

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: P388587

Luminaire Tested: **24CZ2-100VHE-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: P388587  
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: 24CZ2-100VHE-UNV-L940-CD1-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: 8493.7 lumens  
Efficiency: N/A  
Efficacy: 122.0 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

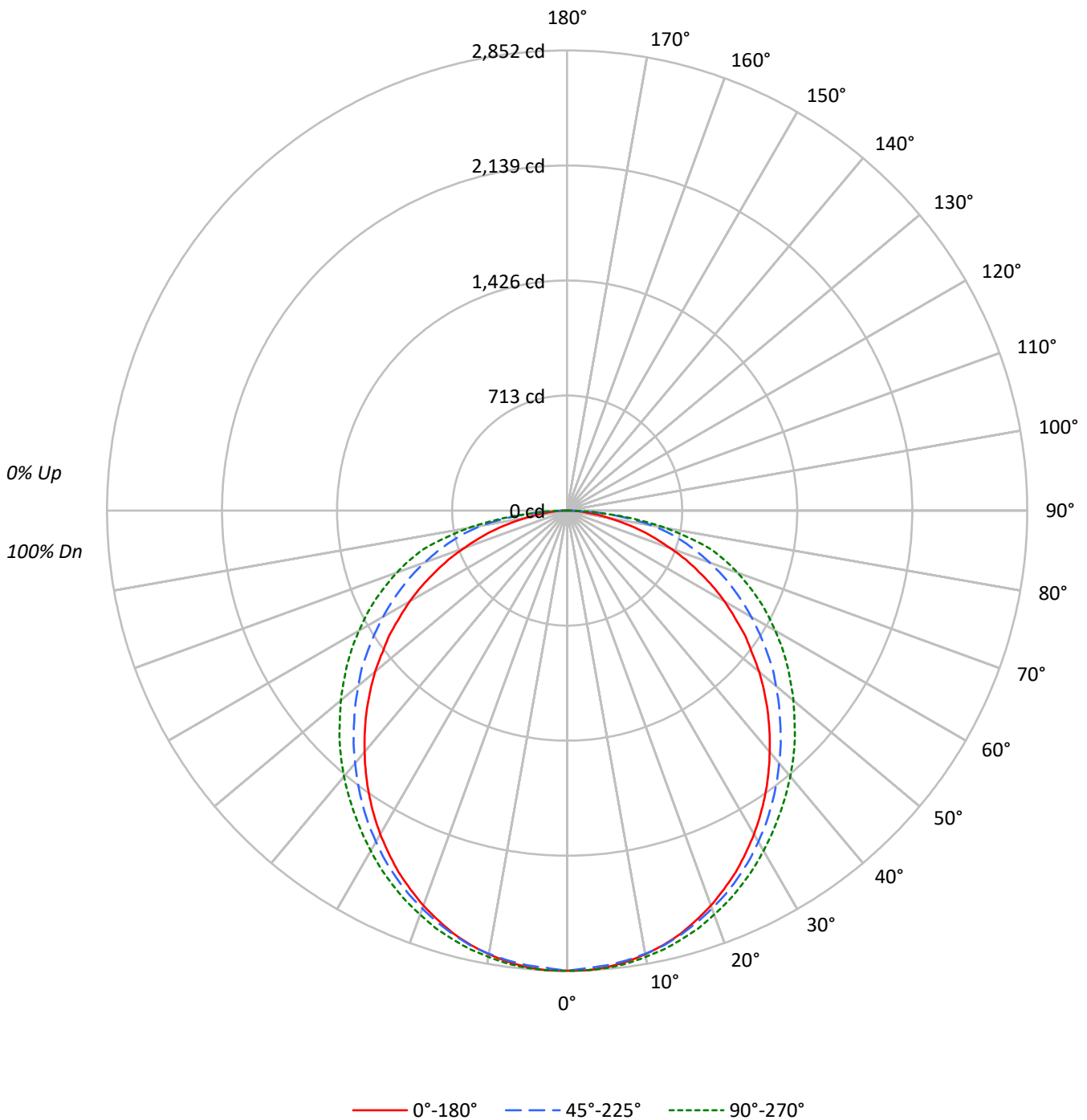
Input Watts (W): 69.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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

