

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: P391126

Luminaire Tested: **24CZ2-170VHE-HRP-UNV-L930-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: P391126
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-170VHE-HRP-UNV-L930-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 11772.7 lumens
Efficiency: N/A
Efficacy: 95.4 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

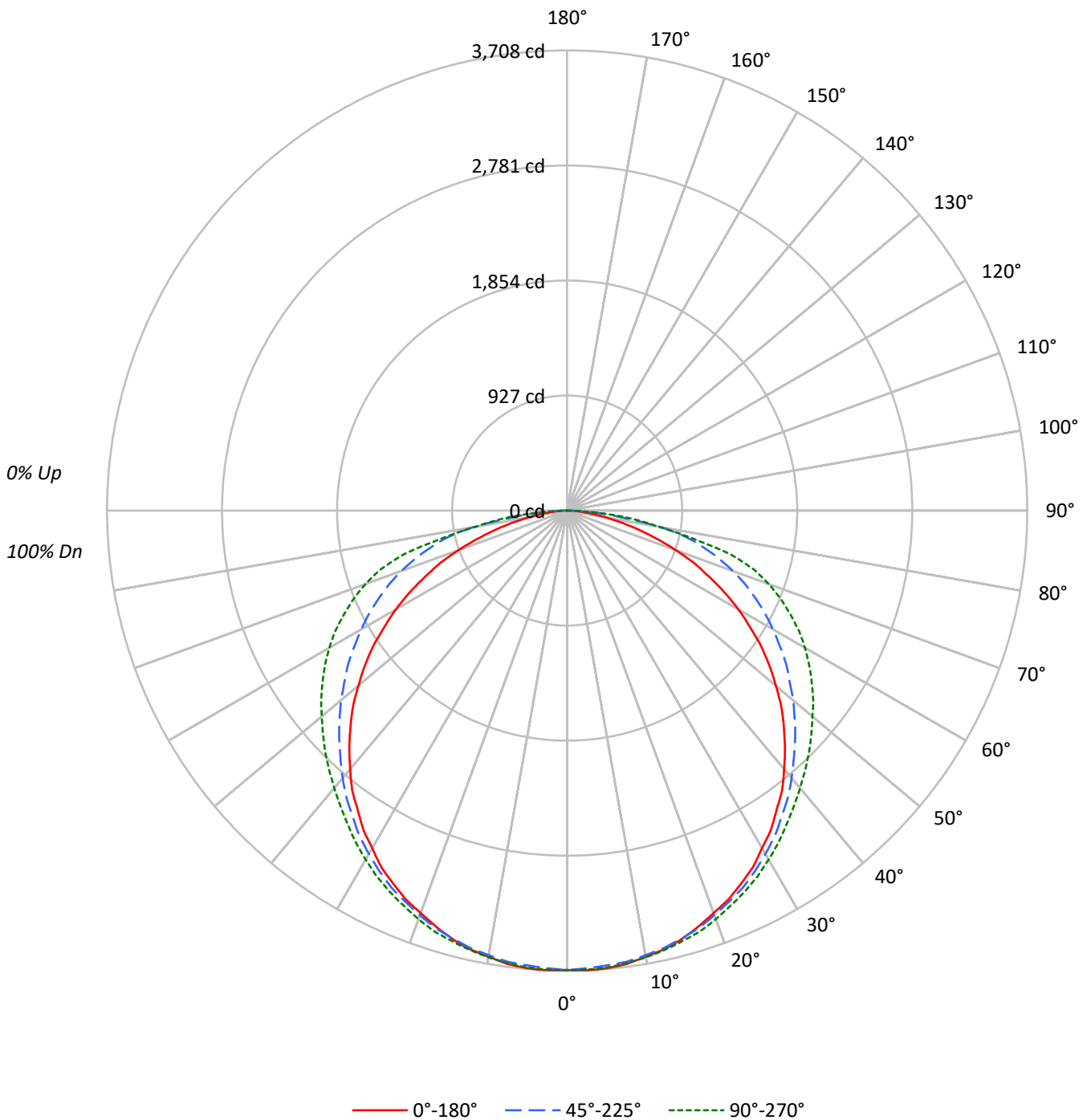
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	4981	4981	4981
5°	5000	4969	4992
10°	4986	4970	4994
15°	4978	4970	5002
20°	4941	4966	5017
25°	4924	4976	5028
30°	4881	4963	5044
35°	4834	4949	5064
40°	4780	4944	5128
45°	4700	4944	5245
50°	4596	4975	5403
55°	4479	5054	5643
60°	4290	5154	5955
65°	4016	5336	6321
70°	3653	5582	6800
75°	3096	5889	7103
80°	2443	5927	5746
85°	1803	4508	5048



