

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: P388707

Luminaire Tested: **24CZ2-170VHE-UNV-L940-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: P388707
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-170VHE-UNV-L940-CD2-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 14186.2 lumens
Efficiency: N/A
Efficacy: 115.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

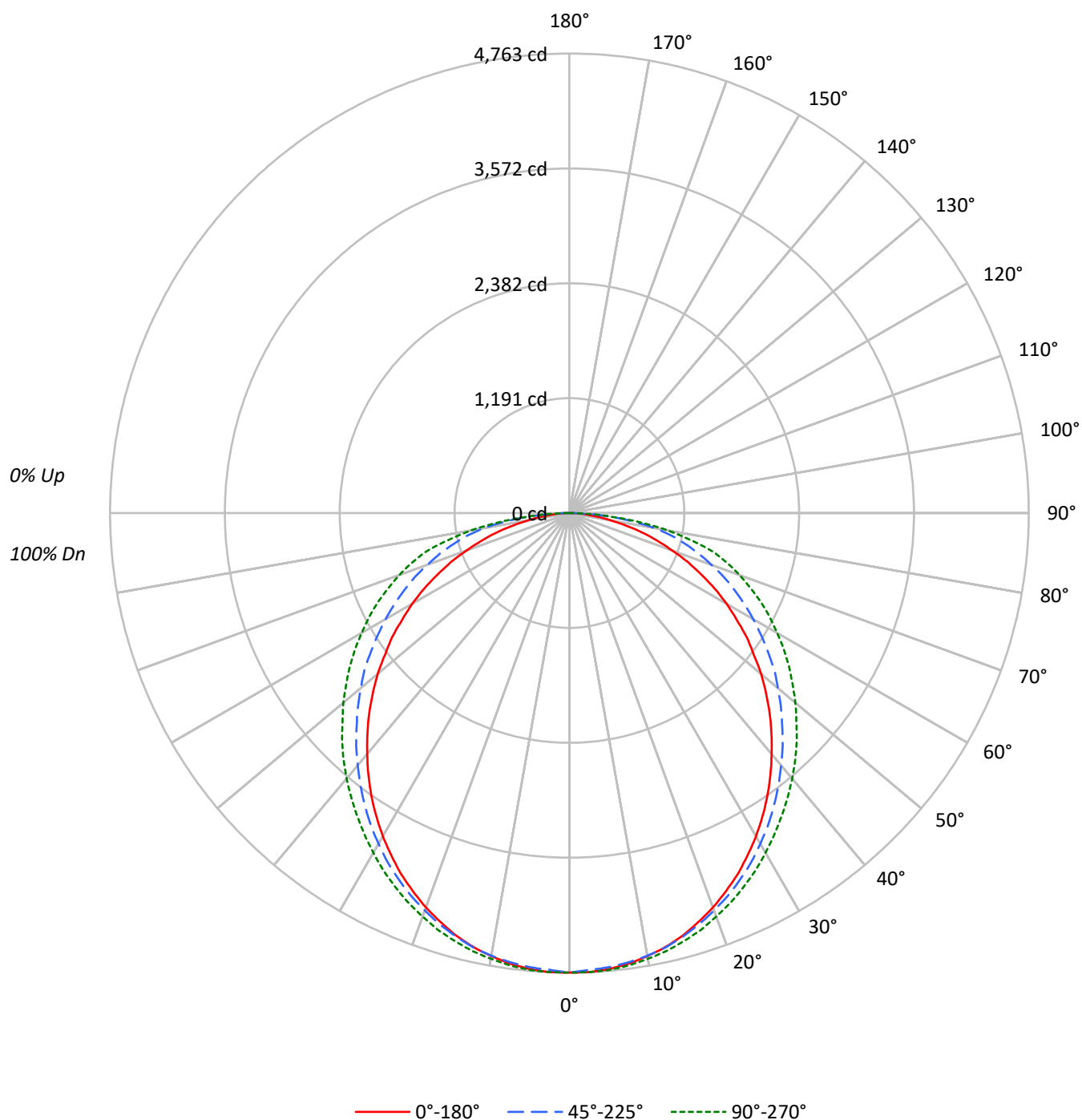
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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					0
RW	70	50	30	10	70	50	30	10		50	30	10		50	30	10		50	30	10
RCR																				
0	119	119	119	119	116	116	116	116		111	111	111		106	106	106		102	102	102
1	108	103	98	94	105	100	96	92		96	93	89		92	89	87		89	86	84
2	98	89	82	76	95	87	80	75		83	78	73		80	75	71		77	73	70
3	89	78	69	62	86	76	68	62		73	66	61		70	64	60		68	63	58
4	81	69	59	52	79	67	59	52		65	57	51		62	56	51		60	55	50
5	74	61	52	45	72	60	51	45		58	50	44		56	49	44		54	48	43
6	69	55	46	39	67	54	45	39		52	44	39		50	44	38		49	43	38
7	64	50	41	35	62	49	40	34		47	40	34		46	39	34		45	38	34
8	59	45	37	31	58	45	36	31		43	36	30		42	35	30		41	35	30
9	55	42	33	28	54	41	33	28		40	33	27		39	32	27		38	32	27
10	52	38	30	25	51	38	30	25		37	30	25		36	29	25		35	29	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6409	6409	6409
5°	6407	6382	6420
10°	6371	6365	6410
15°	6318	6331	6397
20°	6230	6277	6372
25°	6129	6221	6347
30°	6010	6149	6319
35°	5879	6074	6299
40°	5730	5996	6312
45°	5586	5937	6342
50°	5431	5907	6402
55°	5264	5898	6519
60°	5058	5924	6689
65°	4793	6014	6979
70°	4452	6165	7376
75°	4061	6473	7999
80°	3338	6970	7997
85°	2558	6431	6870



