

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: P389195

Luminaire Tested: **24CZ2-90VHE-SQR-UNV-L950-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: P389195
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: 24CZ2-90VHE-SQR-UNV-L950-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 5000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7883.2 lumens
Efficiency: N/A
Efficacy: 127.6 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

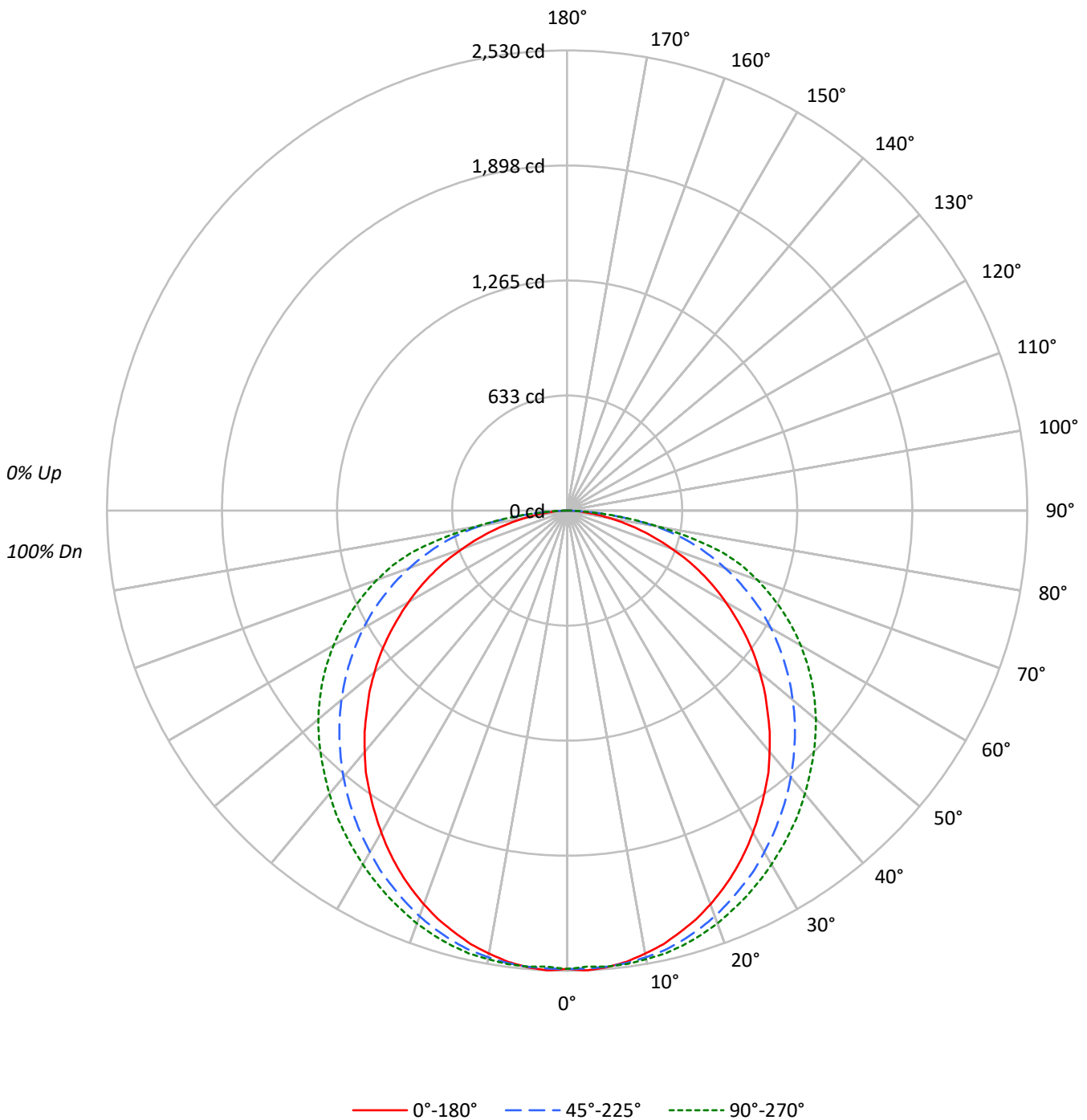
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3390	3390	3390
5°	3403	3400	3400
10°	3379	3407	3421
15°	3343	3409	3445
20°	3299	3399	3459
25°	3242	3382	3470
30°	3175	3369	3490
35°	3109	3361	3523
40°	3041	3361	3571
45°	2962	3368	3641
50°	2893	3389	3738
55°	2809	3426	3853
60°	2711	3482	3993
65°	2594	3547	4160
70°	2406	3635	4373
75°	2179	3762	4574
80°	1836	3772	3933
85°	1406	2853	2853



