

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: P388638

Luminaire Tested: **24CZ2-120VHE-UNV-L950-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: P388638
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: 24CZ2-120VHE-UNV-L950-CD2-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 10802.5 lumens
Efficiency: N/A
Efficacy: 129.2 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

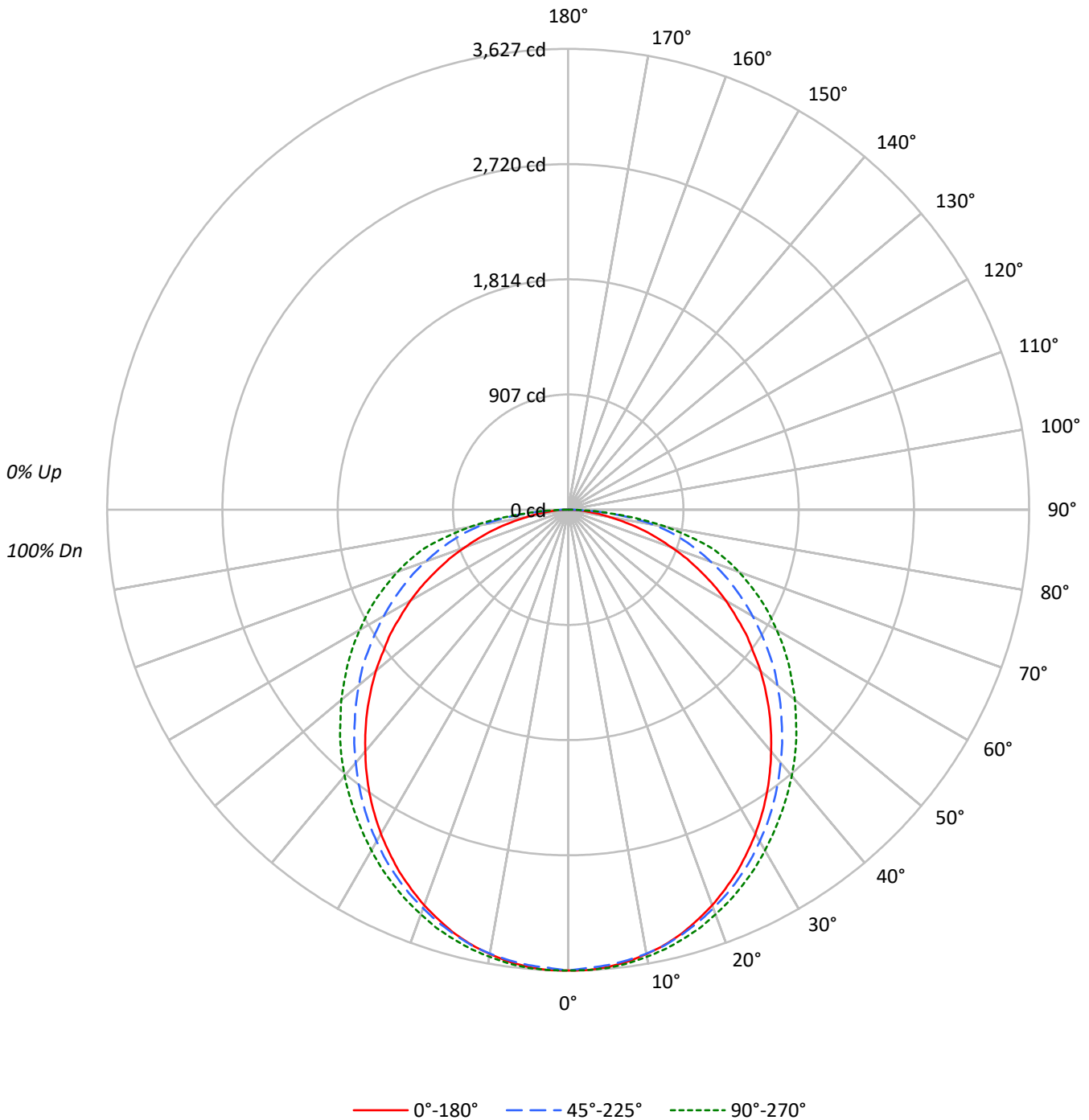
Input Watts (W): 83.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4880	4880	4880
5°	4879	4860	4889
10°	4852	4847	4881
15°	4811	4821	4871
20°	4744	4780	4853
25°	4667	4737	4833
30°	4576	4683	4811
35°	4477	4625	4797
40°	4363	4566	4806
45°	4253	4521	4830
50°	4136	4498	4875
55°	4009	4491	4964
60°	3852	4511	5093
65°	3650	4580	5314
70°	3390	4694	5616
75°	3093	4929	6091
80°	2542	5308	6089
85°	1948	4898	5232



