

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: P389647

Luminaire Tested: **24CZ2-170VHE-S-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: P389647
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: 24CZ2-170VHE-S-UNV-L950-CD2-SWPD1-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: 16014.8 lumens
Efficiency: N/A
Efficacy: 129.8 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

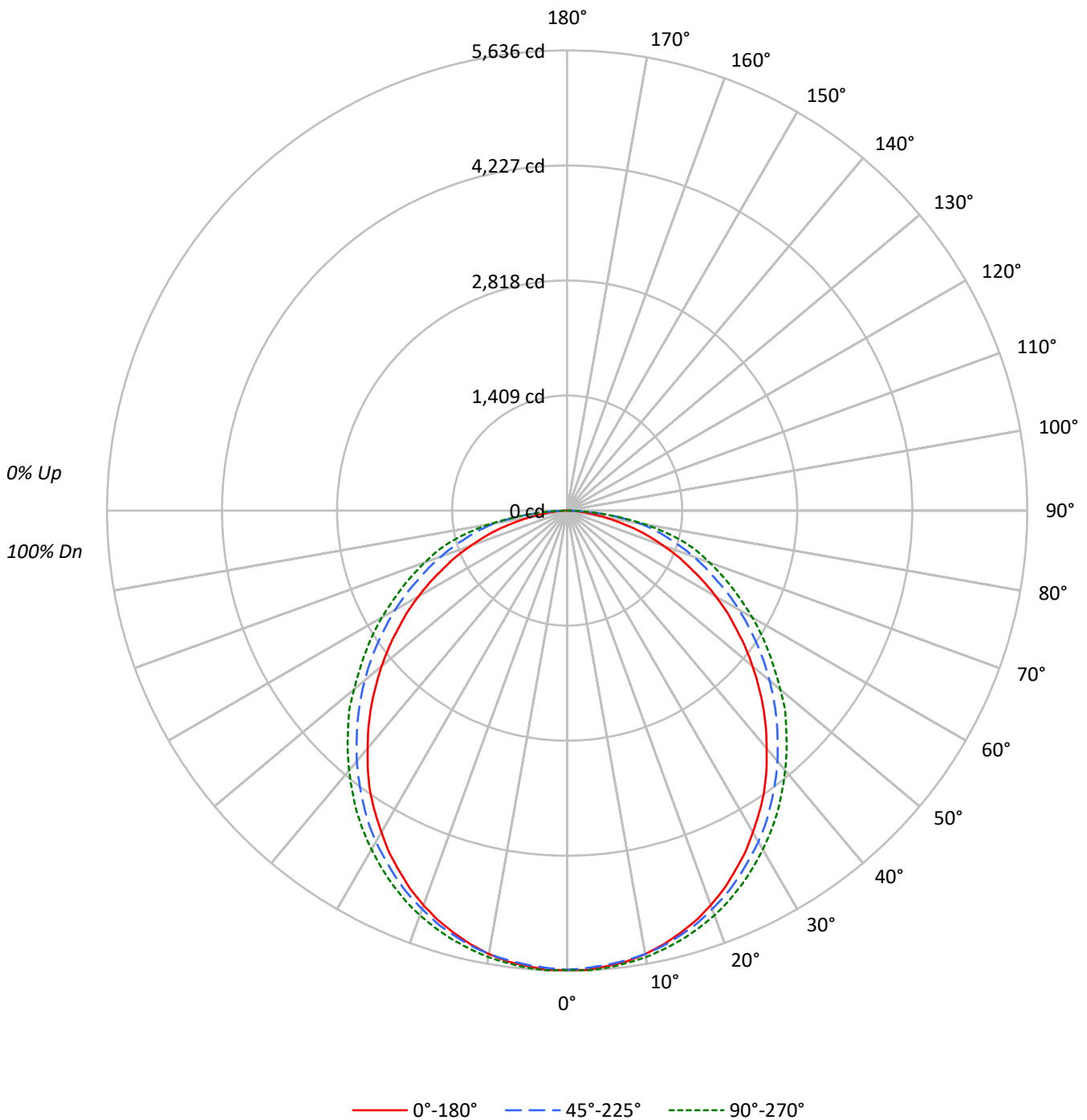
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	7570	7570	7570
5°	7564	7544	7592
10°	7534	7534	7589
15°	7461	7497	7575
20°	7364	7437	7553
25°	7227	7363	7507
30°	7065	7279	7445
35°	6910	7161	7386
40°	6674	7041	7300
45°	6456	6901	7221
50°	6208	6772	7134
55°	5931	6647	7064
60°	5653	6543	7050
65°	5296	6429	7094
70°	4903	6464	7284
75°	4390	6585	7695
80°	3547	6977	7528
85°	2671	6126	5968



