

Scaled data based on original data using  
LM-79-08 Approved Method: Electrical and Photometric Measurements of Solid-State  
Lighting Products

Test Report Prepared for  
Cooper Lighting Solutions  
(formerly Eaton)

Brand: METALUX

Report Number: P391159

Luminaire Tested: **24CZ2-170VHE-RDP-UNV-L950-CD2-SWPD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P391159  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-170VHE-RDP-UNV-L950-CD2-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RDP LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 10250.9 lumens  
Efficiency: N/A  
Efficacy: 83.1 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

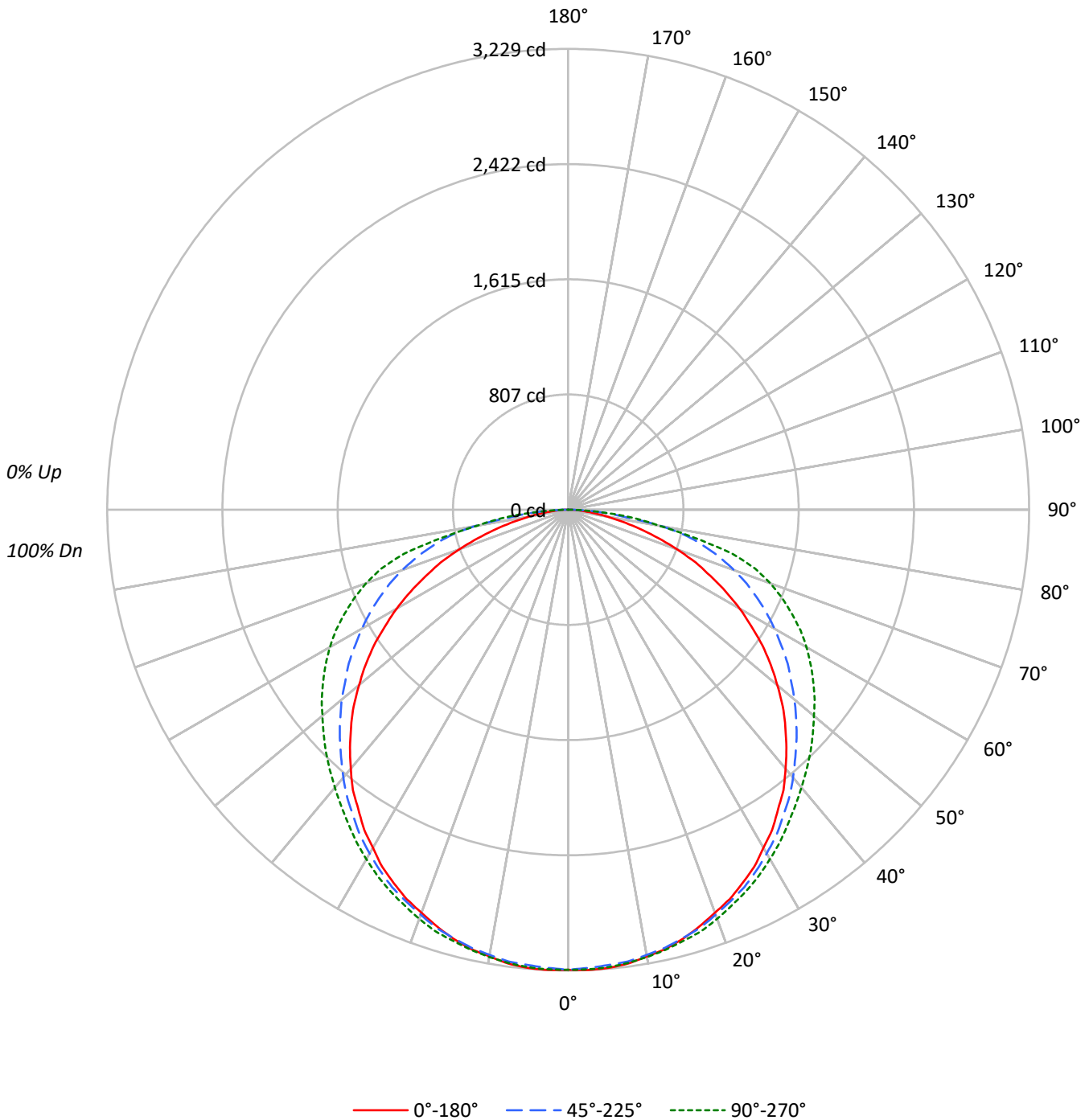
Input Watts (W): 123.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

