

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: P388659

Luminaire Tested: **24CZ2-130VHE-UNV-L940-CD2-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: P388659  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATIONS CENTER(G3)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-130VHE-UNV-L940-CD2-SDWPD1-U  
Description: 2x4 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: 11060.8 lumens  
Efficiency: N/A  
Efficacy: 121.9 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

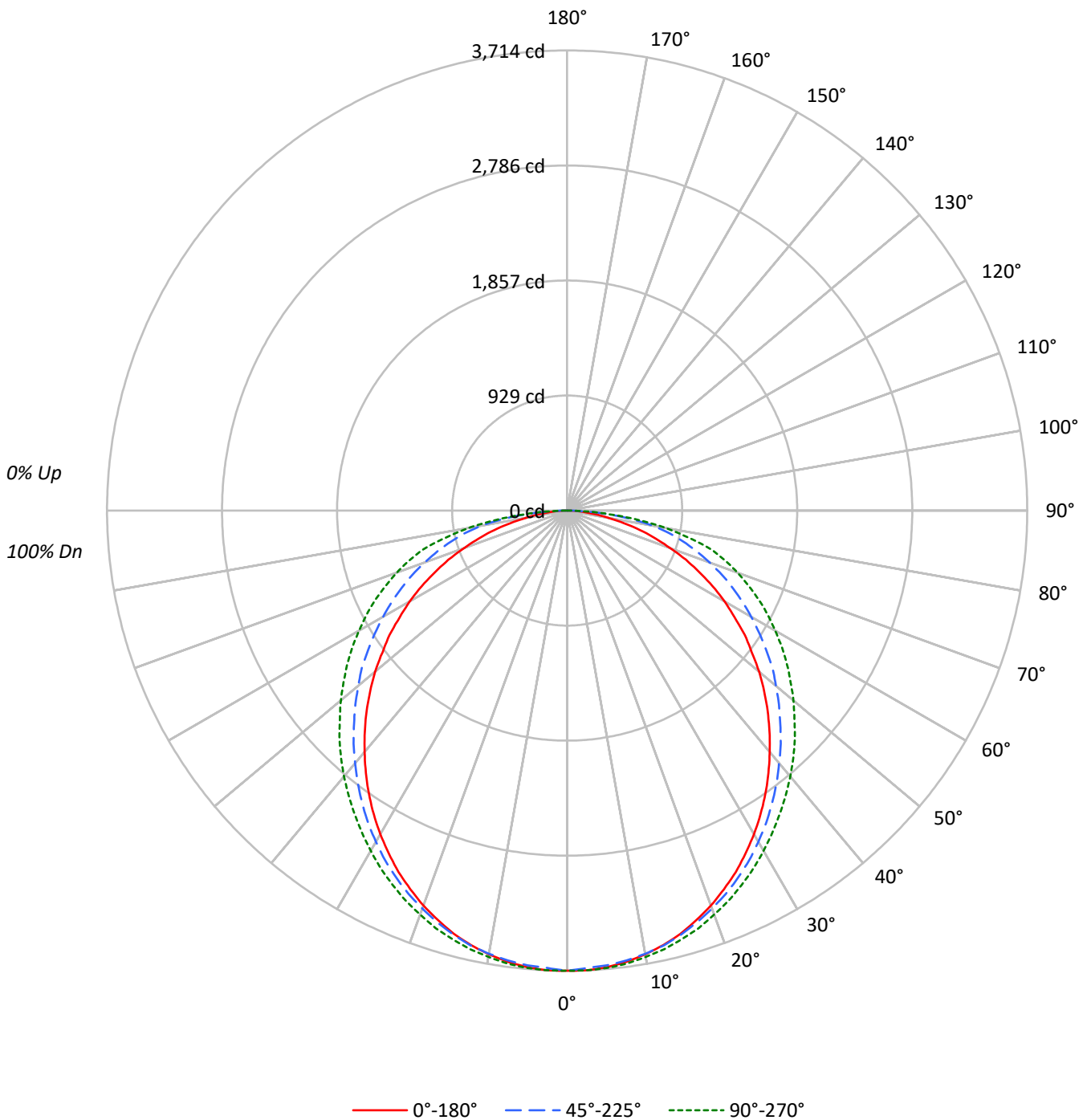
Input Watts (W): 90.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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													100															
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82													82															
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67													67															
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56													56															
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48													48															
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41													41															
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36													36															
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32													32															
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28													28															
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25													25															
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23													23															