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

	0°	45°	90°
0°	3837	3837	3837
5°	3836	3821	3844
10°	3815	3811	3838
15°	3783	3791	3830
20°	3730	3759	3815
25°	3670	3724	3800
30°	3598	3682	3783
35°	3520	3636	3771
40°	3430	3590	3779
45°	3344	3555	3797
50°	3252	3536	3833
55°	3152	3531	3903
60°	3028	3547	4005
65°	2870	3601	4179
70°	2665	3691	4416
75°	2431	3876	4789
80°	1999	4173	4788
85°	1531	3852	4114



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	269.7	3.2
10°-20°	770.0	9.1
20°-30°	1158.7	13.6
30°-40°	1388.6	16.3
40°-50°	1447.0	17.0
50°-60°	1346.3	15.9
60°-70°	1108.9	13.1
70°-80°	755.2	8.9
80°-90°	249.3	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°	2198.4	25.9
0°-40°	3587.0	42.2
0°-60°	6380.3	75.1
0°-90°	8493.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8493.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2852	2852	2852	2852	2852	
5°	2840	2840	2829	2843	2846	270
15°	2716	2718	2721	2747	2750	765
25°	2472	2483	2509	2551	2560	1138
35°	2143	2169	2214	2273	2296	1340
45°	1758	1794	1868	1962	1996	1355
55°	1344	1389	1505	1624	1664	1198
65°	901	978	1131	1264	1312	895
75°	468	573	746	879	921	493
85°	99	193	250	266	266	123
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2851.7	2851.7	2851.7	2851.7	2851.7
2.5°	2851.7	2851.7	2837.6	2851.7	2851.7
5°	2840.4	2840.4	2829.1	2843.2	2846.1
7.5°	2820.5	2823.4	2812.0	2829.1	2831.9
10°	2792.2	2795.0	2789.4	2806.4	2809.2
12.5°	2758.2	2761.0	2761.0	2780.9	2783.7
15°	2715.7	2718.5	2721.3	2746.8	2749.7
17.5°	2661.8	2670.3	2676.0	2707.2	2712.8
20°	2605.1	2613.6	2625.0	2659.0	2664.6
22.5°	2539.9	2551.2	2571.1	2607.9	2616.4
25°	2471.9	2483.2	2508.7	2551.2	2559.8
27.5°	2395.3	2412.3	2443.5	2488.9	2500.2
30°	2316.0	2333.0	2369.8	2418.0	2435.0
32.5°	2230.9	2253.6	2296.1	2350.0	2367.0
35°	2143.0	2168.6	2213.9	2273.4	2296.1
37.5°	2049.5	2077.9	2131.7	2196.9	2225.3
40°	1953.1	1987.1	2043.8	2120.4	2151.6
42.5°	1856.7	1887.9	1958.8	2041.0	2075.0
45°	1757.5	1794.4	1868.1	1961.6	1995.6
47.5°	1655.5	1692.3	1780.2	1879.4	1910.6
50°	1553.4	1590.3	1689.5	1794.4	1831.2
52.5°	1442.9	1491.1	1604.5	1709.3	1746.2
55°	1343.7	1389.0	1505.2	1624.3	1664.0
57.5°	1230.3	1284.1	1411.7	1536.4	1578.9
60°	1125.4	1182.1	1318.1	1445.7	1488.2
62.5°	1017.7	1080.0	1224.6	1355.0	1403.2
65°	901.4	978.0	1131.1	1264.3	1312.5
67.5°	796.6	875.9	1037.5	1173.6	1216.1
70°	677.5	773.9	938.3	1074.4	1122.5
72.5°	575.4	671.8	844.7	978.0	1026.2
75°	467.7	572.6	745.5	878.8	921.3
77.5°	360.0	476.2	649.2	751.2	765.4
80°	258.0	379.9	538.6	598.1	618.0
82.5°	181.4	292.0	396.9	436.5	447.9
85°	99.2	192.8	249.5	266.5	266.5
87.5°	42.5	82.2	99.2	102.0	104.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)