

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: P389637

Luminaire Tested: **24CZ2-170VHE-S-UNV-L930-CD2-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: P389637
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-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: 14397.2 lumens
Efficiency: N/A
Efficacy: 116.7 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

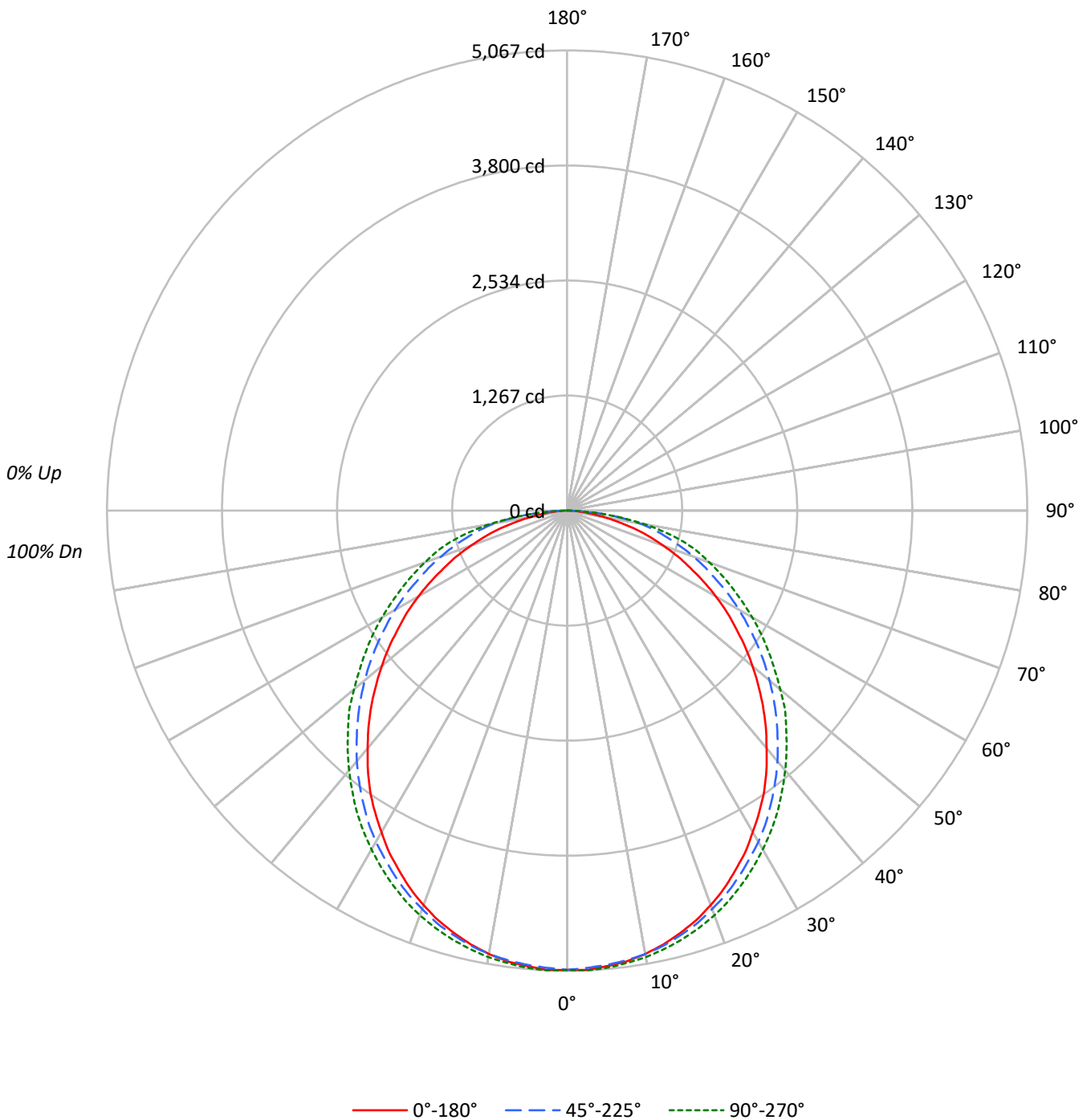
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	6805	6805	6805
5°	6800	6782	6825
10°	6773	6773	6823
15°	6708	6740	6810
20°	6620	6685	6790
25°	6497	6619	6748
30°	6352	6544	6693
35°	6212	6437	6640
40°	6000	6329	6562
45°	5804	6204	6491
50°	5581	6088	6414
55°	5332	5975	6351
60°	5082	5882	6338
65°	4761	5780	6377
70°	4408	5811	6548
75°	3946	5920	6918
80°	3189	6272	6768
85°	2401	5507	5366



