

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: P389973

Luminaire Tested: **24CZ2-90VHE-S-UNV-L930-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: P389973
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-L930-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7657.5 lumens
Efficiency: N/A
Efficacy: 123.9 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

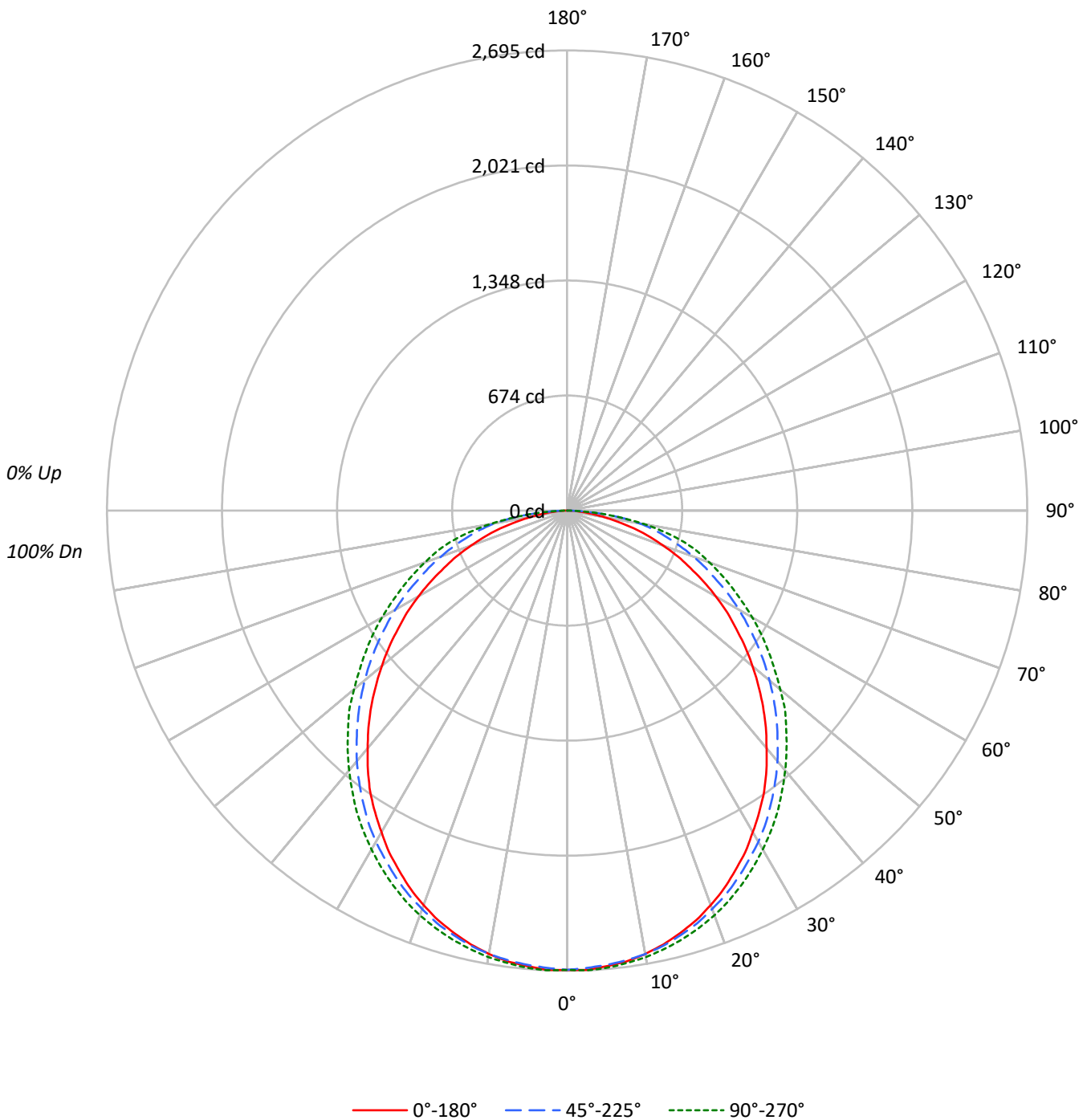
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3620	3620	3620
5°	3617	3607	3630
10°	3602	3602	3629
15°	3568	3585	3622
20°	3521	3556	3612
25°	3456	3521	3589
30°	3378	3480	3560
35°	3304	3424	3532
40°	3191	3367	3490
45°	3087	3300	3453
50°	2968	3238	3411
55°	2836	3178	3378
60°	2703	3129	3371
65°	2532	3074	3392
70°	2344	3091	3483
75°	2099	3148	3680
80°	1696	3336	3600
85°	1277	2929	2854