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

	0°	45°	90°
0°	4337	4337	4337
5°	4354	4326	4347
10°	4342	4328	4349
15°	4335	4327	4356
20°	4303	4324	4368
25°	4287	4333	4378
30°	4250	4321	4392
35°	4209	4309	4410
40°	4162	4305	4465
45°	4093	4305	4567
50°	4002	4332	4704
55°	3900	4401	4914
60°	3735	4488	5186
65°	3497	4646	5504
70°	3180	4860	5921
75°	2696	5128	6185
80°	2128	5161	5003
85°	1570	3924	4395



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	305.8	3.0
10°-20°	880.1	8.6
20°-30°	1345.8	13.1
30°-40°	1645.2	16.0
40°-50°	1753.5	17.1
50°-60°	1676.5	16.4
60°-70°	1420.2	13.9
70°-80°	954.5	9.3
80°-90°	269.3	2.6
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	2531.6	24.7
0°-40°	4176.9	40.7
0°-60°	7606.9	74.2
0°-90°	10250.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10250.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3224	3224	3224	3224	3224	
5°	3224	3218	3203	3218	3218	306
15°	3112	3112	3107	3132	3127	877
25°	2888	2898	2918	2944	2949	1331
35°	2563	2583	2624	2674	2685	1605
45°	2151	2186	2263	2359	2400	1659
55°	1663	1724	1876	2024	2095	1481
65°	1098	1210	1459	1652	1729	1090
75°	519	707	986	1154	1190	555
85°	102	208	254	275	285	126
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3223.6	3223.6	3223.6	3223.6	3223.6
2.5°	3228.7	3228.7	3213.4	3223.6	3223.6
5°	3223.6	3218.5	3203.3	3218.5	3218.5
7.5°	3208.4	3203.3	3193.1	3208.4	3203.3
10°	3177.9	3177.9	3167.7	3182.9	3182.9
12.5°	3152.4	3147.3	3142.3	3162.6	3157.5
15°	3111.8	3111.8	3106.7	3132.1	3127.0
17.5°	3060.9	3066.0	3071.1	3091.4	3096.5
20°	3005.0	3015.1	3020.2	3050.7	3050.7
22.5°	2954.1	2959.2	2969.4	2999.9	2999.9
25°	2888.0	2898.2	2918.5	2944.0	2949.0
27.5°	2821.9	2827.0	2852.4	2888.0	2893.1
30°	2735.5	2750.8	2781.3	2821.9	2827.0
32.5°	2659.2	2674.5	2710.1	2750.8	2760.9
35°	2562.6	2583.0	2623.6	2674.5	2684.7
37.5°	2476.2	2491.4	2542.3	2598.2	2613.5
40°	2369.4	2399.9	2450.8	2516.9	2542.3
42.5°	2262.6	2293.1	2354.2	2440.6	2471.1
45°	2150.8	2186.4	2262.6	2359.2	2399.9
47.5°	2038.9	2079.6	2166.0	2277.9	2323.6
50°	1911.8	1962.6	2069.4	2196.5	2247.4
52.5°	1789.8	1850.8	1967.7	2110.1	2176.2
55°	1662.7	1723.7	1876.2	2023.7	2094.8
57.5°	1520.3	1601.6	1769.4	1937.2	2013.5
60°	1388.1	1464.4	1667.7	1850.8	1927.1
62.5°	1245.7	1347.4	1566.0	1759.3	1835.5
65°	1098.3	1210.1	1459.3	1652.5	1728.8
67.5°	966.1	1088.1	1352.5	1545.7	1622.0
70°	808.4	961.0	1235.5	1428.8	1505.0
72.5°	661.0	828.8	1113.5	1301.6	1372.8
75°	518.6	706.8	986.4	1154.2	1189.8
77.5°	386.4	584.7	854.2	925.4	900.0
80°	274.6	467.8	666.1	630.5	645.7
82.5°	178.0	355.9	411.8	467.8	483.0
85°	101.7	208.5	254.2	274.6	284.7
87.5°	45.8	76.3	101.7	101.7	96.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)