

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: P389884

Luminaire Tested: **24CZ2-70VHE-S-UNV-L940-CD1-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: P389884
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70VHE-S-UNV-L940-CD1-SWPD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SMOOTH LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6257.3 lumens
Efficiency: N/A
Efficacy: 136.9 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

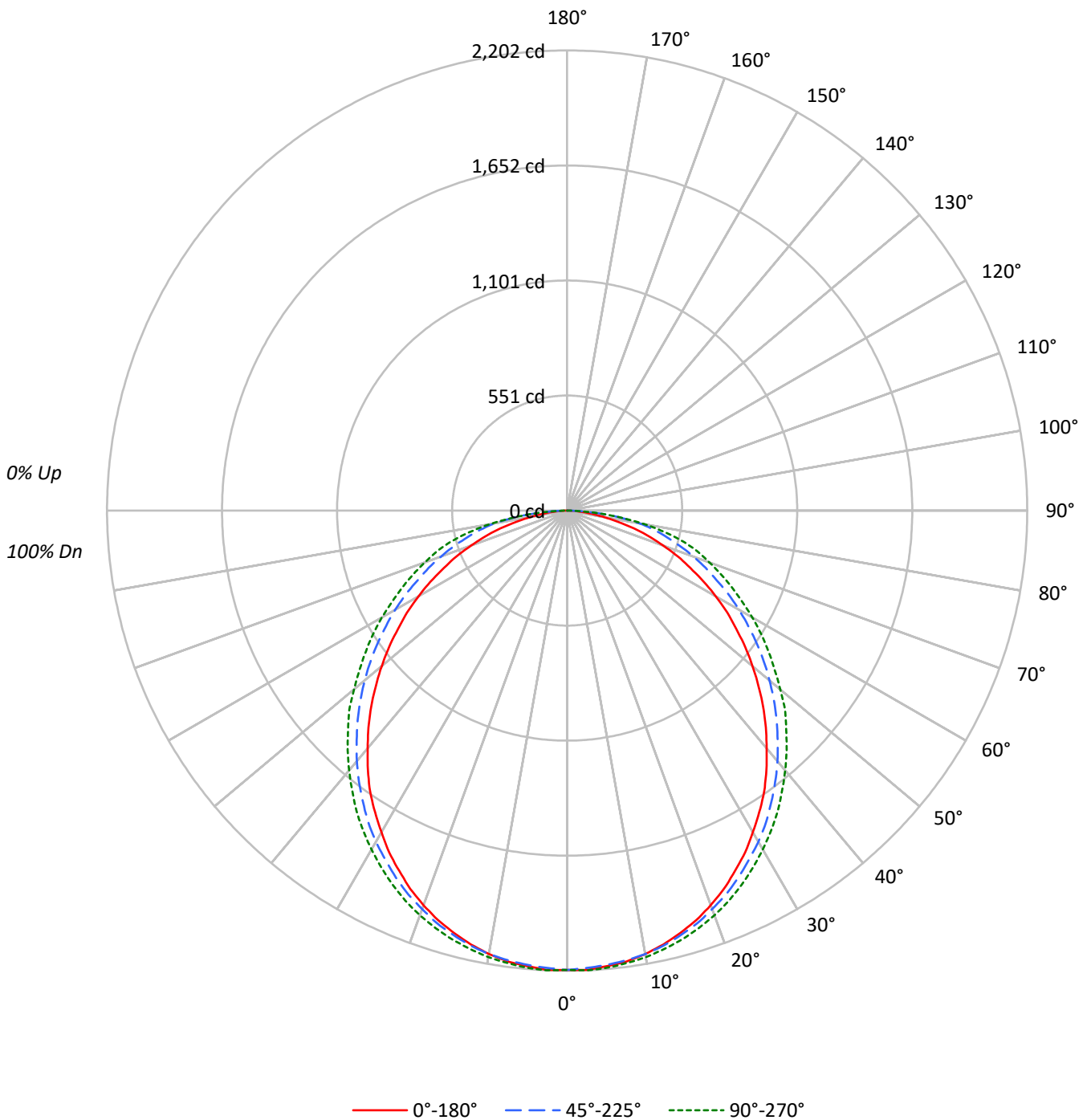
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2958	2958	2958
5°	2956	2947	2966
10°	2944	2944	2965
15°	2915	2929	2960
20°	2877	2906	2951
25°	2824	2877	2933
30°	2761	2844	2909
35°	2700	2798	2886
40°	2608	2751	2852
45°	2523	2696	2821
50°	2425	2646	2788
55°	2317	2597	2760
60°	2209	2556	2754
65°	2069	2512	2771
70°	1915	2526	2846
75°	1715	2573	3007
80°	1386	2726	2941
85°	1044	2393	2333



