

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: P388253

Luminaire Tested: **22CZ2-29VHE-UNV-L940-CD1-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: P388253  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-27)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-29VHE-UNV-L940-CD1-U  
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

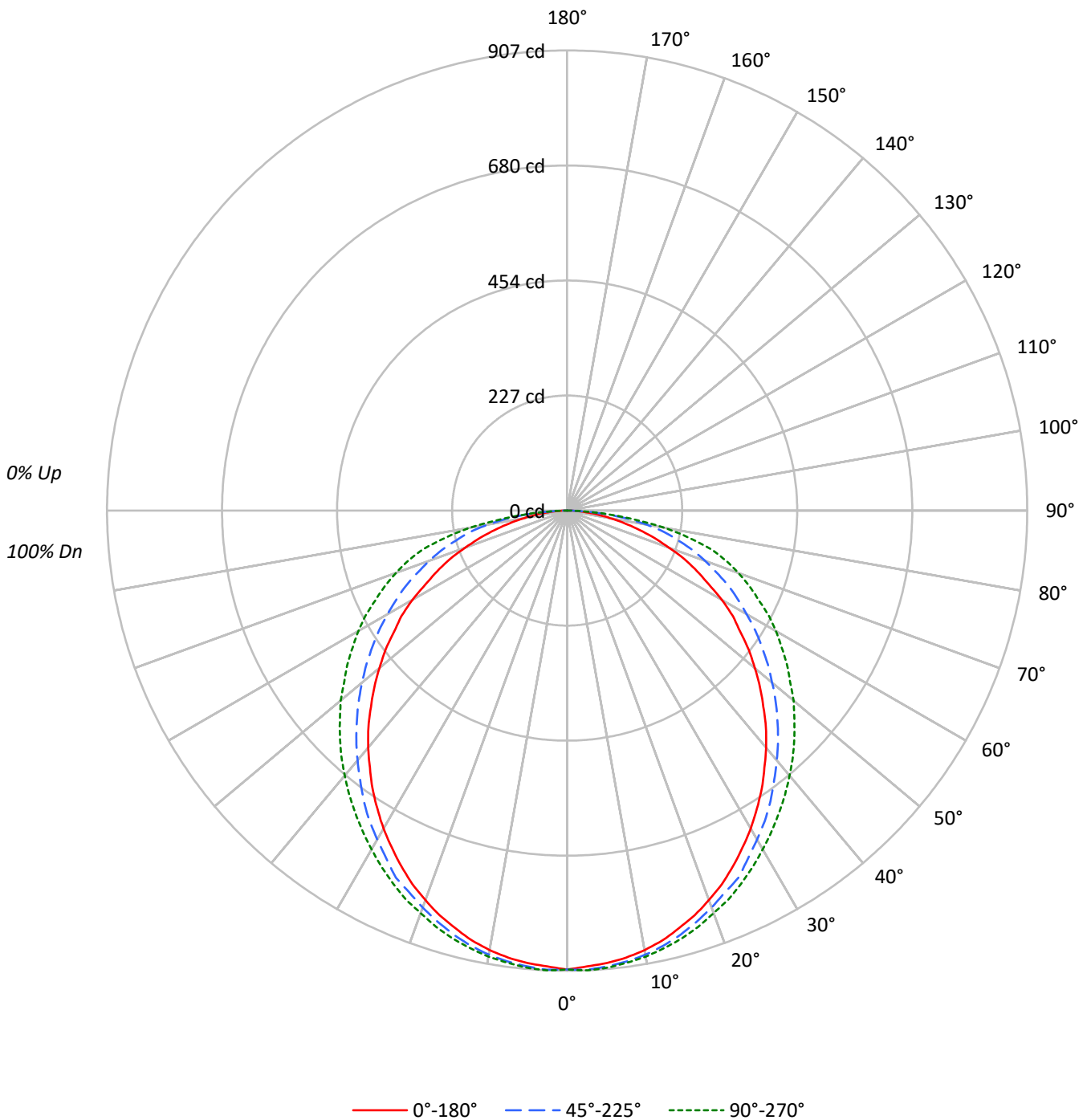
Lumens per Lamp: N/A  
Luminaire Lumens: 2660.1 lumens  
Efficiency: N/A  
Efficacy: 122.6 lumens/watt  
Spacing Criteria (0/90/45): 1.19 / 1.27 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 21.7  
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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68
3	89	78	69	63	86	76	68	62	73	66	61	70	65	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	52	63	56	51	60	55	50	48
5	75	61	52	45	72	60	52	45	58	50	44	56	49	44	54	48	44	41
6	69	55	46	39	67	54	46	39	52	45	39	51	44	39	49	43	38	36
7	64	50	41	35	62	49	41	35	48	40	34	46	39	34	45	39	34	32
8	59	46	37	31	58	45	37	31	44	36	31	42	35	30	41	35	30	28
9	56	42	34	28	54	41	33	28	40	33	28	39	32	27	38	32	27	25
10	52	39	31	25	51	38	30	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	2434	2434	2434
5°	2418	2436	2443
10°	2403	2429	2439
15°	2374	2410	2432
20°	2339	2384	2418
25°	2297	2371	2409
30°	2249	2326	2396
35°	2197	2296	2391
40°	2143	2258	2396
45°	2082	2232	2411
50°	2022	2208	2439
55°	1953	2198	2481
60°	1895	2198	2557
65°	1800	2234	2650
70°	1679	2276	2822
75°	1538	2354	3048
80°	1339	2455	3002
85°	1173	2183	2384



