

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: P388426

Luminaire Tested: **24CZ2-170VHE-SQR-UNV-L950-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: P388426  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2002-678-2)  
Test Lab: INNOVATION CENTER (G2)  
Issue Date: 2/28/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-170VHE-SQR-UNV-L950-CD2-SWPD1-U  
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS  
Light Source: -  
Ballast/Driver: -

Luminaire Equipment: Sample No.    Condition    Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 14637.7 lumens  
Efficiency: N/A  
Efficacy: 118.6 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.33 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

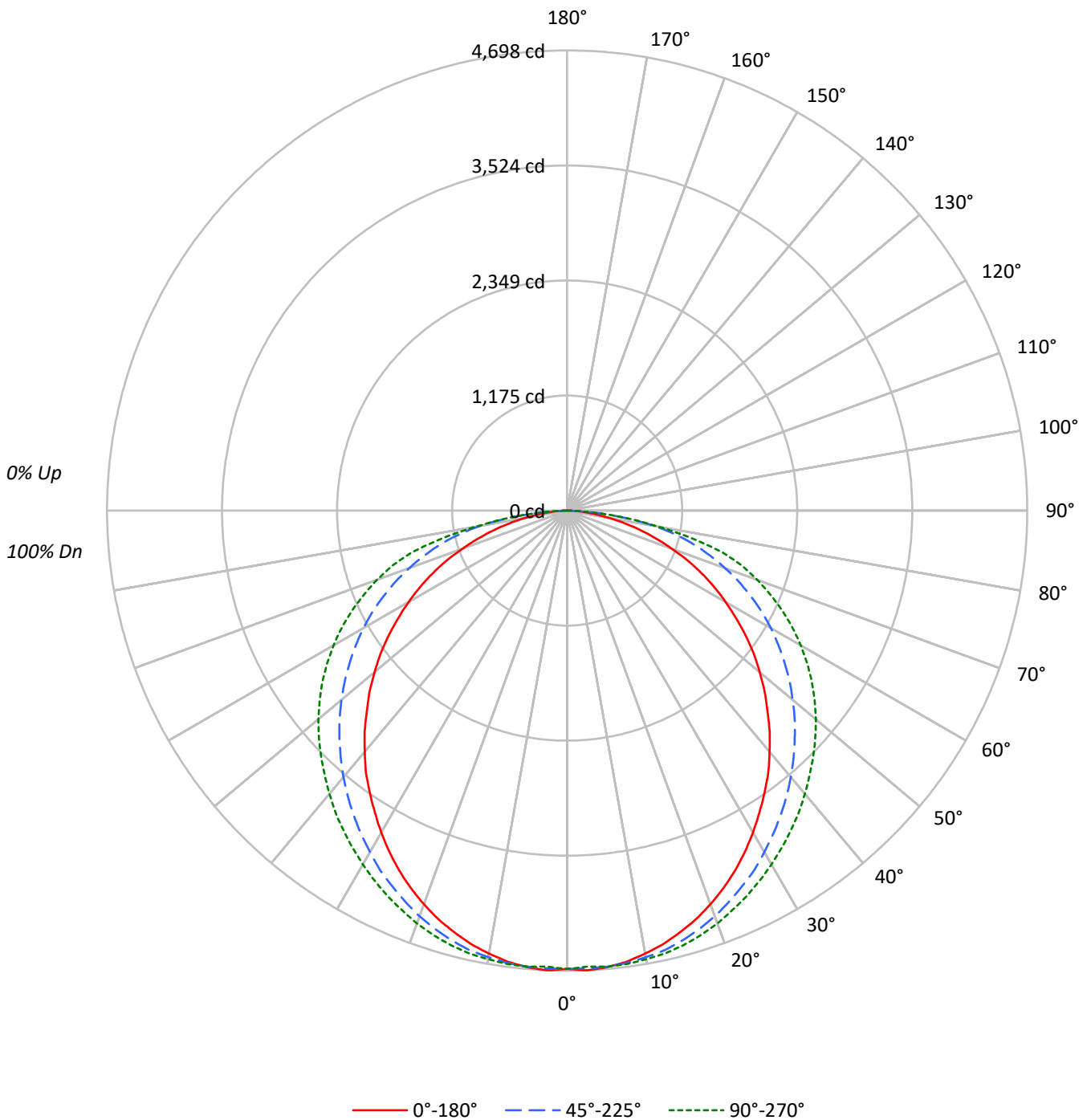
Input Watts (W): 123.4  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6295	6295	6295
5°	6319	6313	6313
10°	6274	6327	6353
15°	6208	6329	6396
20°	6125	6312	6423
25°	6021	6279	6444
30°	5895	6256	6481
35°	5772	6240	6542
40°	5646	6240	6630
45°	5500	6254	6760
50°	5372	6293	6941
55°	5216	6361	7155
60°	5034	6465	7414
65°	4817	6586	7725
70°	4469	6750	8119
75°	4046	6985	8493
80°	3409	7004	7304
85°	2612	5298	5298