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	478.8	3.3
10°-20°	1368.2	9.5
20°-30°	2056.7	14.3
30°-40°	2449.8	17.0
40°-50°	2507.3	17.4
50°-60°	2257.3	15.7
60°-70°	1772.7	12.3
70°-80°	1150.5	8.0
80°-90°	355.8	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°	3903.7	27.1
0°-40°	6353.5	44.1
0°-60°	11118.1	77.2
0°-90°	14397.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14397.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5058	5058	5058	5058	5058	
5°	5035	5044	5021	5049	5053	478
15°	4816	4829	4838	4880	4889	1358
25°	4376	4413	4459	4532	4546	2016
35°	3782	3828	3919	4015	4043	2359
45°	3050	3123	3261	3384	3412	2352
55°	2273	2373	2547	2680	2707	2038
65°	1495	1610	1816	1966	2003	1489
75°	759	906	1139	1294	1331	803
85°	156	288	357	348	348	188
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5057.8	5057.8	5057.8	5057.8	5057.8
2.5°	5062.4	5062.4	5039.5	5062.4	5067.0
5°	5035.0	5044.1	5021.2	5048.7	5053.3
7.5°	5007.5	5007.5	4993.8	5021.2	5025.8
10°	4957.2	4961.8	4957.2	4989.2	4993.8
12.5°	4893.2	4902.3	4906.9	4938.9	4943.5
15°	4815.5	4829.2	4838.3	4879.5	4888.6
17.5°	4728.6	4742.3	4765.2	4810.9	4820.0
20°	4623.4	4641.7	4669.1	4728.6	4742.3
22.5°	4509.1	4527.4	4573.1	4628.0	4650.8
25°	4376.4	4413.0	4458.8	4531.9	4545.6
27.5°	4243.8	4275.8	4335.3	4413.0	4431.3
30°	4088.3	4138.6	4211.8	4289.6	4307.8
32.5°	3937.4	3987.7	4074.6	4156.9	4179.8
35°	3781.9	3827.7	3919.1	4015.2	4042.6
37.5°	3603.6	3663.0	3763.6	3859.7	3887.1
40°	3416.1	3489.3	3603.6	3704.2	3736.2
42.5°	3237.7	3315.5	3429.8	3539.6	3576.2
45°	3050.2	3123.4	3260.6	3384.1	3411.5
47.5°	2858.2	2940.5	3086.8	3210.3	3256.0
50°	2666.1	2753.0	2908.5	3036.5	3064.0
52.5°	2474.0	2565.5	2730.1	2867.3	2881.0
55°	2272.8	2373.4	2547.2	2679.8	2707.3
57.5°	2089.9	2176.8	2364.3	2501.5	2533.5
60°	1888.7	1984.7	2185.9	2314.0	2355.1
62.5°	1696.6	1797.2	2007.6	2135.6	2172.2
65°	1495.4	1609.7	1815.5	1966.4	2003.0
67.5°	1321.6	1431.4	1650.9	1797.2	1833.8
70°	1120.4	1243.9	1477.1	1628.0	1664.6
72.5°	946.6	1074.7	1307.9	1454.2	1509.1
75°	759.1	905.5	1138.7	1294.2	1330.8
77.5°	576.2	745.4	983.2	1102.1	1102.1
80°	411.6	589.9	809.4	864.3	873.5
82.5°	269.8	443.6	599.1	594.5	594.5
85°	155.5	288.1	356.7	347.6	347.6
87.5°	59.5	118.9	128.0	128.0	123.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)