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	208.1	3.3
10°-20°	594.6	9.5
20°-30°	893.9	14.3
30°-40°	1064.7	17.0
40°-50°	1089.7	17.4
50°-60°	981.1	15.7
60°-70°	770.4	12.3
70°-80°	500.0	8.0
80°-90°	154.7	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°	1696.6	27.1
0°-40°	2761.4	44.1
0°-60°	4832.2	77.2
0°-90°	6257.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6257.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2198	2198	2198	2198	2198	
5°	2188	2192	2182	2194	2196	208
15°	2093	2099	2103	2121	2125	590
25°	1902	1918	1938	1970	1976	876
35°	1644	1664	1703	1745	1757	1025
45°	1326	1358	1417	1471	1483	1022
55°	988	1032	1107	1165	1177	886
65°	650	700	789	855	870	647
75°	330	394	495	562	578	349
85°	68	125	155	151	151	82
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2198.2	2198.2	2198.2	2198.2	2198.2
2.5°	2200.2	2200.2	2190.3	2200.2	2202.2
5°	2188.3	2192.3	2182.3	2194.3	2196.2
7.5°	2176.4	2176.4	2170.4	2182.3	2184.3
10°	2154.5	2156.5	2154.5	2168.4	2170.4
12.5°	2126.7	2130.7	2132.6	2146.6	2148.5
15°	2092.9	2098.9	2102.8	2120.7	2124.7
17.5°	2055.1	2061.1	2071.0	2090.9	2094.9
20°	2009.4	2017.4	2029.3	2055.1	2061.1
22.5°	1959.7	1967.7	1987.6	2011.4	2021.3
25°	1902.1	1918.0	1937.9	1969.7	1975.6
27.5°	1844.4	1858.4	1884.2	1918.0	1925.9
30°	1776.9	1798.7	1830.5	1864.3	1872.3
32.5°	1711.3	1733.1	1770.9	1806.7	1816.6
35°	1643.7	1663.6	1703.3	1745.1	1757.0
37.5°	1566.2	1592.0	1635.8	1677.5	1689.4
40°	1484.7	1516.5	1566.2	1609.9	1623.8
42.5°	1407.2	1441.0	1490.7	1538.4	1554.3
45°	1325.7	1357.5	1417.1	1470.8	1482.7
47.5°	1242.2	1278.0	1341.6	1395.3	1415.1
50°	1158.7	1196.5	1264.1	1319.7	1331.7
52.5°	1075.3	1115.0	1186.6	1246.2	1252.2
55°	987.8	1031.5	1107.1	1164.7	1176.6
57.5°	908.3	946.1	1027.6	1087.2	1101.1
60°	820.9	862.6	950.0	1005.7	1023.6
62.5°	737.4	781.1	872.5	928.2	944.1
65°	649.9	699.6	789.1	854.6	870.5
67.5°	574.4	622.1	717.5	781.1	797.0
70°	486.9	540.6	642.0	707.6	723.5
72.5°	411.4	467.1	568.4	632.0	655.9
75°	329.9	393.5	494.9	562.5	578.4
77.5°	250.4	324.0	427.3	479.0	479.0
80°	178.9	256.4	351.8	375.6	379.6
82.5°	117.3	192.8	260.4	258.4	258.4
85°	67.6	125.2	155.0	151.1	151.1
87.5°	25.8	51.7	55.7	55.7	53.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)