

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: P389574

Luminaire Tested: **24CZ2-120VHE-S-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: P389574  
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-L950-CD2-SDWPD1-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: 11350.6 lumens  
Efficiency: N/A  
Efficacy: 135.8 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

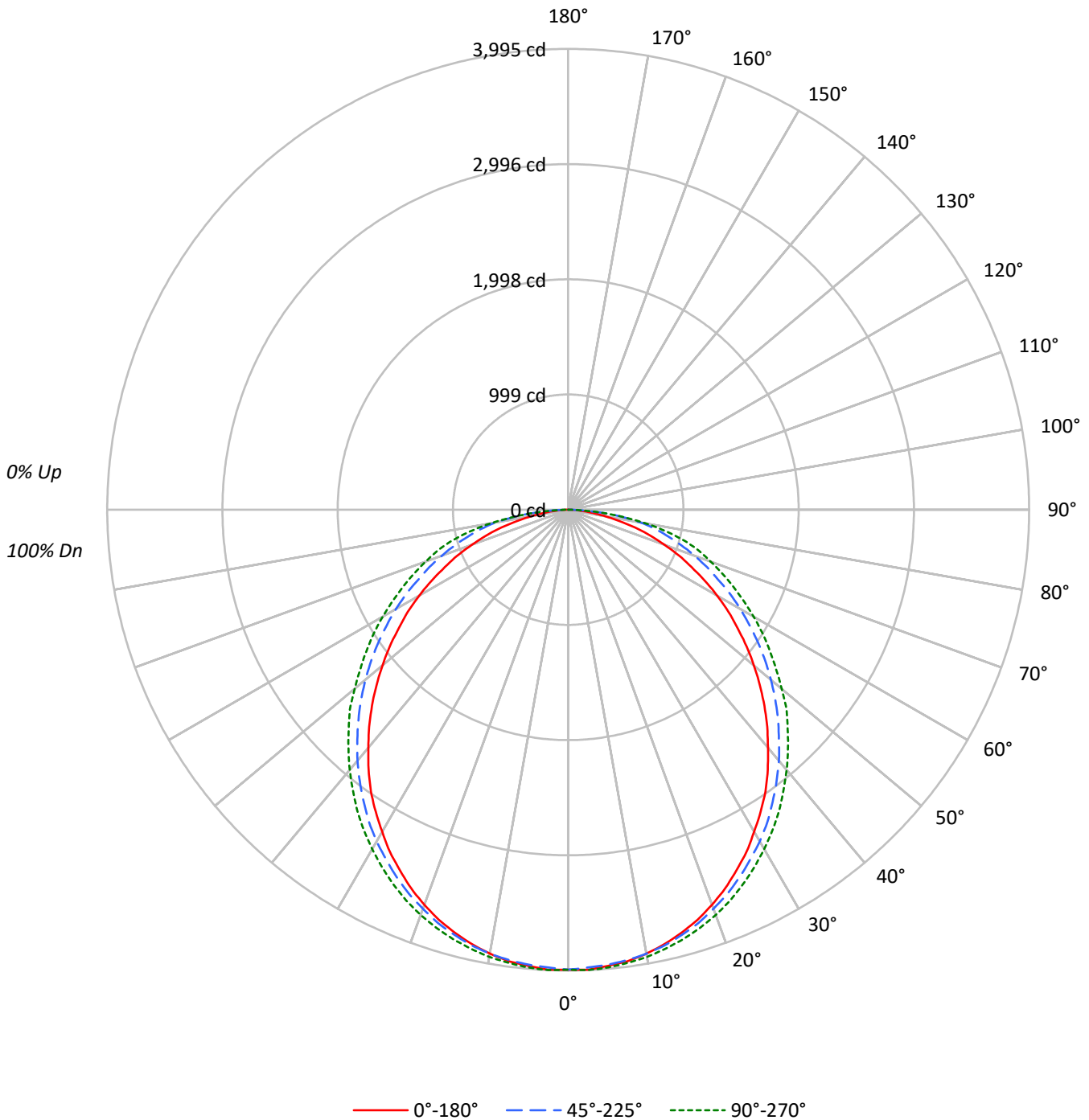
Input Watts (W): 83.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5365	5365	5365
5°	5361	5347	5381
10°	5340	5340	5379
15°	5288	5313	5369
20°	5219	5271	5353
25°	5122	5219	5320
30°	5008	5159	5277
35°	4897	5075	5235
40°	4730	4990	5174
45°	4576	4891	5118
50°	4400	4800	5056
55°	4203	4711	5007
60°	4007	4638	4997
65°	3754	4557	5028
70°	3475	4581	5163
75°	3111	4667	5454
80°	2514	4945	5336
85°	1893	4341	4230