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

	0°	45°	90°
0°	4997	4997	4997
5°	4996	4976	5006
10°	4968	4963	4998
15°	4926	4936	4988
20°	4858	4894	4968
25°	4779	4850	4949
30°	4686	4795	4927
35°	4584	4735	4911
40°	4467	4675	4921
45°	4355	4629	4945
50°	4234	4605	4992
55°	4105	4598	5083
60°	3944	4619	5215
65°	3737	4689	5442
70°	3471	4807	5751
75°	3166	5047	6237
80°	2603	5435	6235
85°	1995	5014	5357



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	351.2	3.2
10°-20°	1002.7	9.1
20°-30°	1508.9	13.6
30°-40°	1808.3	16.3
40°-50°	1884.4	17.0
50°-60°	1753.2	15.9
60°-70°	1444.0	13.1
70°-80°	983.4	8.9
80°-90°	324.7	2.9
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°	2862.8	25.9
0°-40°	4671.1	42.2
0°-60°	8308.7	75.1
0°-90°	11060.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11060.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3714	3714	3714	3714	3714	
5°	3699	3699	3684	3703	3706	351
15°	3536	3540	3544	3577	3581	996
25°	3219	3234	3267	3322	3333	1482
35°	2791	2824	2883	2961	2990	1744
45°	2289	2337	2433	2554	2599	1765
55°	1750	1809	1960	2115	2167	1560
65°	1174	1274	1473	1646	1709	1165
75°	609	746	971	1144	1200	642
85°	129	251	325	347	347	160
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3713.6	3713.6	3713.6	3713.6	3713.6
2.5°	3713.6	3713.6	3695.2	3713.6	3713.6
5°	3698.9	3698.9	3684.1	3702.6	3706.2
7.5°	3673.0	3676.7	3661.9	3684.1	3687.8
10°	3636.1	3639.8	3632.4	3654.6	3658.3
12.5°	3591.8	3595.5	3595.5	3621.3	3625.0
15°	3536.4	3540.1	3543.8	3577.0	3580.7
17.5°	3466.3	3477.4	3484.8	3525.4	3532.7
20°	3392.5	3403.5	3418.3	3462.6	3470.0
22.5°	3307.6	3322.3	3348.2	3396.2	3407.2
25°	3219.0	3233.7	3267.0	3322.3	3333.4
27.5°	3119.3	3141.4	3182.1	3241.1	3255.9
30°	3015.9	3038.1	3086.1	3148.8	3171.0
32.5°	2905.2	2934.7	2990.1	3060.2	3082.4
35°	2790.8	2824.0	2883.0	2960.6	2990.1
37.5°	2668.9	2705.9	2776.0	2860.9	2897.8
40°	2543.4	2587.7	2661.6	2761.2	2801.8
42.5°	2417.9	2458.5	2550.8	2657.9	2702.2
45°	2288.7	2336.7	2432.7	2554.5	2598.8
47.5°	2155.8	2203.8	2318.2	2447.4	2488.1
50°	2022.9	2070.9	2200.1	2336.7	2384.7
52.5°	1879.0	1941.7	2089.4	2226.0	2273.9
55°	1749.8	1808.8	1960.2	2115.2	2166.9
57.5°	1602.1	1672.2	1838.4	2000.8	2056.2
60°	1465.5	1539.3	1716.5	1882.7	1938.0
62.5°	1325.2	1406.5	1594.7	1764.5	1827.3
65°	1173.9	1273.6	1472.9	1646.4	1709.2
67.5°	1037.3	1140.7	1351.1	1528.3	1583.6
70°	882.3	1007.8	1221.9	1399.1	1461.8
72.5°	749.4	874.9	1100.1	1273.6	1336.3
75°	609.1	745.7	970.9	1144.4	1199.7
77.5°	468.8	620.2	845.3	978.2	996.7
80°	335.9	494.7	701.4	778.9	804.7
82.5°	236.3	380.2	516.8	568.5	583.3
85°	129.2	251.0	324.8	347.0	347.0
87.5°	55.4	107.1	129.2	132.9	136.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)