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	254.7	3.3
10°-20°	727.7	9.5
20°-30°	1093.9	14.3
30°-40°	1303.0	17.0
40°-50°	1333.6	17.4
50°-60°	1200.6	15.7
60°-70°	942.9	12.3
70°-80°	611.9	8.0
80°-90°	189.3	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°	2076.3	27.1
0°-40°	3379.3	44.1
0°-60°	5913.5	77.2
0°-90°	7657.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7657.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2690	2690	2690	2690	2690	
5°	2678	2683	2671	2685	2688	254
15°	2561	2568	2573	2595	2600	722
25°	2328	2347	2372	2410	2418	1072
35°	2012	2036	2084	2136	2150	1255
45°	1622	1661	1734	1800	1814	1251
55°	1209	1262	1355	1425	1440	1084
65°	795	856	966	1046	1065	792
75°	404	482	606	688	708	427
85°	83	153	190	185	185	100
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2690.1	2690.1	2690.1	2690.1	2690.1
2.5°	2692.6	2692.6	2680.4	2692.6	2695.0
5°	2678.0	2682.8	2670.7	2685.3	2687.7
7.5°	2663.4	2663.4	2656.1	2670.7	2673.1
10°	2636.6	2639.1	2636.6	2653.6	2656.1
12.5°	2602.6	2607.4	2609.9	2626.9	2629.3
15°	2561.2	2568.5	2573.4	2595.3	2600.1
17.5°	2515.0	2522.3	2534.5	2558.8	2563.6
20°	2459.1	2468.8	2483.4	2515.0	2522.3
22.5°	2398.3	2408.0	2432.3	2461.5	2473.7
25°	2327.7	2347.2	2371.5	2410.4	2417.7
27.5°	2257.2	2274.2	2305.8	2347.2	2356.9
30°	2174.5	2201.2	2240.2	2281.5	2291.2
32.5°	2094.2	2121.0	2167.2	2211.0	2223.1
35°	2011.5	2035.8	2084.5	2135.6	2150.2
37.5°	1916.7	1948.3	2001.8	2052.9	2067.5
40°	1816.9	1855.8	1916.7	1970.2	1987.2
42.5°	1722.1	1763.4	1824.2	1882.6	1902.1
45°	1622.3	1661.3	1734.2	1799.9	1814.5
47.5°	1520.2	1564.0	1641.8	1707.5	1731.8
50°	1418.0	1464.2	1546.9	1615.1	1629.6
52.5°	1315.9	1364.5	1452.1	1525.1	1532.4
55°	1208.9	1262.4	1354.8	1425.3	1439.9
57.5°	1111.6	1157.8	1257.5	1330.5	1347.5
60°	1004.5	1055.6	1162.6	1230.7	1252.6
62.5°	902.4	955.9	1067.8	1135.9	1155.3
65°	795.4	856.2	965.6	1045.9	1065.3
67.5°	702.9	761.3	878.1	955.9	975.4
70°	595.9	661.6	785.6	865.9	885.4
72.5°	503.5	571.6	695.6	773.5	802.7
75°	403.8	481.6	605.6	688.3	707.8
77.5°	306.5	396.5	522.9	586.2	586.2
80°	218.9	313.8	430.5	459.7	464.6
82.5°	143.5	235.9	318.6	316.2	316.2
85°	82.7	153.2	189.7	184.9	184.9
87.5°	31.6	63.2	68.1	68.1	65.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)