

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: P389648

Luminaire Tested: **24CZ2-170VHE-S-UNV-L950-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: P389648
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-L950-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16216.0 lumens
Efficiency: N/A
Efficacy: 131.4 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

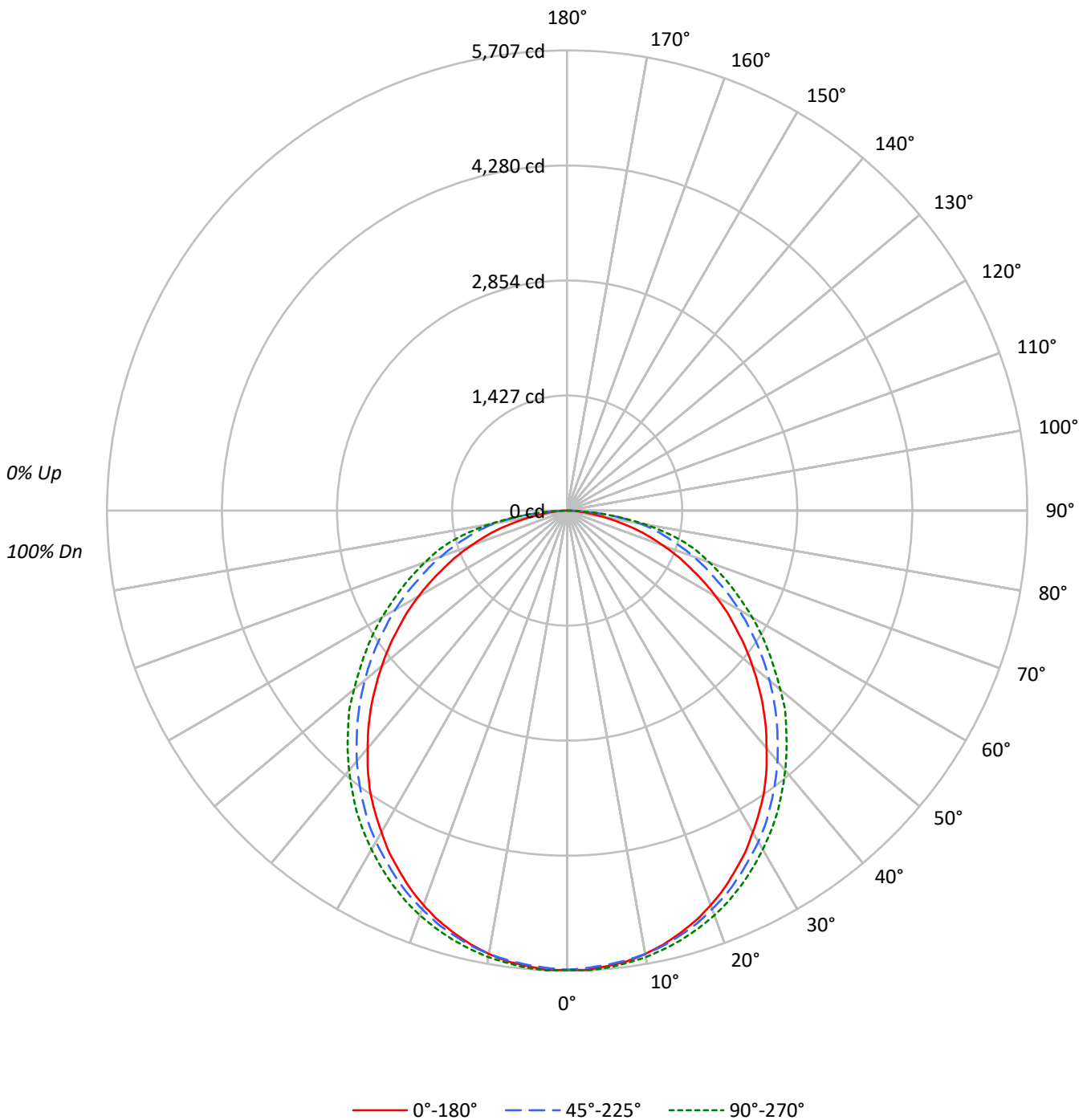
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	7665	7665	7665
5°	7659	7639	7687
10°	7628	7628	7685
15°	7555	7591	7670
20°	7456	7530	7648
25°	7318	7456	7601
30°	7154	7370	7538
35°	6997	7250	7479
40°	6758	7129	7391
45°	6537	6988	7312
50°	6286	6857	7224
55°	6005	6730	7153
60°	5725	6625	7138
65°	5362	6510	7183
70°	4964	6545	7376
75°	4445	6667	7792
80°	3592	7064	7623
85°	2703	6203	6044



