

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: P389974

Luminaire Tested: **24CZ2-90VHE-S-UNV-L930-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: P389974
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-SWPD1-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: 7751.0 lumens
Efficiency: N/A
Efficacy: 125.4 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

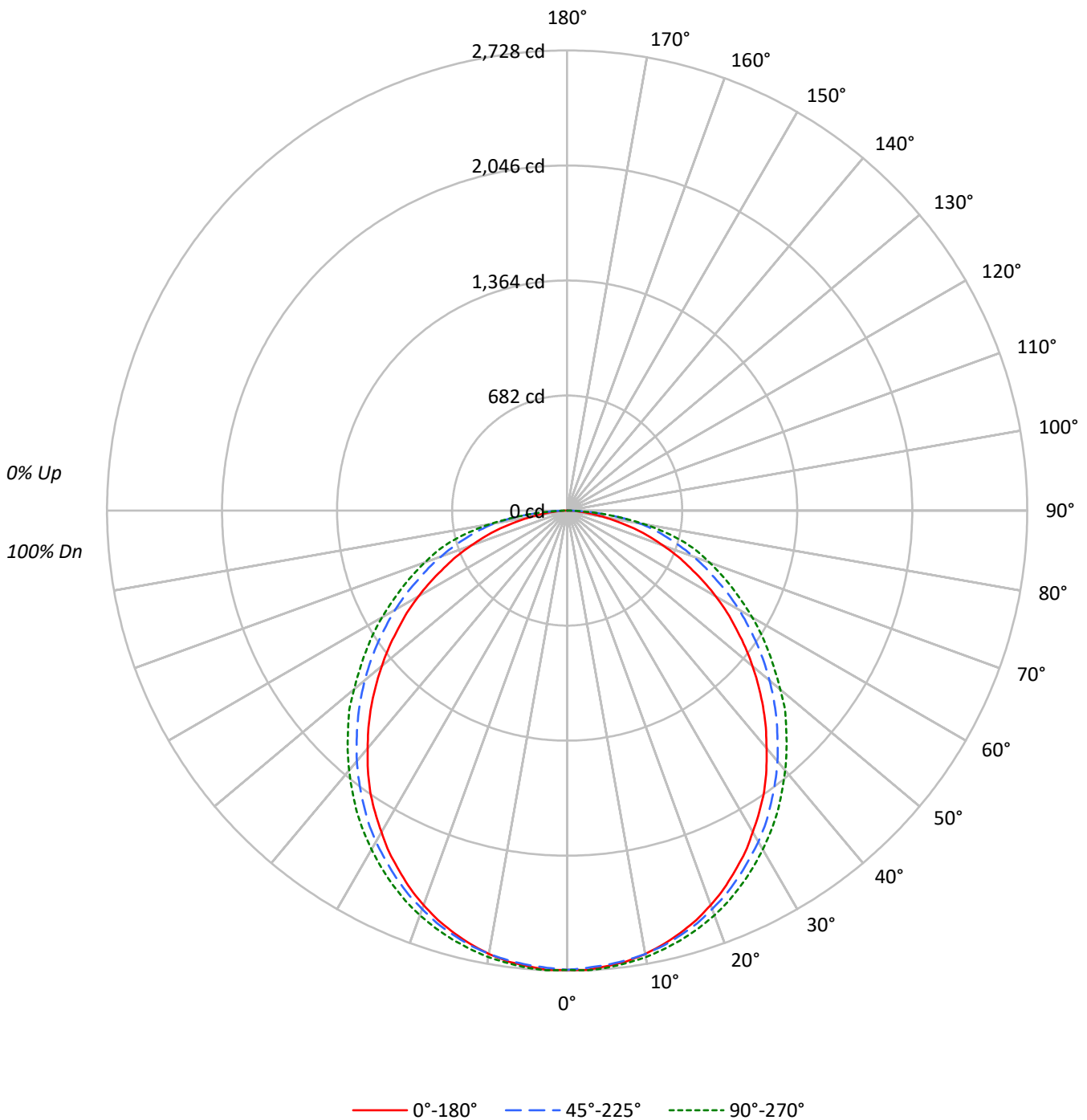
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3664	3664	3664
5°	3661	3651	3674
10°	3646	3646	3673
15°	3611	3628	3666
20°	3564	3599	3656
25°	3498	3564	3633
30°	3420	3523	3603
35°	3344	3466	3575
40°	3230	3408	3533
45°	3125	3340	3495
50°	3004	3278	3453
55°	2870	3217	3419
60°	2736	3167	3412
65°	2563	3112	3433
70°	2373	3128	3526
75°	2125	3187	3724
80°	1717	3377	3643
85°	1292	2964	2888



