

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: P388589

Luminaire Tested: **24CZ2-100VHE-UNV-L940-CD1-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: P388589
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: 24CZ2-100VHE-UNV-L940-CD1-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: 8705.4 lumens
Efficiency: N/A
Efficacy: 125.1 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

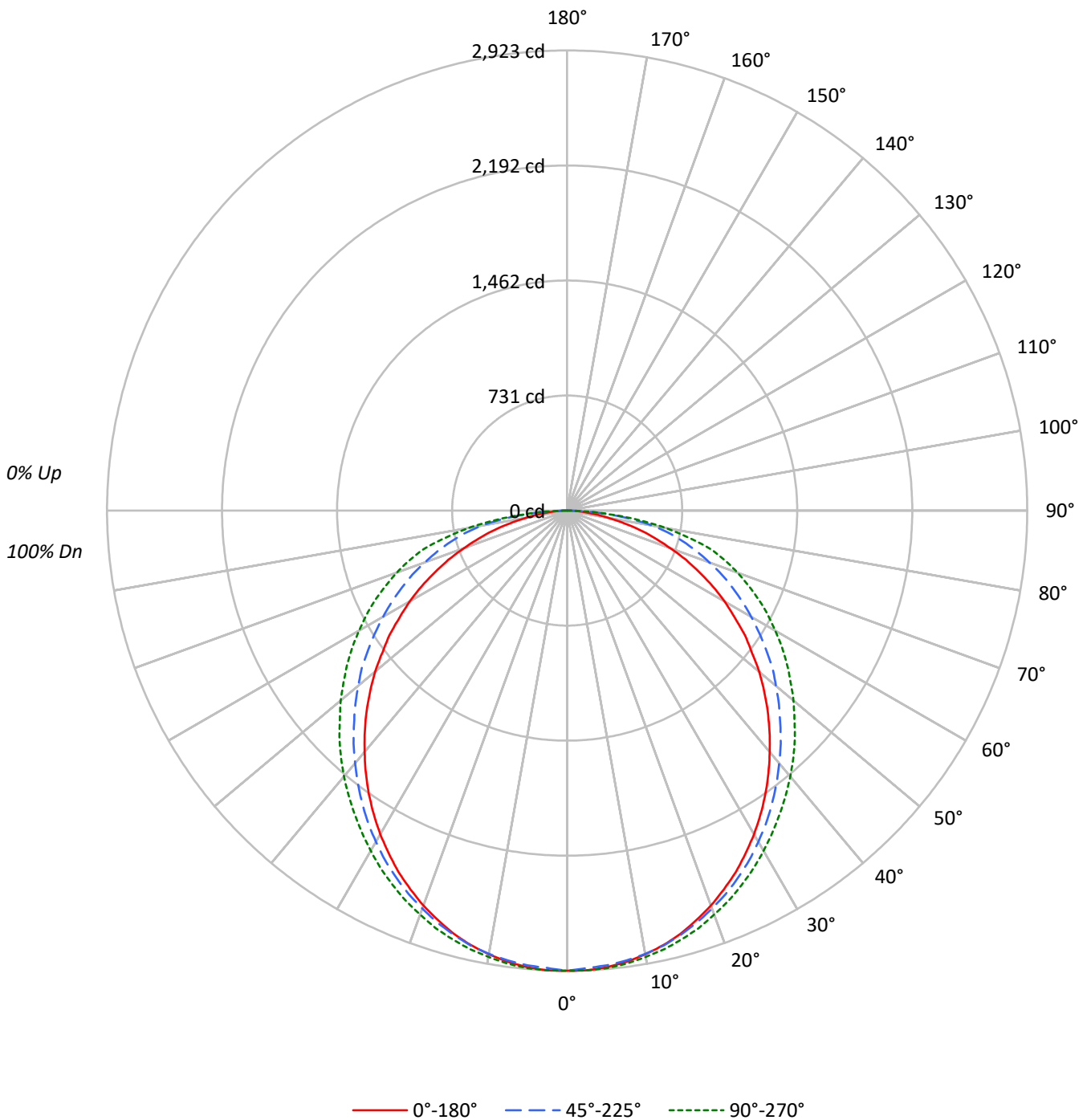
Input Watts (W): 69.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3933	3933	3933
5°	3932	3916	3940
10°	3910	3906	3934
15°	3877	3885	3926
20°	3823	3852	3910
25°	3761	3817	3895
30°	3688	3774	3877
35°	3608	3727	3866
40°	3516	3679	3873
45°	3428	3643	3892
50°	3333	3625	3929
55°	3230	3619	4001
60°	3104	3636	4105
65°	2941	3691	4283
70°	2732	3783	4526
75°	2492	3972	4908
80°	2049	4277	4908
85°	1570	3947	4216



