

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: P388420

Luminaire Tested: **24CZ2-170VHE-SQR-UNV-L935-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: P388420
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-L935-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3500K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13649.3 lumens
Efficiency: N/A
Efficacy: 110.6 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

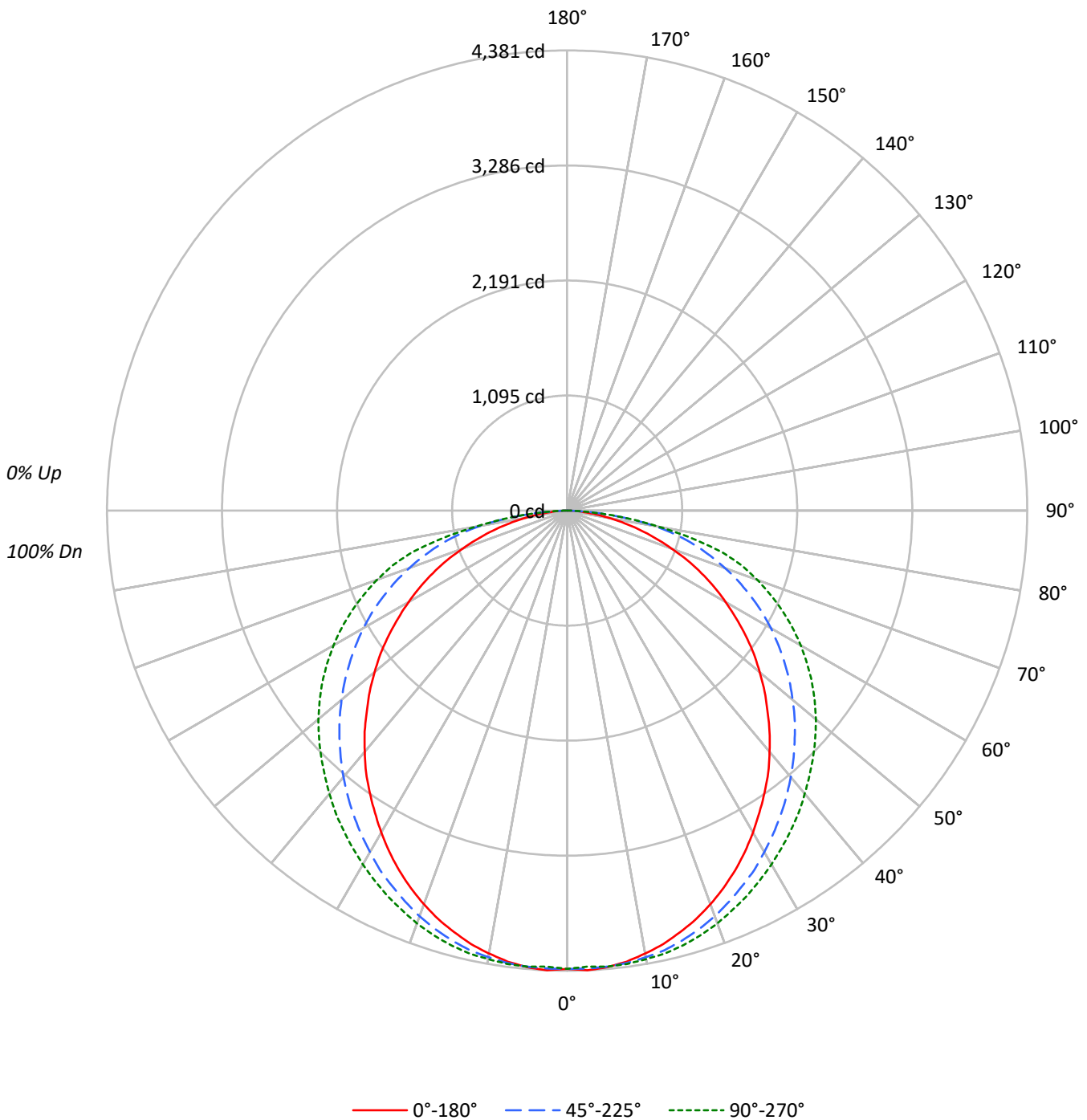
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47					47			
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41					41			
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35					35			
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28					28			
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25					25			
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5870	5870	5870
5°	5893	5887	5887
10°	5850	5899	5924
15°	5789	5902	5964
20°	5711	5886	5989
25°	5614	5855	6009
30°	5497	5833	6043
35°	5382	5819	6100
40°	5264	5819	6183
45°	5129	5832	6304
50°	5010	5868	6472
55°	4864	5931	6672
60°	4694	6028	6913
65°	4492	6142	7203
70°	4167	6295	7571
75°	3773	6514	7920
80°	3178	6530	6810
85°	2436	4940	4940