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	450.5	3.2
10°-20°	1286.0	9.1
20°-30°	1935.3	13.6
30°-40°	2319.2	16.3
40°-50°	2416.9	17.0
50°-60°	2248.6	15.9
60°-70°	1852.0	13.1
70°-80°	1261.3	8.9
80°-90°	416.4	2.9
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°	3671.8	25.9
0°-40°	5991.0	42.2
0°-60°	10656.5	75.1
0°-90°	14186.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14186.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4763	4763	4763	4763	4763	
5°	4744	4744	4725	4749	4754	450
15°	4536	4540	4545	4588	4592	1278
25°	4128	4148	4190	4261	4275	1901
35°	3579	3622	3698	3797	3835	2237
45°	2935	2997	3120	3276	3333	2264
55°	2244	2320	2514	2713	2779	2000
65°	1506	1633	1889	2112	2192	1494
75°	781	956	1245	1468	1539	824
85°	166	322	417	445	445	205
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4763.0	4763.0	4763.0	4763.0	4763.0
2.5°	4763.0	4763.0	4739.3	4763.0	4763.0
5°	4744.0	4744.0	4725.1	4748.8	4753.5
7.5°	4710.9	4715.6	4696.7	4725.1	4729.8
10°	4663.5	4668.3	4658.8	4687.2	4691.9
12.5°	4606.7	4611.5	4611.5	4644.6	4649.3
15°	4535.7	4540.4	4545.2	4587.8	4592.5
17.5°	4445.8	4460.0	4469.4	4521.5	4531.0
20°	4351.1	4365.3	4384.2	4441.0	4450.5
22.5°	4242.2	4261.1	4294.2	4355.8	4370.0
25°	4128.5	4147.5	4190.1	4261.1	4275.3
27.5°	4000.7	4029.1	4081.2	4156.9	4175.9
30°	3868.1	3896.5	3958.1	4038.6	4067.0
32.5°	3726.1	3764.0	3835.0	3925.0	3953.4
35°	3579.3	3621.9	3697.7	3797.1	3835.0
37.5°	3423.1	3470.4	3560.4	3669.3	3716.6
40°	3262.1	3318.9	3413.6	3541.5	3593.5
42.5°	3101.1	3153.2	3271.6	3408.9	3465.7
45°	2935.4	2997.0	3120.1	3276.3	3333.1
47.5°	2765.0	2826.5	2973.3	3139.0	3191.1
50°	2594.5	2656.1	2821.8	2997.0	3058.5
52.5°	2409.9	2490.4	2679.8	2854.9	2916.5
55°	2244.2	2319.9	2514.1	2712.9	2779.2
57.5°	2054.8	2144.8	2357.8	2566.1	2637.1
60°	1879.6	1974.3	2201.6	2414.6	2485.6
62.5°	1699.7	1803.9	2045.3	2263.1	2343.6
65°	1505.6	1633.4	1889.1	2111.6	2192.1
67.5°	1330.4	1463.0	1732.8	1960.1	2031.1
70°	1131.6	1292.5	1567.1	1794.4	1874.9
72.5°	961.1	1122.1	1410.9	1633.4	1713.9
75°	781.2	956.4	1245.2	1467.7	1538.7
77.5°	601.3	795.4	1084.2	1254.7	1278.3
80°	430.8	634.4	899.6	999.0	1032.1
82.5°	303.0	487.7	662.8	729.1	748.1
85°	165.7	322.0	416.6	445.0	445.0
87.5°	71.0	137.3	165.7	170.4	175.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)