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.2	3.0
10°-20°	688.2	8.7
20°-30°	1045.3	13.3
30°-40°	1271.5	16.1
40°-50°	1353.7	17.2
50°-60°	1289.3	16.4
60°-70°	1078.2	13.7
70°-80°	718.9	9.1
80°-90°	198.9	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°	1972.7	25.0
0°-40°	3244.1	41.2
0°-60°	5887.2	74.7
0°-90°	7883.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7883.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2520	2520	2520	2520	2520	
5°	2520	2504	2517	2517	2517	239
15°	2400	2405	2447	2465	2473	677
25°	2184	2213	2278	2317	2338	1006
35°	1892	1947	2046	2114	2145	1184
45°	1557	1640	1770	1869	1913	1203
55°	1198	1302	1460	1588	1643	1070
65°	815	934	1114	1252	1307	805
75°	419	552	724	846	880	444
85°	91	169	185	182	185	110
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2519.9	2519.9	2519.9	2519.9	2519.9
2.5°	2530.3	2512.0	2519.9	2519.9	2509.4
5°	2519.9	2504.2	2517.3	2517.3	2517.3
7.5°	2501.6	2488.6	2509.4	2514.6	2514.6
10°	2473.0	2467.8	2493.8	2501.6	2504.2
12.5°	2441.8	2439.2	2475.6	2486.0	2493.8
15°	2400.1	2405.3	2447.0	2465.2	2473.0
17.5°	2355.9	2366.3	2413.1	2439.2	2447.0
20°	2303.8	2319.4	2374.1	2400.1	2415.7
22.5°	2246.5	2270.0	2327.2	2358.5	2376.7
25°	2184.0	2212.7	2277.8	2316.8	2337.6
27.5°	2116.4	2152.8	2228.3	2272.6	2293.4
30°	2043.5	2085.1	2168.4	2220.5	2246.5
32.5°	1968.0	2017.4	2108.6	2165.8	2197.1
35°	1892.5	1947.2	2046.1	2113.8	2145.0
37.5°	1817.0	1871.7	1981.0	2053.9	2092.9
40°	1731.1	1796.2	1913.3	1994.0	2033.1
42.5°	1647.8	1718.1	1843.0	1931.5	1973.2
45°	1556.7	1640.0	1770.1	1869.1	1913.3
47.5°	1473.4	1556.7	1697.3	1801.4	1850.8
50°	1382.3	1470.8	1619.2	1733.7	1785.8
52.5°	1293.8	1384.9	1541.1	1663.4	1715.5
55°	1197.5	1301.6	1460.4	1587.9	1642.6
57.5°	1101.1	1213.1	1377.1	1509.8	1564.5
60°	1007.4	1122.0	1293.8	1426.5	1483.8
62.5°	913.7	1028.2	1207.9	1343.2	1397.9
65°	814.8	934.5	1114.2	1252.1	1306.8
67.5°	715.9	840.8	1020.4	1158.4	1210.5
70°	611.7	744.5	924.1	1059.5	1111.5
72.5°	515.4	648.2	825.2	958.0	1007.4
75°	419.1	551.9	723.7	846.0	879.9
77.5°	325.4	458.2	611.7	692.4	700.2
80°	236.9	361.8	486.8	510.2	507.6
82.5°	158.8	270.7	335.8	338.4	346.2
85°	91.1	169.2	184.8	182.2	184.8
87.5°	36.4	59.9	52.1	39.0	39.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)