

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: P390531

Luminaire Tested: **22CZ2-60VHE-RDP-UNV-L940-CD1-SDWPD1-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: P390531  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-60VHE-RDP-UNV-L940-CD1-SDWPD1-U  
Description: 2x2 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: 3425.0 lumens  
Efficiency: N/A  
Efficacy: 77.7 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

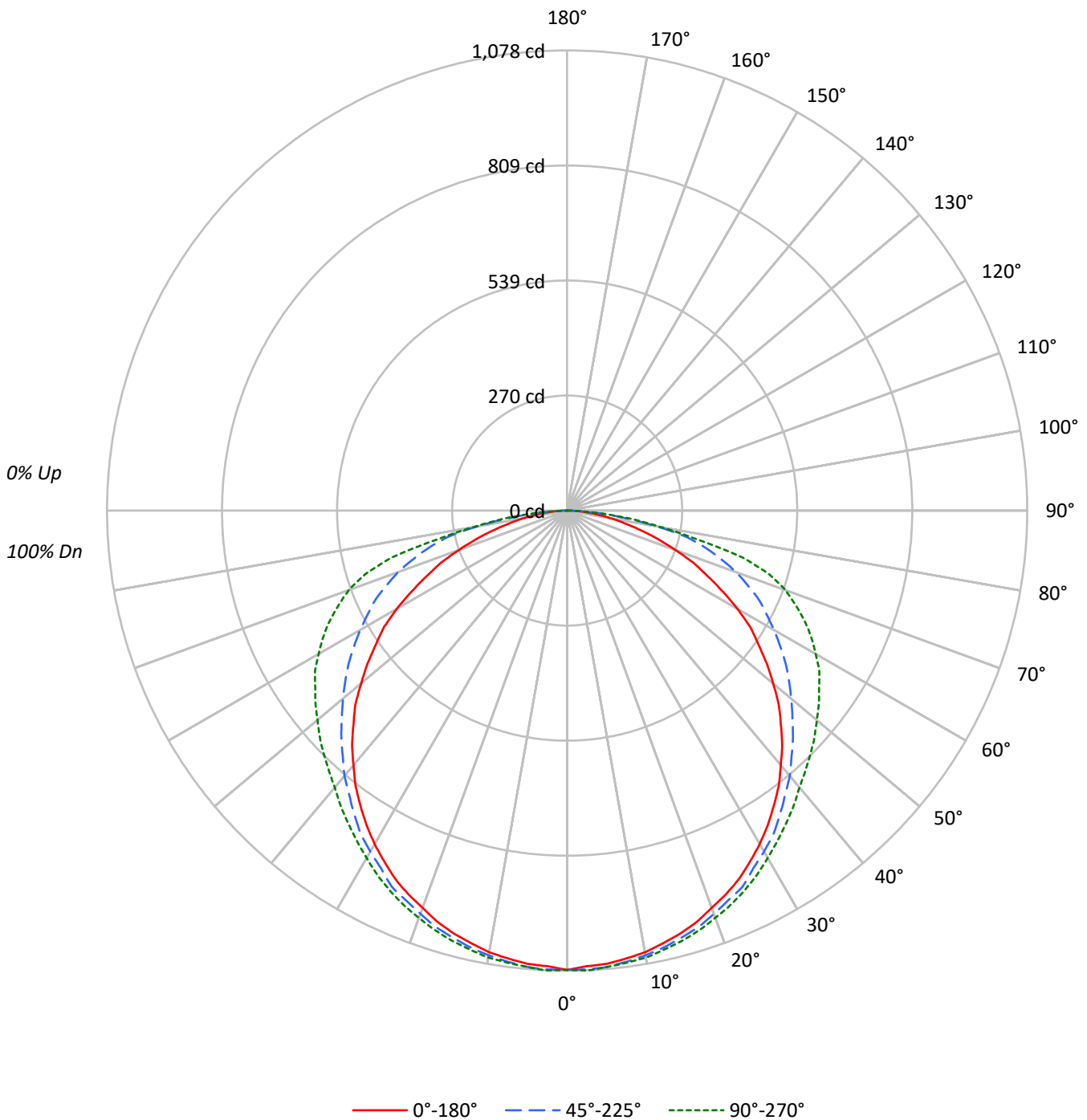
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P390531

