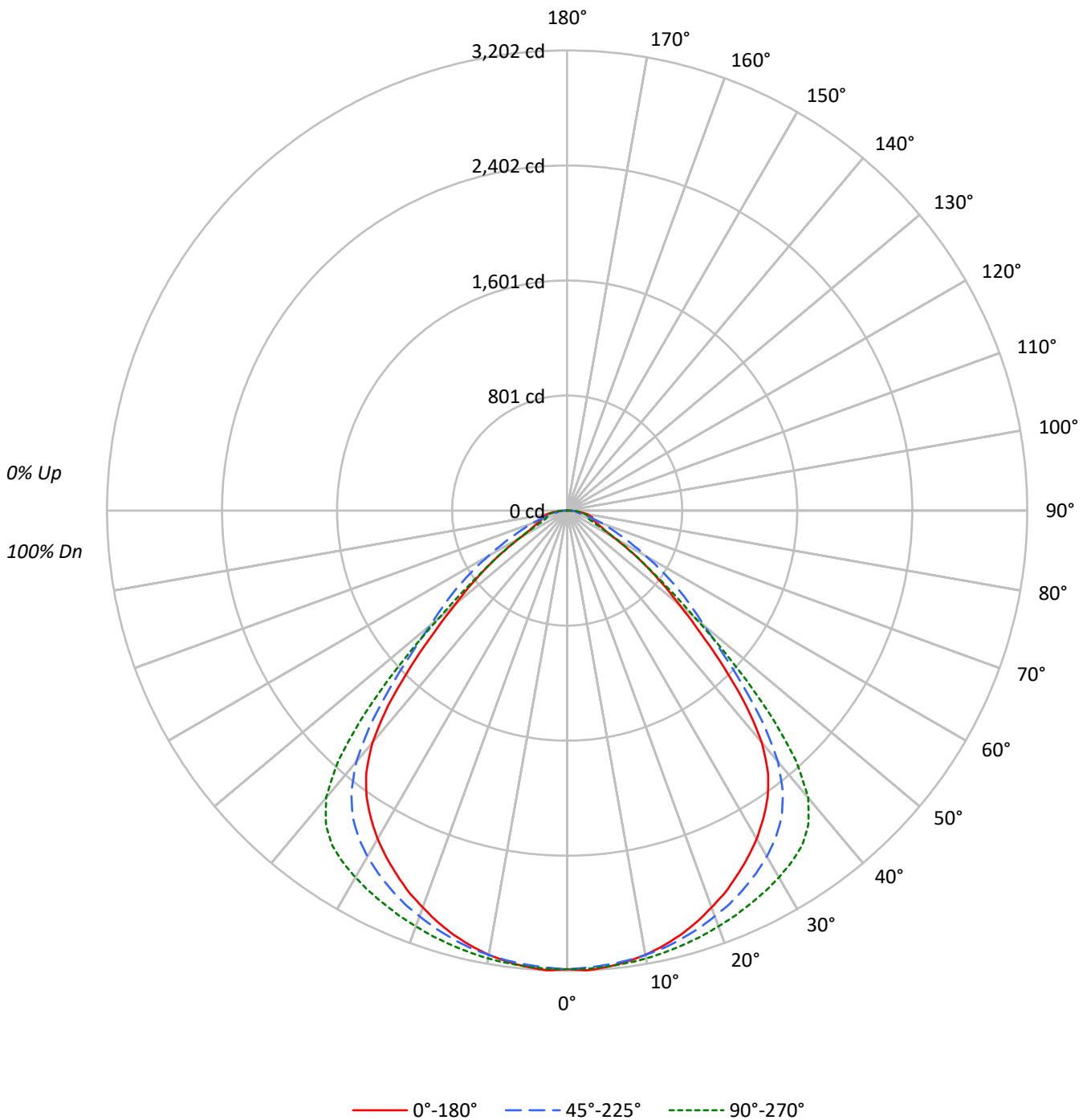
Test Method: LM-41-14  
Report Number: P30845  
Test Lab: INNOVATION CENTER-P3  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 2GR8-332A19/156-UNV-EB81  
Description: METALUX 2' X 4' COMMERCIAL TROFFER W/ ACRYLIC PRISMATIC LENS, TYPE  
19, 0.156" THK  
Light Source: (3) DOUBLE BIPIN T8 LINEAR FLUORESCENT LAMPS  
Ballast/Driver: -  
GE332MAX-N/ULTRA

**Summary**

Lumens per Lamp: 3100 (3 lamps)  
Luminaire Lumens: 6982.0 lumens  
Efficiency: 75.1%  
Efficacy: 83.3 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.38 / 1.31  
Luminous Opening: Rectangular (W 1.75' x L: 3.83' x H: 0')  
CIE Type: Direct  
  