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	414.1	3.0
10°-20°	1191.6	8.7
20°-30°	1809.9	13.3
30°-40°	2201.5	16.1
40°-50°	2343.9	17.2
50°-60°	2232.4	16.4
60°-70°	1866.9	13.7
70°-80°	1244.7	9.1
80°-90°	344.4	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°	3415.6	25.0
0°-40°	5617.0	41.2
0°-60°	10193.3	74.7
0°-90°	13649.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13649.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4363	4363	4363	4363	4363	
5°	4363	4336	4358	4358	4358	414
15°	4156	4165	4237	4268	4282	1172
25°	3782	3831	3944	4011	4048	1741
35°	3277	3371	3543	3660	3714	2050
45°	2695	2840	3065	3236	3313	2084
55°	2073	2254	2528	2749	2844	1853
65°	1411	1618	1929	2168	2263	1394
75°	726	956	1253	1465	1523	769
85°	158	293	320	316	320	191
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4363.0	4363.0	4363.0	4363.0	4363.0
2.5°	4381.0	4349.5	4363.0	4363.0	4345.0
5°	4363.0	4335.9	4358.5	4358.5	4358.5
7.5°	4331.4	4308.9	4345.0	4354.0	4354.0
10°	4281.9	4272.8	4317.9	4331.4	4335.9
12.5°	4227.8	4223.3	4286.4	4304.4	4317.9
15°	4155.6	4164.7	4236.8	4268.3	4281.9
17.5°	4079.0	4097.1	4178.2	4223.3	4236.8
20°	3988.9	4015.9	4110.6	4155.6	4182.7
22.5°	3889.7	3930.3	4029.4	4083.5	4115.1
25°	3781.6	3831.1	3943.8	4011.4	4047.5
27.5°	3664.4	3727.5	3858.2	3934.8	3970.9
30°	3538.2	3610.3	3754.5	3844.7	3889.7
32.5°	3407.5	3493.1	3650.8	3750.0	3804.1
35°	3276.7	3371.4	3542.7	3659.9	3713.9
37.5°	3146.0	3240.7	3430.0	3556.2	3623.8
40°	2997.3	3110.0	3312.8	3452.5	3520.1
42.5°	2853.1	2974.8	3191.1	3344.4	3416.5
45°	2695.3	2839.5	3064.9	3236.2	3312.8
47.5°	2551.1	2695.3	2938.7	3119.0	3204.6
50°	2393.3	2546.6	2803.5	3001.8	3091.9
52.5°	2240.1	2397.8	2668.3	2880.1	2970.3
55°	2073.3	2253.6	2528.5	2749.4	2844.1
57.5°	1906.6	2100.4	2384.3	2614.2	2708.8
60°	1744.3	1942.6	2240.1	2470.0	2569.1
62.5°	1582.0	1780.3	2091.3	2325.7	2420.4
65°	1410.8	1618.1	1929.1	2168.0	2262.6
67.5°	1239.5	1455.8	1766.8	2005.7	2095.9
70°	1059.2	1289.1	1600.1	1834.4	1924.6
72.5°	892.4	1122.3	1428.8	1658.7	1744.3
75°	725.7	955.5	1253.0	1464.8	1523.4
77.5°	563.4	793.3	1059.2	1198.9	1212.4
80°	410.2	626.5	842.8	883.4	878.9
82.5°	274.9	468.7	581.4	585.9	599.5
85°	157.8	293.0	320.0	315.5	320.0
87.5°	63.1	103.7	90.1	67.6	67.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)