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	276.4	3.2
10°-20°	789.2	9.1
20°-30°	1187.6	13.6
30°-40°	1423.2	16.3
40°-50°	1483.1	17.0
50°-60°	1379.9	15.9
60°-70°	1136.5	13.1
70°-80°	774.0	8.9
80°-90°	255.5	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°	2253.2	25.9
0°-40°	3676.4	42.2
0°-60°	6539.4	75.1
0°-90°	8705.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8705.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2923	2923	2923	2923	2923	
5°	2911	2911	2900	2914	2917	276
15°	2783	2786	2789	2815	2818	784
25°	2534	2545	2571	2615	2624	1166
35°	2196	2223	2269	2330	2353	1373
45°	1801	1839	1915	2010	2045	1389
55°	1377	1424	1543	1665	1706	1228
65°	924	1002	1159	1296	1345	917
75°	479	587	764	901	944	505
85°	102	198	256	273	273	126
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2922.8	2922.8	2922.8	2922.8	2922.8
2.5°	2922.8	2922.8	2908.3	2922.8	2922.8
5°	2911.2	2911.2	2899.6	2914.1	2917.0
7.5°	2890.8	2893.8	2882.1	2899.6	2902.5
10°	2861.8	2864.7	2858.9	2876.3	2879.2
12.5°	2826.9	2829.8	2829.8	2850.2	2853.1
15°	2783.3	2786.3	2789.2	2815.3	2818.2
17.5°	2728.1	2736.9	2742.7	2774.6	2780.4
20°	2670.0	2678.8	2690.4	2725.2	2731.1
22.5°	2603.2	2614.8	2635.2	2672.9	2681.7
25°	2533.5	2545.1	2571.3	2614.8	2623.6
27.5°	2455.0	2472.5	2504.4	2550.9	2562.5
30°	2373.7	2391.1	2428.9	2478.3	2495.7
32.5°	2286.5	2309.8	2353.4	2408.6	2426.0
35°	2196.5	2222.6	2269.1	2330.1	2353.4
37.5°	2100.6	2129.6	2184.8	2251.7	2280.7
40°	2001.8	2036.7	2094.8	2173.2	2205.2
42.5°	1903.0	1935.0	2007.6	2091.9	2126.7
45°	1801.3	1839.1	1914.6	2010.5	2045.4
47.5°	1696.7	1734.5	1824.6	1926.3	1958.2
50°	1592.1	1629.9	1731.6	1839.1	1876.9
52.5°	1478.8	1528.2	1644.4	1751.9	1789.7
55°	1377.1	1423.6	1542.8	1664.8	1705.5
57.5°	1260.9	1316.1	1446.9	1574.7	1618.3
60°	1153.4	1211.5	1351.0	1481.7	1525.3
62.5°	1043.0	1106.9	1255.1	1388.8	1438.2
65°	923.9	1002.4	1159.2	1295.8	1345.2
67.5°	816.4	897.8	1063.4	1202.8	1246.4
70°	694.4	793.2	961.7	1101.1	1150.5
72.5°	589.8	688.6	865.8	1002.4	1051.7
75°	479.4	586.9	764.1	900.7	944.2
77.5°	369.0	488.1	665.3	769.9	784.5
80°	264.4	389.3	552.0	613.0	633.4
82.5°	185.9	299.3	406.8	447.4	459.0
85°	101.7	197.6	255.7	273.1	273.1
87.5°	43.6	84.3	101.7	104.6	107.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)