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	343.0	3.2
10°-20°	979.3	9.1
20°-30°	1473.7	13.6
30°-40°	1766.0	16.3
40°-50°	1840.4	17.0
50°-60°	1712.3	15.9
60°-70°	1410.3	13.1
70°-80°	960.5	8.9
80°-90°	317.1	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°	2796.0	25.9
0°-40°	4562.0	42.2
0°-60°	8114.7	75.1
0°-90°	10802.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	10802.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3627	3627	3627	3627	3627	
5°	3612	3612	3598	3616	3620	343
15°	3454	3458	3461	3494	3497	973
25°	3144	3158	3191	3245	3256	1447
35°	2726	2758	2816	2891	2920	1704
45°	2235	2282	2376	2495	2538	1724
55°	1709	1767	1914	2066	2116	1523
65°	1146	1244	1438	1608	1669	1138
75°	595	728	948	1118	1172	627
85°	126	245	317	339	339	156
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3626.9	3626.9	3626.9	3626.9	3626.9
2.5°	3626.9	3626.9	3608.9	3626.9	3626.9
5°	3612.5	3612.5	3598.1	3616.1	3619.7
7.5°	3587.2	3590.8	3576.4	3598.1	3601.7
10°	3551.2	3554.8	3547.6	3569.2	3572.8
12.5°	3507.9	3511.5	3511.5	3536.8	3540.4
15°	3453.8	3457.5	3461.1	3493.5	3497.1
17.5°	3385.3	3396.2	3403.4	3443.0	3450.2
20°	3313.2	3324.1	3338.5	3381.7	3389.0
22.5°	3230.3	3244.7	3270.0	3316.8	3327.7
25°	3143.8	3158.2	3190.7	3244.7	3255.6
27.5°	3046.5	3068.1	3107.7	3165.4	3179.8
30°	2945.5	2967.1	3014.0	3075.3	3096.9
32.5°	2837.3	2866.2	2920.3	2988.8	3010.4
35°	2725.6	2758.0	2815.7	2891.4	2920.3
37.5°	2606.6	2642.7	2711.2	2794.1	2830.1
40°	2484.0	2527.3	2599.4	2696.7	2736.4
42.5°	2361.5	2401.1	2491.2	2595.8	2639.1
45°	2235.3	2282.1	2375.9	2494.8	2538.1
47.5°	2105.5	2152.3	2264.1	2390.3	2430.0
50°	1975.7	2022.6	2148.7	2282.1	2329.0
52.5°	1835.1	1896.4	2040.6	2174.0	2220.8
55°	1708.9	1766.6	1914.4	2065.8	2116.3
57.5°	1564.7	1633.2	1795.4	1954.1	2008.1
60°	1431.3	1503.4	1676.5	1838.7	1892.8
62.5°	1294.3	1373.6	1557.5	1723.3	1784.6
65°	1146.5	1243.8	1438.5	1608.0	1669.2
67.5°	1013.1	1114.0	1319.5	1492.6	1546.7
70°	861.7	984.2	1193.3	1366.4	1427.7
72.5°	731.9	854.4	1074.4	1243.8	1305.1
75°	594.9	728.3	948.2	1117.6	1171.7
77.5°	457.9	605.7	825.6	955.4	973.4
80°	328.1	483.1	685.0	760.7	785.9
82.5°	230.7	371.3	504.7	555.2	569.6
85°	126.2	245.2	317.3	338.9	338.9
87.5°	54.1	104.6	126.2	129.8	133.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)