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	444.1	3.0
10°-20°	1277.8	8.7
20°-30°	1940.9	13.3
30°-40°	2360.9	16.1
40°-50°	2513.6	17.2
50°-60°	2394.1	16.4
60°-70°	2002.1	13.7
70°-80°	1334.8	9.1
80°-90°	369.4	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°	3662.9	25.0
0°-40°	6023.8	41.2
0°-60°	10931.4	74.7
0°-90°	14637.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14637.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	4679	4679	4679	4679	4679	
5°	4679	4650	4674	4674	4674	444
15°	4457	4466	4544	4577	4592	1257
25°	4055	4109	4229	4302	4341	1867
35°	3514	3616	3799	3925	3983	2199
45°	2890	3045	3287	3470	3553	2234
55°	2224	2417	2712	2948	3050	1988
65°	1513	1735	2069	2325	2426	1495
75°	778	1025	1344	1571	1634	824
85°	169	314	343	338	343	204
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	4678.9	4678.9	4678.9	4678.9	4678.9
2.5°	4698.3	4664.4	4678.9	4678.9	4659.6
5°	4678.9	4649.9	4674.1	4674.1	4674.1
7.5°	4645.1	4620.9	4659.6	4669.3	4669.3
10°	4591.9	4582.2	4630.6	4645.1	4649.9
12.5°	4533.9	4529.1	4596.8	4616.1	4630.6
15°	4456.6	4466.2	4543.6	4577.4	4591.9
17.5°	4374.4	4393.7	4480.7	4529.1	4543.6
20°	4277.7	4306.7	4408.2	4456.6	4485.6
22.5°	4171.4	4214.9	4321.2	4379.2	4413.1
25°	4055.4	4108.6	4229.4	4301.9	4340.6
27.5°	3929.7	3997.4	4137.6	4219.7	4258.4
30°	3794.4	3871.7	4026.4	4123.1	4171.4
32.5°	3654.2	3746.0	3915.2	4021.6	4079.6
35°	3514.0	3615.5	3799.2	3924.9	3982.9
37.5°	3373.9	3475.4	3678.4	3813.7	3886.2
40°	3214.3	3335.2	3552.7	3702.5	3775.0
42.5°	3059.7	3190.2	3422.2	3586.5	3663.9
45°	2890.5	3045.2	3286.8	3470.5	3552.7
47.5°	2735.8	2890.5	3151.5	3344.8	3436.7
50°	2566.6	2731.0	3006.5	3219.2	3315.8
52.5°	2402.3	2571.5	2861.5	3088.7	3185.3
55°	2223.5	2416.8	2711.6	2948.5	3050.0
57.5°	2044.6	2252.5	2557.0	2803.5	2905.0
60°	1870.6	2083.3	2402.3	2648.8	2755.1
62.5°	1696.6	1909.3	2242.8	2494.1	2595.6
65°	1512.9	1735.3	2068.8	2325.0	2426.5
67.5°	1329.2	1561.3	1894.8	2151.0	2247.6
70°	1135.9	1382.4	1715.9	1967.3	2063.9
72.5°	957.1	1203.6	1532.3	1778.8	1870.6
75°	778.2	1024.7	1343.7	1570.9	1633.8
77.5°	604.2	850.7	1135.9	1285.7	1300.2
80°	439.9	671.9	903.9	947.4	942.6
82.5°	294.8	502.7	623.5	628.4	642.9
85°	169.2	314.2	343.2	338.4	343.2
87.5°	67.7	111.2	96.7	72.5	72.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)