

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: P388685

Luminaire Tested: **24CZ2-150VHE-UNV-L940-CD2-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: P388685
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-150VHE-UNV-L940-CD2-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RIBBED LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12818.5 lumens
Efficiency: N/A
Efficacy: 123.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

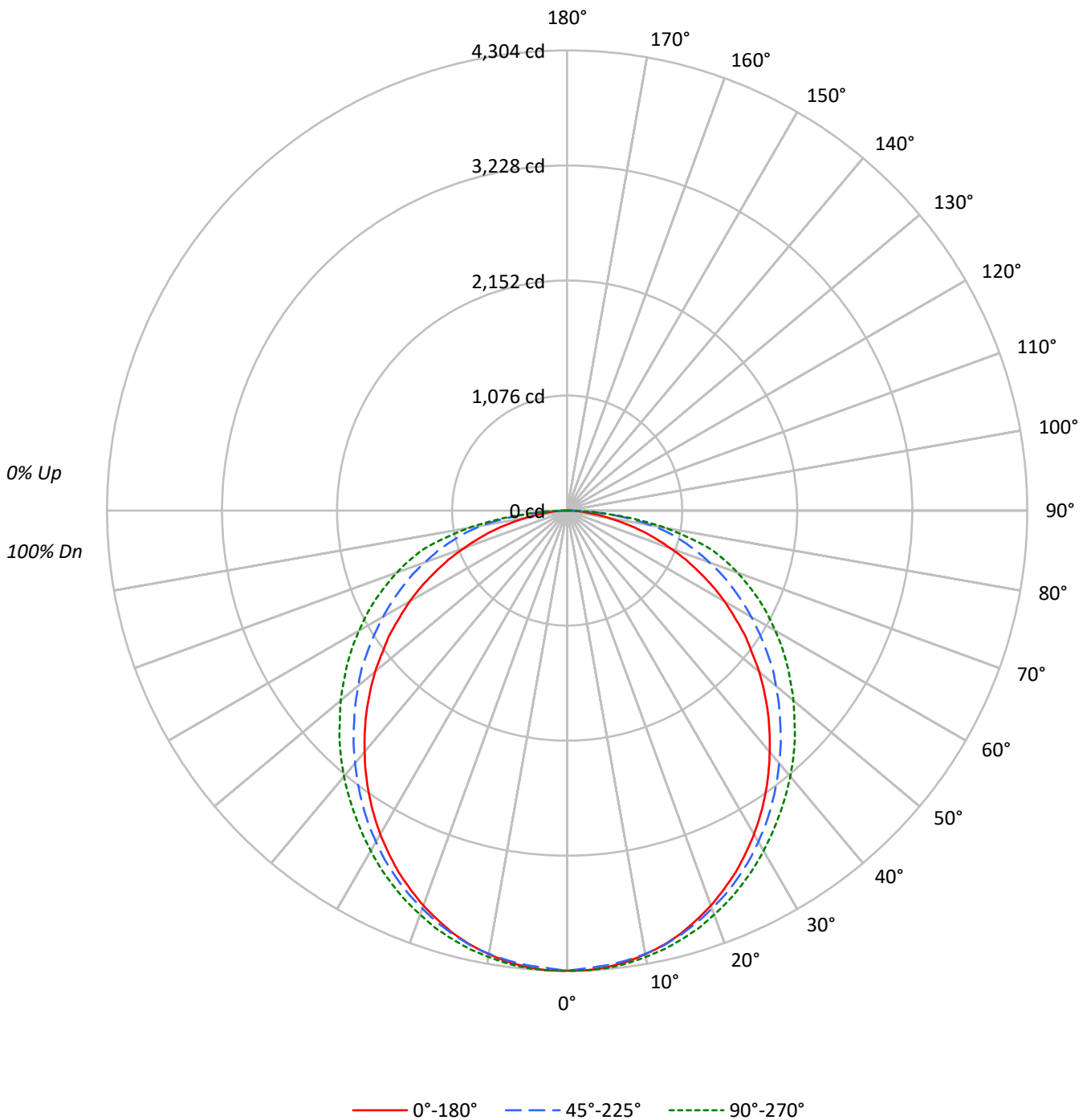
Input Watts (W): 104.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	82	76	95	87	80	75	83	78	73		80	75	71		77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	60		68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51		62	56	51		60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44		56	49	44		54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39		50	44	38		49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34		46	39	34		45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30		42	35	30		41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27		39	32	27		38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25		36	29	25		35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5791	5791	5791
5°	5790	5767	5801
10°	5757	5751	5792
15°	5709	5721	5780
20°	5629	5672	5758
25°	5538	5621	5735
30°	5430	5557	5709
35°	5312	5488	5692
40°	5177	5418	5703
45°	5047	5365	5731
50°	4907	5337	5785
55°	4757	5329	5891
60°	4570	5353	6044
65°	4331	5435	6306
70°	4022	5571	6665
75°	3670	5849	7228
80°	3016	6298	7226
85°	2311	5812	6208