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	532.6	3.3
10°-20°	1521.9	9.5
20°-30°	2287.8	14.3
30°-40°	2725.1	17.0
40°-50°	2789.0	17.4
50°-60°	2510.9	15.7
60°-70°	1971.9	12.3
70°-80°	1279.8	8.0
80°-90°	395.8	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°	4342.3	27.1
0°-40°	7067.4	44.1
0°-60°	12367.3	77.2
0°-90°	16014.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16014.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5626	5626	5626	5626	5626	
5°	5601	5611	5585	5616	5621	532
15°	5356	5372	5382	5428	5438	1510
25°	4868	4909	4960	5041	5056	2243
35°	4207	4258	4360	4466	4497	2624
45°	3393	3474	3627	3764	3795	2616
55°	2528	2640	2833	2981	3011	2267
65°	1663	1791	2020	2187	2228	1656
75°	844	1007	1267	1440	1480	894
85°	173	320	397	387	387	209
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5626.1	5626.1	5626.1	5626.1	5626.1
2.5°	5631.2	5631.2	5605.8	5631.2	5636.3
5°	5600.7	5610.8	5585.4	5615.9	5621.0
7.5°	5570.1	5570.1	5554.9	5585.4	5590.5
10°	5514.2	5519.3	5514.2	5549.8	5554.9
12.5°	5443.0	5453.1	5458.2	5493.8	5498.9
15°	5356.5	5371.8	5381.9	5427.7	5437.9
17.5°	5259.8	5275.1	5300.5	5351.4	5361.6
20°	5142.8	5163.2	5193.7	5259.8	5275.1
22.5°	5015.7	5036.0	5086.9	5147.9	5173.4
25°	4868.2	4908.9	4959.7	5041.1	5056.4
27.5°	4720.6	4756.2	4822.4	4908.9	4929.2
30°	4547.7	4603.6	4685.0	4771.5	4791.9
32.5°	4379.8	4435.8	4532.4	4624.0	4649.4
35°	4206.9	4257.7	4359.5	4466.3	4496.8
37.5°	4008.5	4074.6	4186.5	4293.3	4323.9
40°	3799.9	3881.3	4008.5	4120.4	4156.0
42.5°	3601.5	3688.0	3815.2	3937.3	3978.0
45°	3393.0	3474.3	3627.0	3764.3	3794.8
47.5°	3179.3	3270.9	3433.7	3571.0	3621.9
50°	2965.7	3062.3	3235.3	3377.7	3408.2
52.5°	2752.0	2853.7	3036.9	3189.5	3204.7
55°	2528.2	2640.1	2833.4	2980.9	3011.4
57.5°	2324.7	2421.4	2629.9	2782.5	2818.1
60°	2100.9	2207.7	2431.5	2574.0	2619.7
62.5°	1887.2	1999.1	2233.1	2375.6	2416.3
65°	1663.4	1790.6	2019.5	2187.4	2228.1
67.5°	1470.1	1592.2	1836.4	1999.1	2039.8
70°	1246.3	1383.6	1643.1	1810.9	1851.6
72.5°	1053.0	1195.4	1454.9	1617.6	1678.7
75°	844.4	1007.2	1266.6	1439.6	1480.3
77.5°	640.9	829.2	1093.7	1225.9	1225.9
80°	457.8	656.2	900.4	961.4	971.6
82.5°	300.1	493.4	666.4	661.3	661.3
85°	173.0	320.5	396.8	386.6	386.6
87.5°	66.1	132.3	142.4	142.4	137.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)