

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: P391157

Luminaire Tested: **24CZ2-170VHE-RDP-UNV-L940-CD2-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: P391157
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-L940-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9778.9 lumens
Efficiency: N/A
Efficacy: 79.2 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

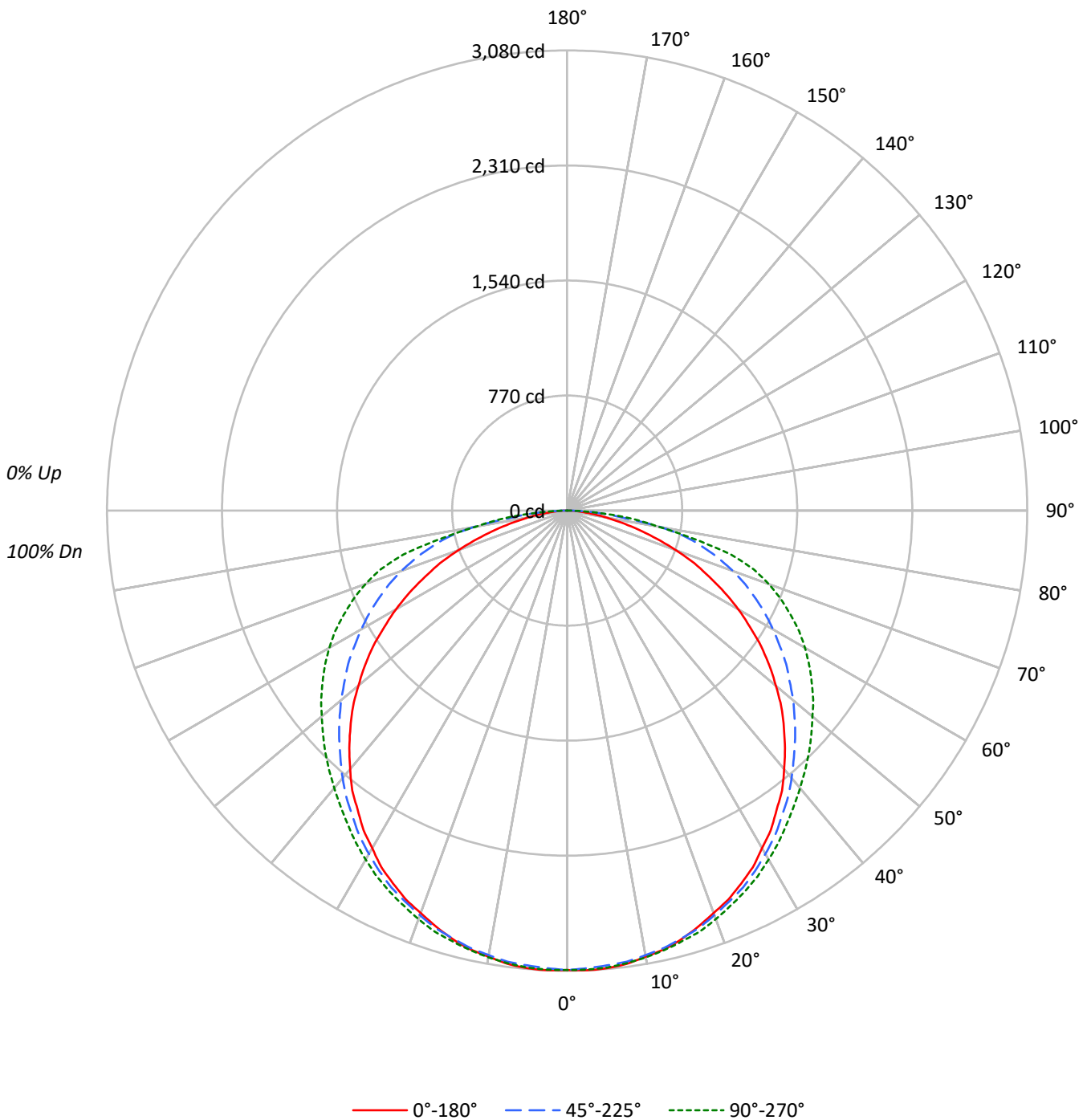
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P391157

