

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: P389980

Luminaire Tested: **24CZ2-90VHE-S-UNV-L940-CD1-SWPD1-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: P389980
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-90VHE-S-UNV-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8024.9 lumens
Efficiency: N/A
Efficacy: 129.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

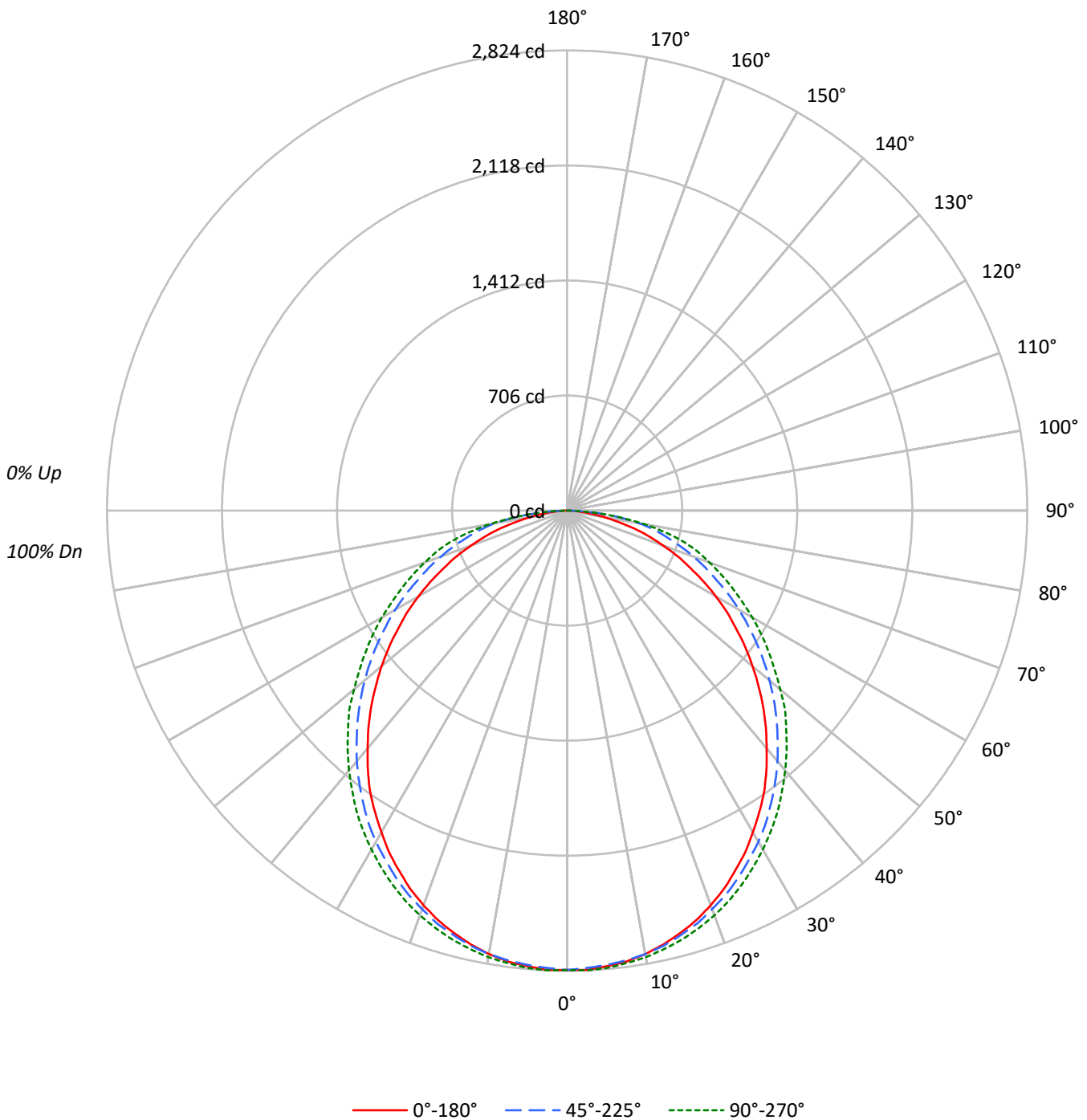
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69					69			
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3793	3793	3793
5°	3791	3780	3804
10°	3775	3775	3803
15°	3739	3757	3796
20°	3690	3726	3785
25°	3621	3690	3761
30°	3540	3647	3731
35°	3462	3588	3701
40°	3344	3528	3658
45°	3235	3458	3618
50°	3111	3394	3575
55°	2972	3331	3540
60°	2833	3279	3532
65°	2654	3222	3555
70°	2457	3239	3650
75°	2200	3300	3856
80°	1777	3496	3773
85°	1338	3069	2990