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.5	3.2
10°-20°	243.6	9.2
20°-30°	365.8	13.7
30°-40°	437.0	16.4
40°-50°	454.5	17.1
50°-60°	421.2	15.8
60°-70°	345.5	13.0
70°-80°	233.6	8.8
80°-90°	73.4	2.8
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°	694.9	26.1
0°-40°	1132.0	42.6
0°-60°	2007.6	75.5
0°-90°	2660.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2660.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	904	904	904	904	904	
5°	895	897	902	903	904	85
15°	852	856	865	870	873	240
25°	774	780	798	808	812	356
35°	669	678	699	720	728	418
45°	547	558	586	620	634	423
55°	416	429	469	510	529	374
65°	283	298	351	397	416	279
75°	148	173	226	272	293	157
85°	38	52	71	78	77	43
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	904.5	904.5	904.5	904.5	904.5
2.5°	899.2	901.9	905.8	907.1	907.1
5°	895.3	896.6	901.9	903.2	904.5
7.5°	888.8	891.4	896.6	897.9	899.2
10°	879.6	882.2	888.8	891.4	892.7
12.5°	867.8	870.5	878.3	882.2	883.5
15°	852.1	856.1	865.2	870.5	873.1
17.5°	836.4	840.3	849.5	857.4	860.0
20°	816.8	825.9	832.5	843.0	844.3
22.5°	797.1	802.4	814.2	824.6	829.9
25°	773.6	780.1	798.5	807.6	811.5
27.5°	748.7	757.9	772.3	786.7	791.9
30°	723.8	730.4	748.7	765.7	771.0
32.5°	696.4	705.5	725.2	742.2	750.0
35°	668.9	678.0	699.0	719.9	727.8
37.5°	638.8	649.2	670.2	695.1	705.5
40°	610.0	617.8	642.7	672.8	682.0
42.5°	579.9	589.0	615.2	647.9	658.4
45°	547.1	557.6	586.4	620.4	633.5
47.5°	515.7	526.2	557.6	591.6	607.4
50°	483.0	496.1	527.5	566.8	582.5
52.5°	451.6	463.4	498.7	539.3	553.7
55°	416.2	429.3	468.6	510.5	528.8
57.5°	387.4	396.6	439.8	483.0	501.3
60°	352.1	363.9	408.4	454.2	475.1
62.5°	314.1	333.8	379.6	426.7	447.7
65°	282.7	298.4	350.8	396.6	416.2
67.5°	250.0	267.0	318.1	366.5	388.8
70°	213.4	235.6	289.3	337.7	358.7
72.5°	180.6	204.2	259.2	306.3	328.5
75°	147.9	172.8	226.4	272.3	293.2
77.5°	116.5	144.0	196.3	231.7	244.8
80°	86.4	112.6	158.4	183.3	193.7
82.5°	60.2	82.5	116.5	129.6	132.2
85°	38.0	52.4	70.7	78.5	77.2
87.5°	17.0	20.9	26.2	28.8	27.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)