CATALOG NUMBER: 24CZ2-170VHE-RDP-UNV-L940-CD2-U

Luminous Intensity Polar Plot





TEST NUMBER: P391157

CATALOG NUMBER: 24CZ2-170VHE-RDP-UNV-L940-CD2-U

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°	4138	4138	4138
5°	4153	4127	4147
10°	4142	4129	4148
15°	4135	4128	4155
20°	4105	4125	4167
25°	4090	4133	4177
30°	4054	4122	4190
35°	4015	4111	4207
40°	3970	4106	4260
45°	3904	4107	4356
50°	3818	4132	4488
55°	3721	4198	4688
60°	3563	4281	4947
65°	3336	4432	5251
70°	3034	4637	5648
75°	2572	4892	5900
80°	2029	4923	4773
85°	1497	3744	4193



TEST NUMBER: P391157

CATALOG NUMBER: 24CZ2-170VHE-RDP-UNV-L940-CD2-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	291.7	3.0
10°-20°	839.5	8.6
20°-30°	1283.8	13.1
30°-40°	1569.5	16.0
40°-50°	1672.7	17.1
50°-60°	1599.4	16.4
60°-70°	1354.9	13.9
70°-80°	910.6	9.3
80°-90°	256.9	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°	2415.1	24.7
0°-40°	3984.5	40.7
0°-60°	7256.6	74.2
0°-90°	9778.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9778.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3075	3075	3075	3075	3075	
5°	3075	3070	3056	3070	3070	292
15°	2968	2968	2964	2988	2983	837
25°	2755	2765	2784	2808	2813	1270
35°	2445	2464	2503	2551	2561	1531
45°	2052	2086	2158	2251	2289	1582
55°	1586	1644	1790	1930	1998	1413
65°	1048	1154	1392	1576	1649	1040
75°	495	674	941	1101	1135	530
85°	97	199	242	262	272	120
90°	0	0	0	0	0	



TEST NUMBER: P391157

CATALOG NUMBER: 24CZ2-170VHE-RDP-UNV-L940-CD2-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3075.2	3075.2	3075.2	3075.2	3075.2
2.5°	3080.0	3080.0	3065.5	3075.2	3075.2
5°	3075.2	3070.3	3055.8	3070.3	3070.3
7.5°	3060.6	3055.8	3046.1	3060.6	3055.8
10°	3031.5	3031.5	3021.8	3036.4	3036.4
12.5°	3007.3	3002.4	2997.6	3017.0	3012.1
15°	2968.5	2968.5	2963.6	2987.9	2983.0
17.5°	2920.0	2924.8	2929.7	2949.1	2953.9
20°	2866.6	2876.3	2881.2	2910.3	2910.3
22.5°	2818.1	2823.0	2832.7	2861.8	2861.8
25°	2755.1	2764.8	2784.2	2808.4	2813.3
27.5°	2692.0	2696.8	2721.1	2755.1	2759.9
30°	2609.5	2624.1	2653.2	2692.0	2696.8
32.5°	2536.8	2551.3	2585.3	2624.1	2633.8
35°	2444.6	2464.0	2502.8	2551.3	2561.0
37.5°	2362.2	2376.7	2425.2	2478.6	2493.1
40°	2260.3	2289.4	2337.9	2401.0	2425.2
42.5°	2158.4	2187.6	2245.8	2328.2	2357.3
45°	2051.7	2085.7	2158.4	2250.6	2289.4
47.5°	1945.0	1983.8	2066.3	2173.0	2216.7
50°	1823.8	1872.3	1974.1	2095.4	2143.9
52.5°	1707.4	1765.6	1877.1	2012.9	2076.0
55°	1586.1	1644.3	1789.8	1930.5	1998.4
57.5°	1450.3	1527.9	1688.0	1848.0	1920.8
60°	1324.2	1396.9	1590.9	1765.6	1838.3
62.5°	1188.4	1285.4	1493.9	1678.3	1751.0
65°	1047.7	1154.4	1392.1	1576.4	1649.2
67.5°	921.6	1038.0	1290.2	1474.5	1547.3
70°	771.2	916.7	1178.7	1363.0	1435.7
72.5°	630.6	790.6	1062.2	1241.7	1309.6
75°	494.7	674.2	941.0	1101.1	1135.0
77.5°	368.6	557.8	814.9	882.8	858.5
80°	261.9	446.2	635.4	601.5	616.0
82.5°	169.8	339.5	392.9	446.2	460.8
85°	97.0	198.9	242.5	261.9	271.6
87.5°	43.7	72.8	97.0	97.0	92.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)