CATALOG NUMBER: 22CZ2-60VHE-RDP-UNV-L940-CD1-SDWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P390531

CATALOG NUMBER: 22CZ2-60VHE-RDP-UNV-L940-CD1-SDWPD1-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	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	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°	2895	2895	2895
5°	2879	2899	2899
10°	2871	2892	2905
15°	2857	2885	2906
20°	2836	2879	2908
25°	2828	2888	2918
30°	2803	2866	2920
35°	2773	2855	2938
40°	2735	2850	2974
45°	2694	2848	3068
50°	2637	2869	3196
55°	2565	2932	3381
60°	2482	3010	3620
65°	2310	3161	3915
70°	2121	3311	4282
75°	1860	3484	4427
80°	1601	3319	3474
85°	1402	2411	2646



TEST NUMBER: P390531

CATALOG NUMBER: 22CZ2-60VHE-RDP-UNV-L940-CD1-SDWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	101.8	3.0
10°-20°	292.2	8.5
20°-30°	445.8	13.0
30°-40°	544.3	15.9
40°-50°	582.0	17.0
50°-60°	561.8	16.4
60°-70°	483.6	14.1
70°-80°	327.2	9.6
80°-90°	86.3	2.5
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°	839.8	24.5
0°-40°	1384.1	40.4
0°-60°	2527.9	73.8
0°-90°	3425.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3425.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1076	1076	1076	1076	1076	
5°	1066	1068	1073	1073	1073	101
15°	1026	1028	1036	1041	1043	289
25°	952	957	973	978	983	438
35°	844	852	869	887	894	528
45°	708	721	748	786	806	546
55°	547	564	625	688	721	490
65°	363	398	496	574	615	361
75°	179	237	335	403	426	192
85°	45	63	78	81	86	51
90°	0	0	0	0	0	



TEST NUMBER: P390531

CATALOG NUMBER: 22CZ2-60VHE-RDP-UNV-L940-CD1-SDWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1075.9	1075.9	1075.9	1075.9	1075.9
2.5°	1068.3	1070.8	1075.9	1075.9	1078.4
5°	1065.8	1068.3	1073.3	1073.3	1073.3
7.5°	1058.2	1060.7	1065.8	1068.3	1068.3
10°	1050.7	1053.2	1058.2	1060.7	1063.3
12.5°	1038.1	1040.6	1048.1	1053.2	1053.2
15°	1025.5	1028.0	1035.5	1040.6	1043.1
17.5°	1010.3	1015.4	1022.9	1028.0	1030.5
20°	990.2	995.2	1005.3	1012.9	1015.4
22.5°	972.6	977.6	987.7	995.2	1000.3
25°	952.4	957.4	972.6	977.6	982.6
27.5°	927.2	932.2	944.8	954.9	962.5
30°	902.0	907.0	922.2	934.8	939.8
32.5°	874.3	881.8	899.5	909.6	917.1
35°	844.1	851.6	869.2	886.9	894.4
37.5°	813.8	821.4	839.0	861.7	871.8
40°	778.5	788.6	811.3	841.5	846.6
42.5°	745.8	758.4	778.5	813.8	826.4
45°	708.0	720.6	748.3	786.1	806.3
47.5°	672.7	685.3	715.6	760.9	786.1
50°	629.9	647.5	685.3	738.2	763.4
52.5°	589.6	604.7	655.1	713.0	743.3
55°	546.7	564.4	624.9	687.8	720.6
57.5°	509.0	524.1	592.1	662.6	700.4
60°	461.1	481.2	559.3	634.9	672.7
62.5°	410.7	440.9	526.6	604.7	645.0
65°	362.8	398.1	496.4	574.5	614.8
67.5°	320.0	357.8	458.6	541.7	579.5
70°	269.6	317.5	420.8	501.4	544.2
72.5°	224.2	277.2	377.9	458.6	496.4
75°	178.9	236.8	335.1	403.1	425.8
77.5°	138.6	194.0	287.2	307.4	309.9
80°	103.3	153.7	214.2	216.7	224.2
82.5°	70.5	108.3	138.6	151.2	153.7
85°	45.4	63.0	78.1	80.6	85.7
87.5°	20.2	22.7	27.7	25.2	25.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)