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	266.9	3.3
10°-20°	762.6	9.5
20°-30°	1146.4	14.3
30°-40°	1365.5	17.0
40°-50°	1397.6	17.4
50°-60°	1258.2	15.7
60°-70°	988.1	12.3
70°-80°	641.3	8.0
80°-90°	198.3	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°	2175.9	27.1
0°-40°	3541.4	44.1
0°-60°	6197.2	77.2
0°-90°	8024.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8024.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2819	2819	2819	2819	2819	
5°	2806	2812	2799	2814	2817	267
15°	2684	2692	2697	2720	2725	757
25°	2439	2460	2485	2526	2534	1124
35°	2108	2134	2184	2238	2253	1315
45°	1700	1741	1817	1886	1902	1311
55°	1267	1323	1420	1494	1509	1136
65°	834	897	1012	1096	1116	830
75°	423	505	635	721	742	448
85°	87	161	199	194	194	105
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2819.2	2819.2	2819.2	2819.2	2819.2
2.5°	2821.7	2821.7	2809.0	2821.7	2824.3
5°	2806.5	2811.6	2798.8	2814.1	2816.7
7.5°	2791.2	2791.2	2783.5	2798.8	2801.4
10°	2763.1	2765.7	2763.1	2781.0	2783.5
12.5°	2727.4	2732.5	2735.1	2752.9	2755.5
15°	2684.1	2691.7	2696.8	2719.8	2724.9
17.5°	2635.7	2643.3	2656.1	2681.6	2686.7
20°	2577.0	2587.2	2602.5	2635.7	2643.3
22.5°	2513.3	2523.5	2549.0	2579.6	2592.3
25°	2439.4	2459.8	2485.3	2526.1	2533.7
27.5°	2365.5	2383.3	2416.5	2459.8	2470.0
30°	2278.8	2306.8	2347.6	2391.0	2401.2
32.5°	2194.7	2222.7	2271.2	2317.0	2329.8
35°	2108.0	2133.5	2184.5	2238.0	2253.3
37.5°	2008.6	2041.8	2097.8	2151.4	2166.7
40°	1904.1	1944.9	2008.6	2064.7	2082.5
42.5°	1804.7	1848.0	1911.8	1972.9	1993.3
45°	1700.2	1741.0	1817.4	1886.3	1901.6
47.5°	1593.1	1639.0	1720.6	1789.4	1814.9
50°	1486.1	1534.5	1621.2	1692.5	1707.8
52.5°	1379.0	1430.0	1521.8	1598.2	1605.9
55°	1266.9	1322.9	1419.8	1493.7	1509.0
57.5°	1164.9	1213.3	1317.8	1394.3	1412.1
60°	1052.7	1106.3	1218.4	1289.8	1312.7
62.5°	945.7	1001.8	1119.0	1190.4	1210.8
65°	833.5	897.2	1012.0	1096.1	1116.5
67.5°	736.7	797.8	920.2	1001.8	1022.2
70°	624.5	693.3	823.3	907.4	927.8
72.5°	527.6	599.0	729.0	810.6	841.2
75°	423.1	504.7	634.7	721.4	741.8
77.5°	321.2	415.5	548.0	614.3	614.3
80°	229.4	328.8	451.2	481.8	486.9
82.5°	150.4	247.3	333.9	331.4	331.4
85°	86.7	160.6	198.8	193.7	193.7
87.5°	33.1	66.3	71.4	71.4	68.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)