

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: P389184

Luminaire Tested: **24CZ2-90VHE-SQR-UNV-L930-CD1-SDWPD1-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: P389184
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-L930-CD1-SDWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 3000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6999.0 lumens
Efficiency: N/A
Efficacy: 113.3 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

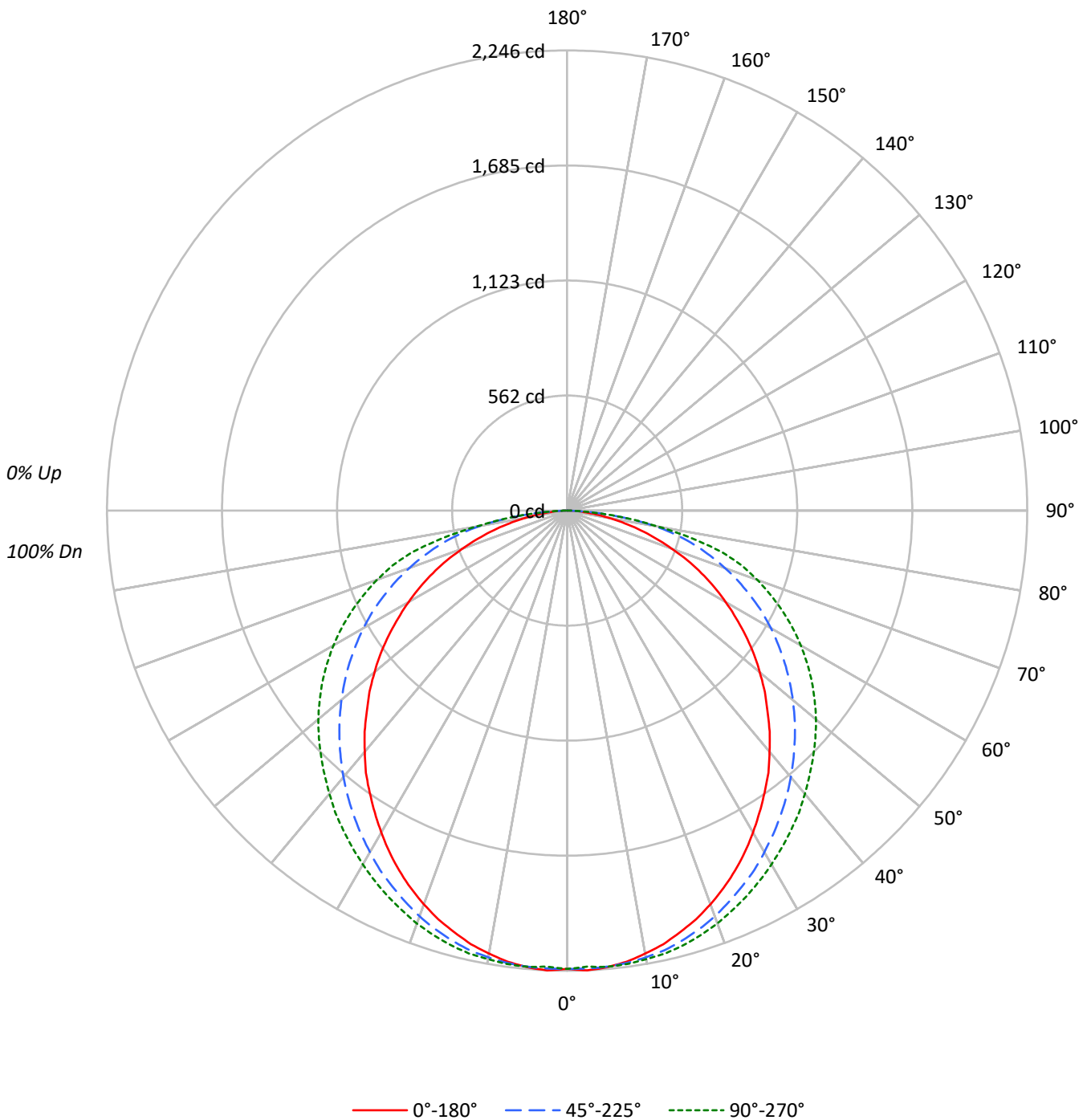
Input Watts (W): 61.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3010	3010	3010
5°	3022	3019	3019
10°	3000	3025	3038
15°	2968	3026	3058
20°	2929	3018	3071
25°	2879	3002	3081
30°	2819	2991	3099
35°	2760	2984	3128
40°	2699	2984	3170
45°	2630	2990	3232
50°	2569	3009	3319
55°	2494	3042	3421
60°	2407	3091	3545
65°	2303	3149	3694
70°	2137	3228	3882
75°	1934	3340	4061
80°	1629	3349	3492
85°	1249	2533	2533