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	257.8	3.3
10°-20°	736.6	9.5
20°-30°	1107.3	14.3
30°-40°	1318.9	17.0
40°-50°	1349.9	17.4
50°-60°	1215.3	15.7
60°-70°	954.4	12.3
70°-80°	619.4	8.0
80°-90°	191.6	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°	2101.6	27.1
0°-40°	3420.5	44.1
0°-60°	5985.7	77.2
0°-90°	7751.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7751.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2723	2723	2723	2723	2723	
5°	2711	2716	2703	2718	2720	258
15°	2592	2600	2605	2627	2632	731
25°	2356	2376	2400	2440	2447	1085
35°	2036	2061	2110	2162	2176	1270
45°	1642	1682	1755	1822	1837	1266
55°	1224	1278	1371	1443	1458	1097
65°	805	867	977	1059	1078	801
75°	409	488	613	697	716	432
85°	84	155	192	187	187	101
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2723.0	2723.0	2723.0	2723.0	2723.0
2.5°	2725.4	2725.4	2713.1	2725.4	2727.9
5°	2710.7	2715.6	2703.3	2718.1	2720.5
7.5°	2695.9	2695.9	2688.5	2703.3	2705.7
10°	2668.8	2671.3	2668.8	2686.0	2688.5
12.5°	2634.3	2639.3	2641.7	2659.0	2661.4
15°	2592.5	2599.9	2604.8	2627.0	2631.9
17.5°	2545.7	2553.1	2565.4	2590.0	2595.0
20°	2489.1	2498.9	2513.7	2545.7	2553.1
22.5°	2427.5	2437.4	2462.0	2491.5	2503.9
25°	2356.1	2375.8	2400.5	2439.8	2447.2
27.5°	2284.7	2302.0	2334.0	2375.8	2385.7
30°	2201.0	2228.1	2267.5	2309.4	2319.2
32.5°	2119.8	2146.9	2193.6	2238.0	2250.3
35°	2036.1	2060.7	2109.9	2161.6	2176.4
37.5°	1940.1	1972.1	2026.2	2077.9	2092.7
40°	1839.1	1878.5	1940.1	1994.2	2011.5
42.5°	1743.1	1785.0	1846.5	1905.6	1925.3
45°	1642.2	1681.5	1755.4	1821.9	1836.7
47.5°	1538.8	1583.1	1661.9	1728.3	1752.9
50°	1435.3	1482.1	1565.8	1634.8	1649.5
52.5°	1331.9	1381.2	1469.8	1543.7	1551.1
55°	1223.6	1277.8	1371.3	1442.7	1457.5
57.5°	1125.1	1171.9	1272.9	1346.7	1364.0
60°	1016.8	1068.5	1176.8	1245.8	1267.9
62.5°	913.4	967.6	1080.8	1149.8	1169.5
65°	805.1	866.6	977.4	1058.7	1078.4
67.5°	711.5	770.6	888.8	967.6	987.3
70°	603.2	669.7	795.2	876.5	896.2
72.5°	509.6	578.6	704.1	782.9	812.5
75°	408.7	487.5	613.0	696.7	716.4
77.5°	310.2	401.3	529.3	593.3	593.3
80°	221.6	317.6	435.8	465.3	470.2
82.5°	145.3	238.8	322.5	320.1	320.1
85°	83.7	155.1	192.0	187.1	187.1
87.5°	32.0	64.0	68.9	68.9	66.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)