Input Watts (W): 83.8  
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	89	89	89	89	87	87	87	87	83	83	83		80	80	80		77	77	77	75
1	83	80	77	75	81	78	76	74	75	73	71		72	71	69		70	68	67	66
2	77	71	67	63	75	70	66	63	68	64	61		65	62	60		63	61	59	57
3	71	64	59	55	69	63	58	54	61	57	53		59	55	52		57	54	51	50
4	66	58	52	47	64	57	51	47	55	50	47		53	49	46		52	48	45	44
5	61	52	46	42	59	51	46	42	50	45	41		49	44	41		47	43	40	39
6	57	48	41	37	55	47	41	37	46	40	37		44	40	36		43	39	36	35
7	53	43	37	33	51	43	37	33	42	37	33		41	36	33		40	36	32	31
8	49	40	34	30	48	39	34	30	38	33	30		38	33	30		37	32	29	28
9	46	37	31	27	45	36	31	27	36	30	27		35	30	27		34	30	27	25
10	43	34	28	25	42	34	28	25	33	28	25		32	28	25		32	27	24	23

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

	0°	45°	90°
0°	5120	5120	5120
5°	5135	5111	5130
10°	5114	5116	5157
15°	5075	5123	5196
20°	5017	5129	5258
25°	4957	5145	5345
30°	4888	5149	5460
35°	4768	5099	5579
40°	4415	4778	5465
45°	3501	3944	4498
50°	2541	3098	2898
55°	1860	2602	1883
60°	1194	2031	1229
65°	945	1545	809
70°	910	1206	727
75°	1122	806	899
80°	1266	656	1109
85°	1252	1197	1381



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**ZONAL LUMENS:**

**CANDELA DISTRIBUTION:**

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	302.3	4.3	3.3	0°	3191	3191	3191	3191	3191	
10°-20°	871.8	12.5	9.4	5°	3188	3176	3173	3178	3185	303
20°-30°	1340.4	19.2	14.4	15°	3055	3058	3084	3112	3128	861
30°-40°	1627.2	23.3	17.5	25°	2800	2827	2906	2983	3019	1290
40°-50°	1374.0	19.7	14.8	35°	2434	2477	2603	2771	2848	1508
50°-60°	760.2	10.9	8.2	45°	1543	1715	1738	1979	1982	1189
60°-70°	400.7	5.7	4.3	55°	665	825	930	911	673	601
70°-80°	218.0	3.1	2.3	65°	249	448	407	489	213	258
80°-90°	85.5	1.2	0.9	75°	181	250	130	273	145	182
90°-100°	1.9	0.0	0.0	85°	68	102	65	92	75	70
100°-110°	0.0	0.0	0.0	90°	5	13	16	17	13	6
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°	2514.6	36.0	27.0	165°	0	0	0	0	0	0
0°-40°	4141.8	59.3	44.5	175°	0	0	0	0	0	0
0°-60°	6275.9	89.9	67.5	180°	0	0	0	0	0	0
0°-90°	6980.1	100.0	75.1							
90°-120°	1.9	0.0	0.0							
90°-150°	1.9	0.0	0.0							
90°-180°	2.0	0.0	0.0							
0°-180°	6982.0	100.0	75.1							



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3191	3191	3191	3191	3191
2.5°	3202	3188	3183	3184	3191
5°	3188	3176	3173	3178	3185
7.5°	3167	3158	3159	3168	3176
10°	3139	3132	3140	3155	3165
12.5°	3101	3097	3116	3135	3148
15°	3055	3058	3084	3112	3128
17.5°	3002	3011	3048	3087	3106
20°	2938	2956	3004	3055	3079
22.5°	2875	2896	2960	3022	3051
25°	2800	2827	2906	2983	3019
27.5°	2722	2753	2846	2940	2986
30°	2638	2672	2779	2893	2947
32.5°	2541	2580	2700	2837	2903
35°	2434	2477	2603	2771	2848
37.5°	2296	2345	2466	2671	2757
40°	2108	2178	2281	2526	2609
42.5°	1847	1963	2030	2295	2354
45°	1543	1715	1738	1979	1982
47.5°	1252	1454	1465	1633	1555
50°	1018	1208	1241	1321	1161
52.5°	835	1000	1082	1090	873
55°	665	825	930	911	673
57.5°	508	679	777	776	515
60°	372	569	633	664	383
62.5°	294	497	511	568	281
65°	249	448	407	489	213
67.5°	218	402	326	424	174
70°	194	350	257	373	155
72.5°	187	294	188	323	148
75°	181	250	130	273	145
77.5°	157	213	90	221	136
80°	137	171	71	170	120
82.5°	106	133	64	128	101
85°	68	102	65	92	75
87.5°	32	59	50	53	42
90°	5	13	16	17	13
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)