

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: P391156

Luminaire Tested: **24CZ2-170VHE-RDP-UNV-L940-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: P391156
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-RDP-UNV-L940-CD2-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND RDP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 9657.6 lumens
Efficiency: N/A
Efficacy: 78.3 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

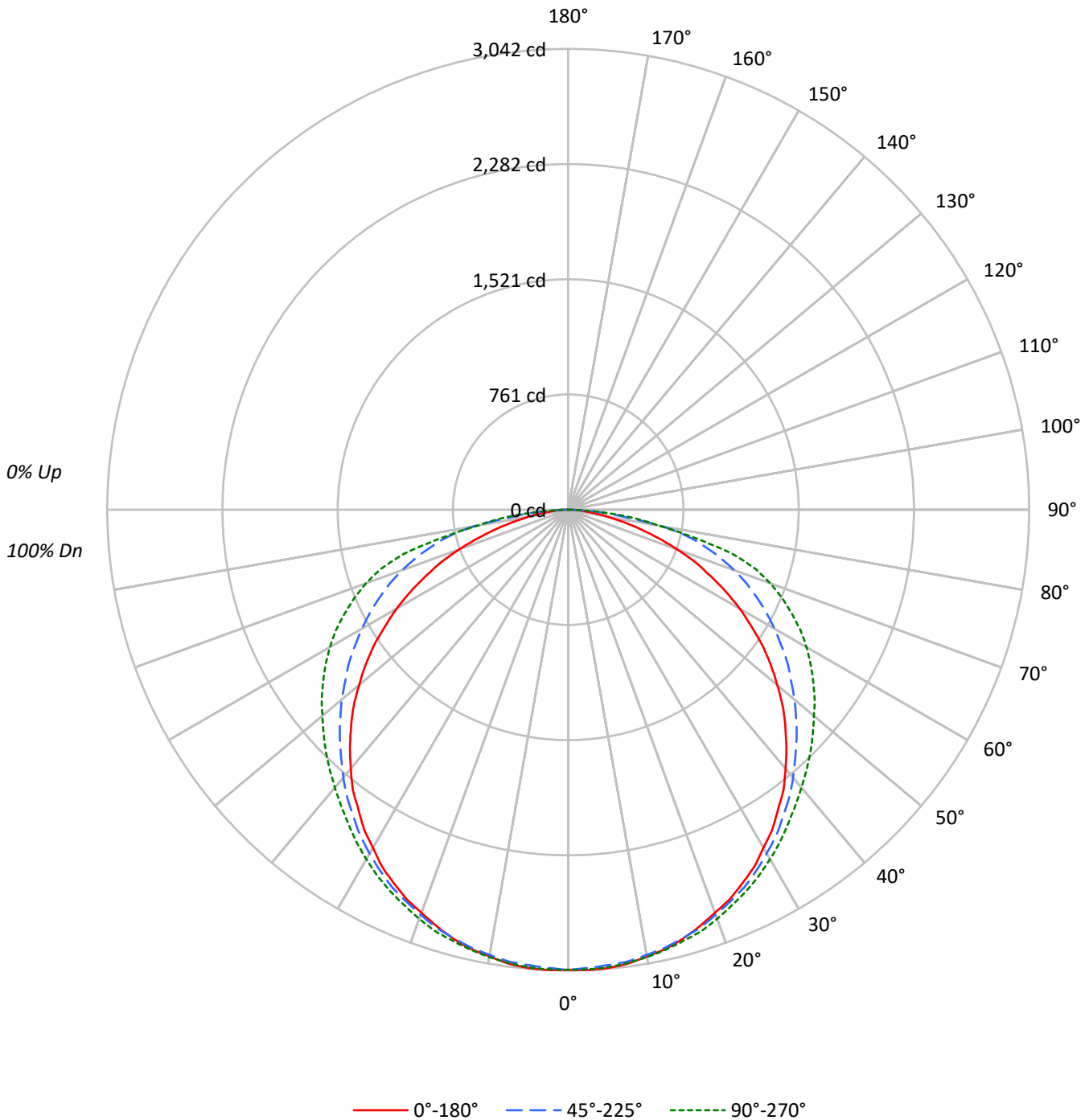
Input Watts (W): 123.4
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	4086	4086	4086
5°	4102	4076	4095
10°	4090	4077	4097
15°	4084	4077	4104
20°	4054	4074	4115
25°	4039	4082	4125
30°	4004	4071	4138
35°	3966	4060	4154
40°	3921	4055	4207
45°	3856	4056	4302
50°	3770	4081	4432
55°	3674	4146	4630
60°	3519	4228	4885
65°	3294	4377	5185
70°	2996	4579	5578
75°	2540	4831	5827
80°	2005	4862	4714
85°	1479	3697	4142