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.4	3.0
10°-20°	611.0	8.7
20°-30°	928.1	13.3
30°-40°	1128.9	16.1
40°-50°	1201.9	17.2
50°-60°	1144.7	16.4
60°-70°	957.3	13.7
70°-80°	638.3	9.1
80°-90°	176.6	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°	1751.4	25.0
0°-40°	2880.3	41.2
0°-60°	5226.8	74.7
0°-90°	6999.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6999.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2237	2237	2237	2237	2237	
5°	2237	2223	2235	2235	2235	212
15°	2131	2136	2172	2189	2196	601
25°	1939	1964	2022	2057	2075	893
35°	1680	1729	1817	1877	1904	1051
45°	1382	1456	1572	1659	1699	1068
55°	1063	1156	1297	1410	1458	950
65°	723	830	989	1112	1160	715
75°	372	490	642	751	781	394
85°	81	150	164	162	164	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2237.2	2237.2	2237.2	2237.2	2237.2
2.5°	2246.5	2230.3	2237.2	2237.2	2228.0
5°	2237.2	2223.4	2234.9	2234.9	2234.9
7.5°	2221.0	2209.5	2228.0	2232.6	2232.6
10°	2195.6	2191.0	2214.1	2221.0	2223.4
12.5°	2167.9	2165.6	2197.9	2207.2	2214.1
15°	2130.9	2135.5	2172.5	2188.7	2195.6
17.5°	2091.6	2100.9	2142.5	2165.6	2172.5
20°	2045.4	2059.3	2107.8	2130.9	2144.8
22.5°	1994.5	2015.3	2066.2	2093.9	2110.1
25°	1939.1	1964.5	2022.3	2056.9	2075.4
27.5°	1879.0	1911.3	1978.4	2017.7	2036.1
30°	1814.3	1851.3	1925.2	1971.4	1994.5
32.5°	1747.3	1791.2	1872.1	1922.9	1950.6
35°	1680.2	1728.8	1816.6	1876.7	1904.4
37.5°	1613.2	1661.7	1758.8	1823.5	1858.2
40°	1536.9	1594.7	1698.7	1770.4	1805.0
42.5°	1463.0	1525.4	1636.3	1714.9	1751.9
45°	1382.1	1456.0	1571.6	1659.4	1698.7
47.5°	1308.1	1382.1	1506.9	1599.3	1643.2
50°	1227.2	1305.8	1437.6	1539.2	1585.5
52.5°	1148.7	1229.5	1368.2	1476.8	1523.1
55°	1063.1	1155.6	1296.6	1409.8	1458.4
57.5°	977.6	1077.0	1222.6	1340.5	1389.0
60°	894.4	996.1	1148.7	1266.5	1317.4
62.5°	811.2	912.9	1072.4	1192.6	1241.1
65°	723.4	829.7	989.2	1111.7	1160.2
67.5°	635.6	746.5	906.0	1028.5	1074.7
70°	543.1	661.0	820.5	940.6	986.9
72.5°	457.6	575.5	732.6	850.5	894.4
75°	372.1	490.0	642.5	751.1	781.2
77.5°	288.9	406.8	543.1	614.8	621.7
80°	210.3	321.3	432.2	453.0	450.7
82.5°	141.0	240.4	298.1	300.5	307.4
85°	80.9	150.2	164.1	161.8	164.1
87.5°	32.4	53.2	46.2	34.7	34.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)