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	407.0	3.2
10°-20°	1162.0	9.1
20°-30°	1748.7	13.6
30°-40°	2095.6	16.3
40°-50°	2183.8	17.0
50°-60°	2031.8	15.9
60°-70°	1673.4	13.1
70°-80°	1139.7	8.9
80°-90°	376.3	2.9
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°	3317.8	25.9
0°-40°	5413.4	42.2
0°-60°	9629.1	75.1
0°-90°	12818.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12818.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4304	4304	4304	4304	4304	
5°	4287	4287	4270	4291	4295	407
15°	4098	4103	4107	4146	4150	1155
25°	3730	3748	3786	3850	3863	1717
35°	3234	3273	3341	3431	3465	2022
45°	2652	2708	2819	2960	3012	2046
55°	2028	2096	2272	2451	2511	1808
65°	1360	1476	1707	1908	1981	1350
75°	706	864	1125	1326	1390	744
85°	150	291	376	402	402	186
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4303.8	4303.8	4303.8	4303.8	4303.8
2.5°	4303.8	4303.8	4282.4	4303.8	4303.8
5°	4286.7	4286.7	4269.5	4290.9	4295.2
7.5°	4256.7	4261.0	4243.9	4269.5	4273.8
10°	4213.9	4218.2	4209.6	4235.3	4239.6
12.5°	4162.6	4166.9	4166.9	4196.8	4201.1
15°	4098.4	4102.7	4107.0	4145.5	4149.8
17.5°	4017.1	4030.0	4038.5	4085.6	4094.1
20°	3931.6	3944.4	3961.5	4012.9	4021.4
22.5°	3833.2	3850.3	3880.2	3935.9	3948.7
25°	3730.5	3747.6	3786.1	3850.3	3863.1
27.5°	3615.0	3640.7	3687.7	3756.2	3773.3
30°	3495.2	3520.9	3576.5	3649.2	3674.9
32.5°	3366.9	3401.1	3465.3	3546.5	3572.2
35°	3234.2	3272.7	3341.2	3431.0	3465.3
37.5°	3093.1	3135.8	3217.1	3315.5	3358.3
40°	2947.6	2998.9	3084.5	3200.0	3247.1
42.5°	2802.2	2849.2	2956.2	3080.2	3131.6
45°	2652.4	2708.0	2819.3	2960.4	3011.8
47.5°	2498.4	2554.0	2686.6	2836.4	2883.4
50°	2344.4	2400.0	2549.7	2708.0	2763.7
52.5°	2177.6	2250.3	2421.4	2579.7	2635.3
55°	2027.8	2096.3	2271.7	2451.4	2511.2
57.5°	1856.7	1938.0	2130.5	2318.7	2382.9
60°	1698.4	1784.0	1989.3	2181.8	2246.0
62.5°	1535.8	1630.0	1848.1	2044.9	2117.7
65°	1360.4	1475.9	1707.0	1908.0	1980.8
67.5°	1202.1	1321.9	1565.8	1771.1	1835.3
70°	1022.5	1167.9	1416.1	1621.4	1694.1
72.5°	868.5	1013.9	1274.9	1475.9	1548.7
75°	705.9	864.2	1125.1	1326.2	1390.4
77.5°	543.3	718.7	979.7	1133.7	1155.1
80°	389.3	573.3	812.8	902.7	932.6
82.5°	273.8	440.6	598.9	658.8	675.9
85°	149.7	290.9	376.5	402.1	402.1
87.5°	64.2	124.1	149.7	154.0	158.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)