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	377.5	3.3
10°-20°	1078.7	9.5
20°-30°	1621.5	14.3
30°-40°	1931.4	17.0
40°-50°	1976.7	17.4
50°-60°	1779.6	15.7
60°-70°	1397.6	12.3
70°-80°	907.1	8.0
80°-90°	280.5	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°	3077.6	27.1
0°-40°	5009.1	44.1
0°-60°	8765.4	77.2
0°-90°	11350.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11350.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	3988	3988	3988	3988	3988	
5°	3970	3977	3959	3980	3984	377
15°	3796	3807	3814	3847	3854	1070
25°	3450	3479	3515	3573	3584	1589
35°	2982	3018	3090	3166	3187	1860
45°	2405	2462	2571	2668	2690	1854
55°	1792	1871	2008	2113	2134	1606
65°	1179	1269	1431	1550	1579	1174
75°	598	714	898	1020	1049	633
85°	123	227	281	274	274	148
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	3987.5	3987.5	3987.5	3987.5	3987.5
2.5°	3991.1	3991.1	3973.1	3991.1	3994.8
5°	3969.5	3976.7	3958.7	3980.3	3983.9
7.5°	3947.9	3947.9	3937.1	3958.7	3962.3
10°	3908.2	3911.8	3908.2	3933.5	3937.1
12.5°	3857.7	3865.0	3868.6	3893.8	3897.4
15°	3796.5	3807.3	3814.5	3846.9	3854.1
17.5°	3728.0	3738.8	3756.8	3792.8	3800.1
20°	3645.0	3659.5	3681.1	3728.0	3738.8
22.5°	3554.9	3569.3	3605.4	3648.6	3666.7
25°	3450.3	3479.2	3515.2	3572.9	3583.7
27.5°	3345.8	3371.0	3417.9	3479.2	3493.6
30°	3223.2	3262.9	3320.5	3381.8	3396.3
32.5°	3104.2	3143.9	3212.4	3277.3	3295.3
35°	2981.6	3017.7	3089.8	3165.5	3187.1
37.5°	2841.0	2887.9	2967.2	3042.9	3064.6
40°	2693.2	2750.9	2841.0	2920.4	2945.6
42.5°	2552.6	2613.9	2704.0	2790.6	2819.4
45°	2404.8	2462.5	2570.6	2668.0	2689.6
47.5°	2253.4	2318.3	2433.6	2531.0	2567.0
50°	2101.9	2170.4	2293.0	2394.0	2415.6
52.5°	1950.5	2022.6	2152.4	2260.6	2271.4
55°	1791.9	1871.2	2008.2	2112.7	2134.4
57.5°	1647.7	1716.2	1864.0	1972.1	1997.4
60°	1489.0	1564.7	1723.4	1824.3	1856.8
62.5°	1337.6	1416.9	1582.8	1683.7	1712.6
65°	1179.0	1269.1	1431.3	1550.3	1579.2
67.5°	1042.0	1128.5	1301.5	1416.9	1445.8
70°	883.3	980.7	1164.5	1283.5	1312.4
72.5°	746.3	847.3	1031.1	1146.5	1189.8
75°	598.5	713.9	897.7	1020.3	1049.2
77.5°	454.3	587.7	775.2	868.9	868.9
80°	324.5	465.1	638.2	681.4	688.6
82.5°	212.7	349.7	472.3	468.7	468.7
85°	122.6	227.1	281.2	274.0	274.0
87.5°	46.9	93.7	101.0	101.0	97.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)