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	351.2	3.0
10°-20°	1010.7	8.6
20°-30°	1545.6	13.1
30°-40°	1889.5	16.0
40°-50°	2013.8	17.1
50°-60°	1925.4	16.4
60°-70°	1631.1	13.9
70°-80°	1096.2	9.3
80°-90°	309.2	2.6
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°	2907.5	24.7
0°-40°	4796.9	40.7
0°-60°	8736.2	74.2
0°-90°	11772.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	11772.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3702	3702	3702	3702	3702	
5°	3702	3696	3679	3696	3696	352
15°	3574	3574	3568	3597	3591	1008
25°	3317	3328	3352	3381	3387	1529
35°	2943	2966	3013	3072	3083	1844
45°	2470	2511	2598	2710	2756	1905
55°	1910	1980	2155	2324	2406	1701
65°	1261	1390	1676	1898	1985	1252
75°	596	812	1133	1326	1366	638
85°	117	239	292	315	327	145
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3702.2	3702.2	3702.2	3702.2	3702.2
2.5°	3708.0	3708.0	3690.5	3702.2	3702.2
5°	3702.2	3696.3	3678.8	3696.3	3696.3
7.5°	3684.7	3678.8	3667.1	3684.7	3678.8
10°	3649.6	3649.6	3637.9	3655.5	3655.5
12.5°	3620.4	3614.6	3608.7	3632.1	3626.3
15°	3573.7	3573.7	3567.9	3597.1	3591.2
17.5°	3515.3	3521.2	3527.0	3550.4	3556.2
20°	3451.1	3462.8	3468.6	3503.6	3503.6
22.5°	3392.7	3398.5	3410.2	3445.2	3445.2
25°	3316.8	3328.5	3351.8	3381.0	3386.9
27.5°	3240.9	3246.7	3275.9	3316.8	3322.6
30°	3141.6	3159.1	3194.2	3240.9	3246.7
32.5°	3054.0	3071.5	3112.4	3159.1	3170.8
35°	2943.1	2966.4	3013.1	3071.5	3083.2
37.5°	2843.8	2861.3	2919.7	2983.9	3001.5
40°	2721.2	2756.2	2814.6	2890.5	2919.7
42.5°	2598.5	2633.6	2703.6	2802.9	2837.9
45°	2470.1	2510.9	2598.5	2709.5	2756.2
47.5°	2341.6	2388.3	2487.6	2616.1	2668.6
50°	2195.6	2254.0	2376.6	2522.6	2581.0
52.5°	2055.5	2125.5	2259.8	2423.3	2499.3
55°	1909.5	1979.6	2154.7	2324.1	2405.8
57.5°	1746.0	1839.4	2032.1	2224.8	2312.4
60°	1594.2	1681.7	1915.3	2125.5	2213.1
62.5°	1430.7	1547.4	1798.5	2020.4	2108.0
65°	1261.3	1389.8	1675.9	1897.8	1985.4
67.5°	1109.5	1249.6	1553.3	1775.2	1862.8
70°	928.5	1103.6	1419.0	1640.9	1728.5
72.5°	759.1	951.8	1278.8	1494.9	1576.6
75°	595.6	811.7	1132.8	1325.5	1366.4
77.5°	443.8	671.5	981.0	1062.8	1033.6
80°	315.3	537.2	765.0	724.1	741.6
82.5°	204.4	408.8	473.0	537.2	554.7
85°	116.8	239.4	292.0	315.3	327.0
87.5°	52.6	87.6	116.8	116.8	110.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)