

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: P389639

Luminaire Tested: **24CZ2-170VHE-S-UNV-L930-CD2-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: P389639
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: 24CZ2-170VHE-S-UNV-L930-CD2-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: 14756.1 lumens
Efficiency: N/A
Efficacy: 119.6 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

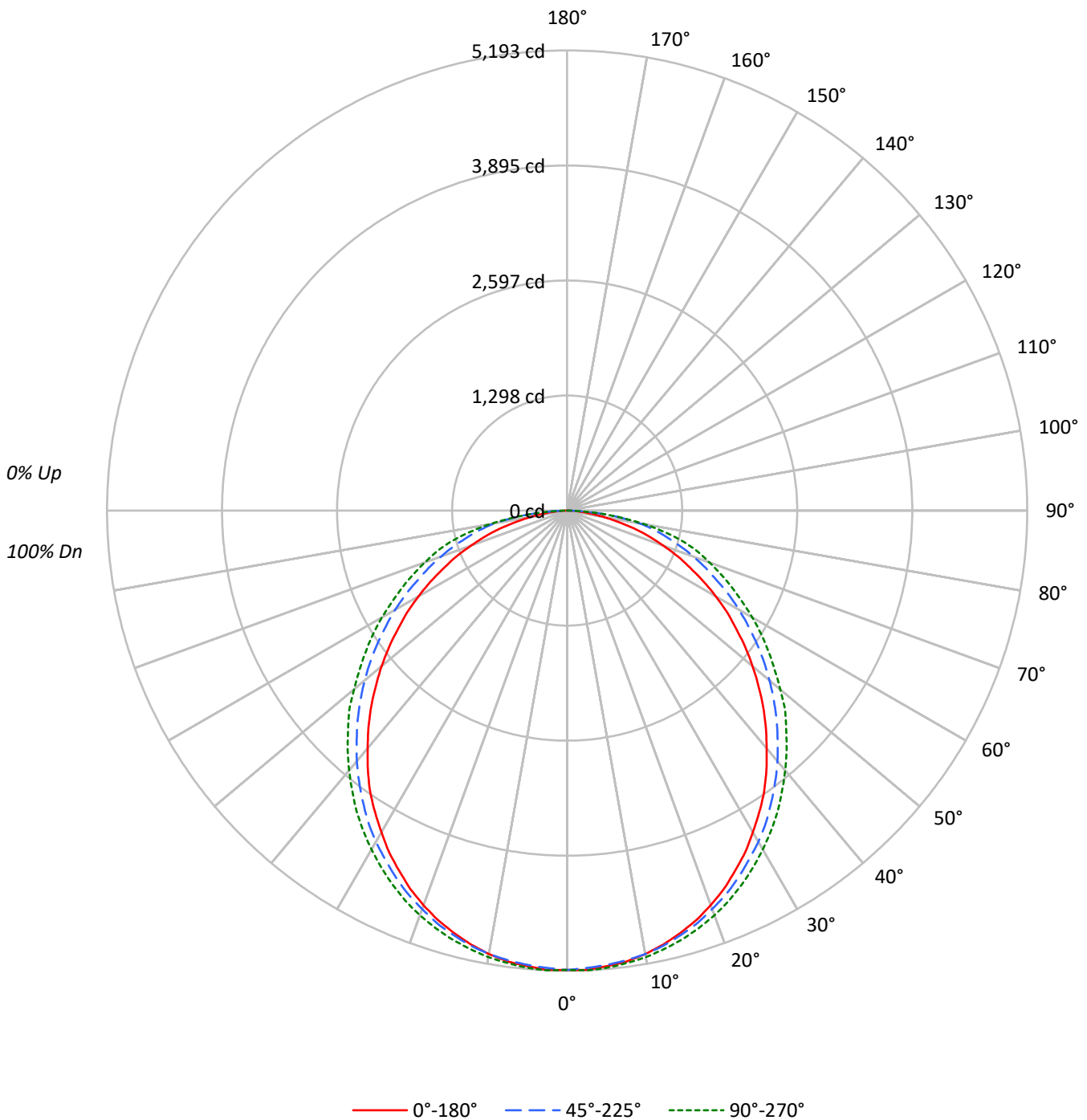
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6975	6975	6975
5°	6970	6951	6995
10°	6942	6942	6993
15°	6875	6908	6979
20°	6785	6852	6959
25°	6659	6784	6917
30°	6510	6707	6860
35°	6367	6598	6806
40°	6150	6487	6726
45°	5949	6359	6653
50°	5720	6240	6573
55°	5465	6124	6509
60°	5209	6029	6495
65°	4880	5924	6536
70°	4517	5956	6712
75°	4045	6067	7090
80°	3268	6428	6936
85°	2461	5644	5499