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	539.3	3.3
10°-20°	1541.0	9.5
20°-30°	2316.5	14.3
30°-40°	2759.3	17.0
40°-50°	2824.0	17.4
50°-60°	2542.5	15.7
60°-70°	1996.7	12.3
70°-80°	1295.9	8.0
80°-90°	400.8	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°	4396.8	27.1
0°-40°	7156.2	44.1
0°-60°	12522.7	77.2
0°-90°	16216.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16216.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5697	5697	5697	5697	5697	
5°	5671	5681	5656	5686	5692	539
15°	5424	5439	5450	5496	5506	1529
25°	4929	4970	5022	5104	5120	2271
35°	4260	4311	4414	4522	4553	2657
45°	3436	3518	3672	3812	3842	2649
55°	2560	2673	2869	3018	3049	2295
65°	1684	1813	2045	2215	2256	1677
75°	855	1020	1282	1458	1499	905
85°	175	324	402	392	392	212
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5696.8	5696.8	5696.8	5696.8	5696.8
2.5°	5701.9	5701.9	5676.2	5701.9	5707.1
5°	5671.0	5681.3	5655.6	5686.5	5691.6
7.5°	5640.1	5640.1	5624.7	5655.6	5660.7
10°	5583.5	5588.6	5583.5	5619.5	5624.7
12.5°	5511.4	5521.7	5526.8	5562.9	5568.0
15°	5423.8	5439.2	5449.5	5495.9	5506.2
17.5°	5325.9	5341.4	5367.1	5418.6	5428.9
20°	5207.5	5228.1	5259.0	5325.9	5341.4
22.5°	5078.7	5099.3	5150.8	5212.6	5238.4
25°	4929.3	4970.5	5022.0	5104.4	5119.9
27.5°	4779.9	4816.0	4883.0	4970.5	4991.1
30°	4604.8	4661.5	4743.9	4831.5	4852.1
32.5°	4434.8	4491.5	4589.4	4682.1	4707.8
35°	4259.7	4311.2	4414.2	4522.4	4553.3
37.5°	4058.8	4125.8	4239.1	4347.3	4378.2
40°	3847.6	3930.1	4058.8	4172.1	4208.2
42.5°	3646.8	3734.3	3863.1	3986.7	4027.9
45°	3435.6	3518.0	3672.5	3811.6	3842.5
47.5°	3219.3	3312.0	3476.8	3615.9	3667.4
50°	3002.9	3100.8	3275.9	3420.1	3451.0
52.5°	2786.6	2889.6	3075.0	3229.6	3245.0
55°	2559.9	2673.3	2869.0	3018.4	3049.3
57.5°	2353.9	2451.8	2663.0	2817.5	2853.5
60°	2127.3	2235.4	2462.1	2606.3	2652.7
62.5°	1910.9	2024.3	2261.2	2405.4	2446.6
65°	1684.3	1813.1	2044.9	2214.8	2256.1
67.5°	1488.6	1612.2	1859.4	2024.3	2065.5
70°	1261.9	1401.0	1663.7	1833.7	1874.9
72.5°	1066.2	1210.4	1473.1	1638.0	1699.8
75°	855.0	1019.9	1282.5	1457.7	1498.9
77.5°	649.0	839.6	1107.4	1241.3	1241.3
80°	463.6	664.5	911.7	973.5	983.8
82.5°	303.9	499.6	674.8	669.6	669.6
85°	175.1	324.5	401.8	391.5	391.5
87.5°	67.0	133.9	144.2	144.2	139.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)