

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: P389572

Luminaire Tested: **24CZ2-120VHE-S-UNV-L940-CD2-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: P389572
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: 24CZ2-120VHE-S-UNV-L940-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10824.2 lumens
Efficiency: N/A
Efficacy: 129.5 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

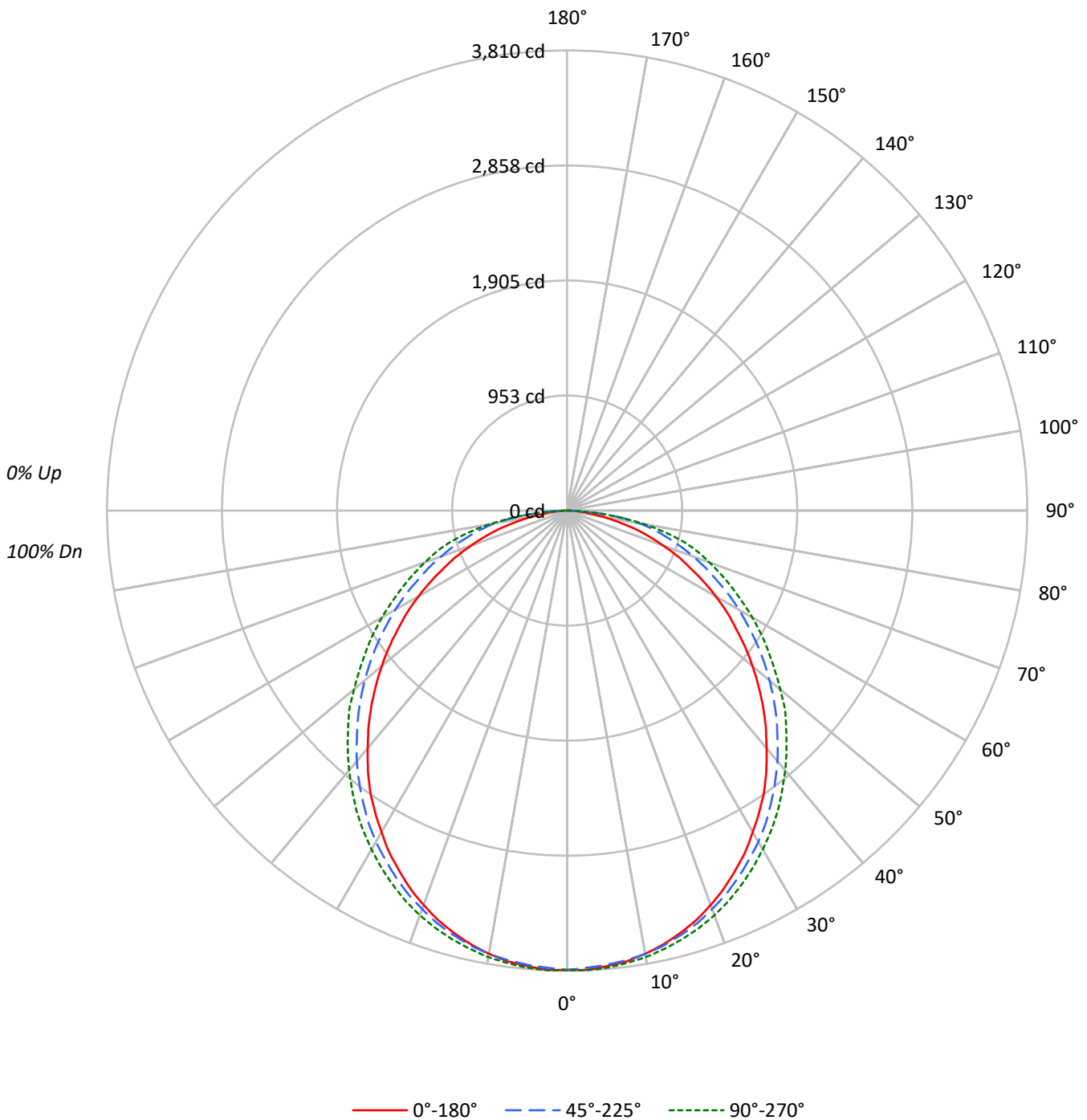
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5116	5116	5116
5°	5113	5099	5131
10°	5092	5092	5130
15°	5043	5067	5120
20°	4977	5026	5105
25°	4885	4977	5074
30°	4775	4920	5032
35°	4670	4840	4992
40°	4511	4759	4934
45°	4364	4665	4881
50°	4196	4577	4822
55°	4008	4492	4775
60°	3821	4422	4765
65°	3579	4346	4794
70°	3314	4369	4923
75°	2967	4450	5201
80°	2397	4716	5088
85°	1805	4140	4034