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	490.8	3.3
10°-20°	1402.3	9.5
20°-30°	2108.0	14.3
30°-40°	2510.9	17.0
40°-50°	2569.8	17.4
50°-60°	2313.6	15.7
60°-70°	1816.9	12.3
70°-80°	1179.2	8.0
80°-90°	364.7	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°	4001.0	27.1
0°-40°	6511.9	44.1
0°-60°	11395.3	77.2
0°-90°	14756.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14756.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5184	5184	5184	5184	5184	
5°	5160	5170	5146	5174	5179	490
15°	4936	4950	4959	5001	5010	1392
25°	4486	4523	4570	4645	4659	2066
35°	3876	3923	4017	4115	4143	2418
45°	3126	3201	3342	3468	3497	2410
55°	2330	2433	2611	2747	2775	2088
65°	1533	1650	1861	2015	2053	1526
75°	778	928	1167	1326	1364	823
85°	159	295	366	356	356	192
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5183.9	5183.9	5183.9	5183.9	5183.9
2.5°	5188.6	5188.6	5165.2	5188.6	5193.3
5°	5160.5	5169.9	5146.4	5174.5	5179.2
7.5°	5132.4	5132.4	5118.3	5146.4	5151.1
10°	5080.8	5085.5	5080.8	5113.6	5118.3
12.5°	5015.2	5024.6	5029.2	5062.1	5066.7
15°	4935.5	4949.6	4958.9	5001.1	5010.5
17.5°	4846.4	4860.5	4883.9	4930.8	4940.2
20°	4738.6	4757.4	4785.5	4846.4	4860.5
22.5°	4621.5	4640.2	4687.1	4743.3	4766.8
25°	4485.5	4523.0	4569.9	4644.9	4659.0
27.5°	4349.6	4382.4	4443.4	4523.0	4541.8
30°	4190.3	4241.8	4316.8	4396.5	4415.2
32.5°	4035.6	4087.1	4176.2	4260.6	4284.0
35°	3876.2	3923.1	4016.8	4115.3	4143.4
37.5°	3693.4	3754.4	3857.5	3955.9	3984.0
40°	3501.3	3576.2	3693.4	3796.5	3829.3
42.5°	3318.5	3398.1	3515.3	3627.8	3665.3
45°	3126.3	3201.3	3341.9	3468.4	3496.6
47.5°	2929.4	3013.8	3163.8	3290.3	3337.2
50°	2732.6	2821.6	2981.0	3112.2	3140.3
52.5°	2535.7	2629.5	2798.2	2938.8	2952.9
55°	2329.5	2432.6	2610.7	2746.6	2774.8
57.5°	2142.0	2231.1	2423.2	2563.8	2596.6
60°	1935.8	2034.2	2240.4	2371.7	2413.8
62.5°	1738.9	1842.0	2057.6	2188.9	2226.4
65°	1532.7	1649.9	1860.8	2015.4	2052.9
67.5°	1354.6	1467.1	1692.0	1842.0	1879.5
70°	1148.3	1274.9	1513.9	1668.6	1706.1
72.5°	970.2	1101.5	1340.5	1490.5	1546.7
75°	778.1	928.0	1167.1	1326.4	1363.9
77.5°	590.6	764.0	1007.7	1129.6	1129.6
80°	421.8	604.6	829.6	885.9	895.2
82.5°	276.5	454.6	614.0	609.3	609.3
85°	159.4	295.3	365.6	356.2	356.2
87.5°	60.9	121.9	131.2	131.2	126.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)