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	288.1	3.0
10°-20°	829.1	8.6
20°-30°	1267.9	13.1
30°-40°	1550.0	16.0
40°-50°	1652.0	17.1
50°-60°	1579.5	16.4
60°-70°	1338.0	13.9
70°-80°	899.3	9.3
80°-90°	253.7	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°	2385.1	24.7
0°-40°	3935.1	40.7
0°-60°	7166.6	74.2
0°-90°	9657.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	9657.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	3037	3037	3037	3037	3037	
5°	3037	3032	3018	3032	3032	289
15°	2932	2932	2927	2951	2946	827
25°	2721	2730	2750	2774	2778	1254
35°	2414	2434	2472	2520	2529	1512
45°	2026	2060	2132	2223	2261	1563
55°	1566	1624	1768	1906	1974	1395
65°	1035	1140	1375	1557	1629	1027
75°	489	666	929	1087	1121	523
85°	96	196	240	259	268	119
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	3037.0	3037.0	3037.0	3037.0	3037.0
2.5°	3041.8	3041.8	3027.5	3037.0	3037.0
5°	3037.0	3032.2	3017.9	3032.2	3032.2
7.5°	3022.7	3017.9	3008.3	3022.7	3017.9
10°	2993.9	2993.9	2984.3	2998.7	2998.7
12.5°	2970.0	2965.2	2960.4	2979.6	2974.8
15°	2931.7	2931.7	2926.9	2950.8	2946.0
17.5°	2883.8	2888.5	2893.3	2912.5	2917.3
20°	2831.1	2840.6	2845.4	2874.2	2874.2
22.5°	2783.2	2787.9	2797.5	2826.3	2826.3
25°	2720.9	2730.5	2749.6	2773.6	2778.4
27.5°	2658.6	2663.4	2687.3	2720.9	2725.7
30°	2577.2	2591.5	2620.3	2658.6	2663.4
32.5°	2505.3	2519.7	2553.2	2591.5	2601.1
35°	2414.3	2433.5	2471.8	2519.7	2529.3
37.5°	2332.9	2347.2	2395.1	2447.8	2462.2
40°	2232.3	2261.0	2308.9	2371.2	2395.1
42.5°	2131.7	2160.4	2217.9	2299.3	2328.1
45°	2026.3	2059.8	2131.7	2222.7	2261.0
47.5°	1920.9	1959.2	2040.7	2146.0	2189.2
50°	1801.1	1849.0	1949.6	2069.4	2117.3
52.5°	1686.2	1743.7	1853.8	1988.0	2050.2
55°	1566.4	1623.9	1767.6	1906.5	1973.6
57.5°	1432.3	1508.9	1667.0	1825.1	1897.0
60°	1307.7	1379.6	1571.2	1743.7	1815.5
62.5°	1173.6	1269.4	1475.4	1657.4	1729.3
65°	1034.7	1140.1	1374.8	1556.8	1628.7
67.5°	910.2	1025.1	1274.2	1456.2	1528.1
70°	761.7	905.4	1164.0	1346.1	1417.9
72.5°	622.7	780.8	1049.1	1226.3	1293.4
75°	488.6	665.8	929.3	1087.4	1120.9
77.5°	364.1	550.9	804.8	871.8	847.9
80°	258.7	440.7	627.5	594.0	608.4
82.5°	167.7	335.3	388.0	440.7	455.1
85°	95.8	196.4	239.5	258.7	268.3
87.5°	43.1	71.9	95.8	95.8	91.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)