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	360.0	3.3
10°-20°	1028.6	9.5
20°-30°	1546.3	14.3
30°-40°	1841.9	17.0
40°-50°	1885.1	17.4
50°-60°	1697.1	15.7
60°-70°	1332.8	12.3
70°-80°	865.0	8.0
80°-90°	267.5	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°	2934.9	27.1
0°-40°	4776.8	44.1
0°-60°	8358.9	77.2
0°-90°	10824.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10824.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3803	3803	3803	3803	3803	
5°	3785	3792	3775	3796	3799	360
15°	3620	3631	3638	3668	3675	1021
25°	3290	3318	3352	3407	3418	1516
35°	2843	2878	2946	3019	3039	1774
45°	2293	2348	2451	2544	2565	1768
55°	1709	1784	1915	2015	2035	1532
65°	1124	1210	1365	1478	1506	1119
75°	571	681	856	973	1000	604
85°	117	217	268	261	261	141
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3802.6	3802.6	3802.6	3802.6	3802.6
2.5°	3806.1	3806.1	3788.9	3806.1	3809.5
5°	3785.4	3792.3	3775.1	3795.7	3799.2
7.5°	3764.8	3764.8	3754.5	3775.1	3778.5
10°	3727.0	3730.4	3727.0	3751.0	3754.5
12.5°	3678.8	3685.7	3689.2	3713.2	3716.7
15°	3620.4	3630.7	3637.6	3668.5	3675.4
17.5°	3555.1	3565.4	3582.6	3617.0	3623.8
20°	3476.0	3489.7	3510.4	3555.1	3565.4
22.5°	3390.0	3403.8	3438.2	3479.4	3496.6
25°	3290.3	3317.8	3352.2	3407.2	3417.5
27.5°	3190.6	3214.7	3259.4	3317.8	3331.6
30°	3073.7	3111.5	3166.6	3225.0	3238.8
32.5°	2960.3	2998.1	3063.4	3125.3	3142.5
35°	2843.4	2877.7	2946.5	3018.7	3039.3
37.5°	2709.3	2754.0	2829.6	2901.8	2922.4
40°	2568.3	2623.3	2709.3	2784.9	2809.0
42.5°	2434.2	2492.7	2578.6	2661.1	2688.6
45°	2293.3	2348.3	2451.4	2544.2	2564.9
47.5°	2148.9	2210.7	2320.8	2413.6	2448.0
50°	2004.5	2069.8	2186.7	2282.9	2303.6
52.5°	1860.0	1928.8	2052.6	2155.7	2166.0
55°	1708.8	1784.4	1915.1	2014.8	2035.4
57.5°	1571.2	1636.6	1777.5	1880.7	1904.7
60°	1420.0	1492.2	1643.4	1739.7	1770.7
62.5°	1275.6	1351.2	1509.4	1605.6	1633.1
65°	1124.3	1210.2	1365.0	1478.4	1505.9
67.5°	993.6	1076.1	1241.2	1351.2	1378.7
70°	842.4	935.2	1110.5	1224.0	1251.5
72.5°	711.7	808.0	983.3	1093.3	1134.6
75°	570.7	680.8	856.1	973.0	1000.5
77.5°	433.2	560.4	739.2	828.6	828.6
80°	309.4	443.5	608.6	649.8	656.7
82.5°	202.9	333.5	450.4	447.0	447.0
85°	116.9	216.6	268.2	261.3	261.3
87.5°	44.7	89.4	96.3	96.3	92.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)