

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: P389072

Luminaire Tested: **24CZ2-70VHE-SQR-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: P389072
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: 24CZ2-70VHE-SQR-UNV-L940-CD1-U
Description: 2x4 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND SQUARE LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 5791.1 lumens
Efficiency: N/A
Efficacy: 126.7 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

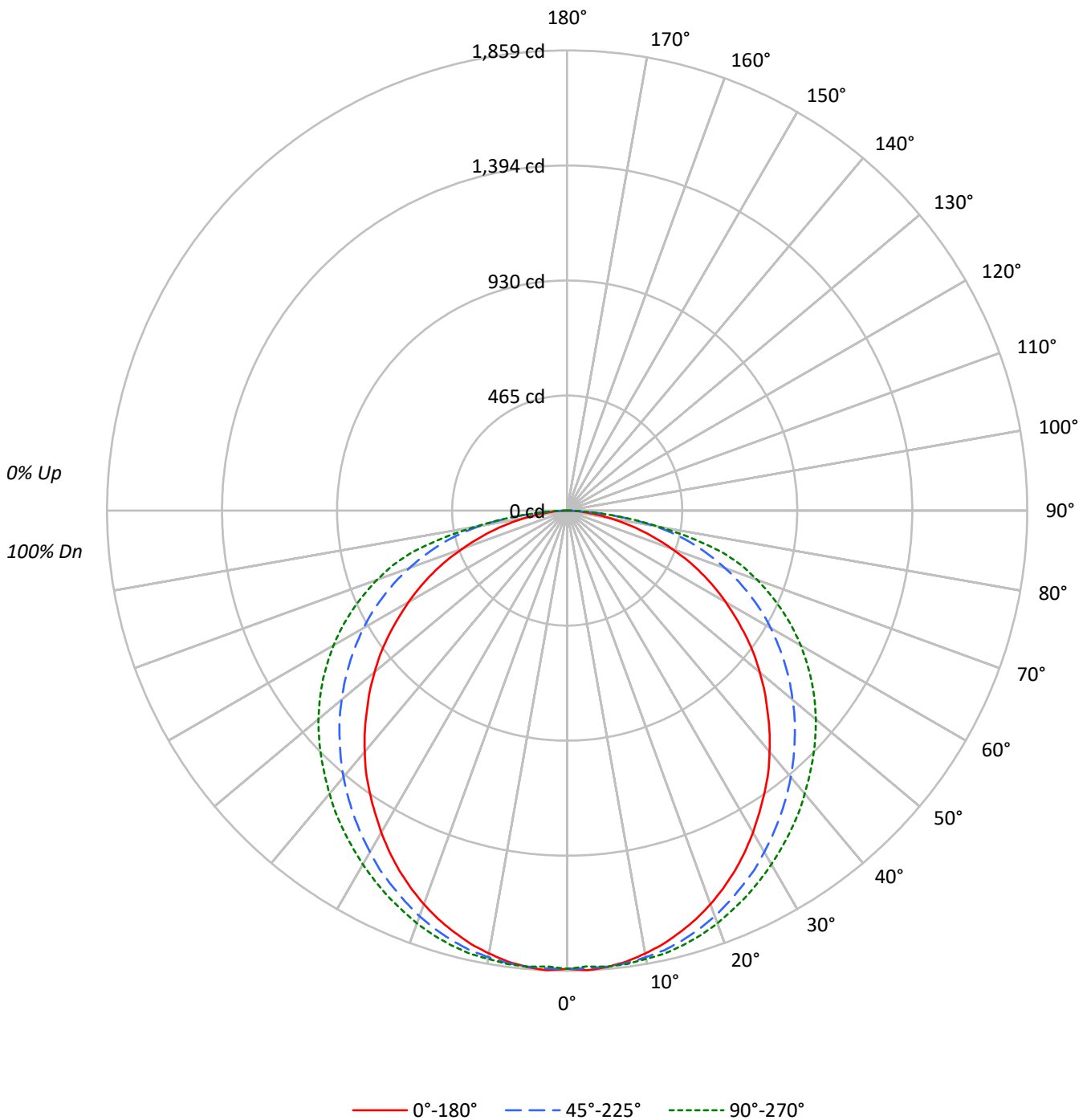
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84	82					82			
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69	67					67			
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58	56					56			
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49	47					47			
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43	41					41			
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37	35					35			
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33	31					31			
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30	28					28			
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27	25					25			
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24	22					22			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2491	2491	2491
5°	2500	2498	2498
10°	2482	2503	2513
15°	2456	2504	2531
20°	2423	2497	2541
25°	2382	2484	2549
30°	2332	2475	2564
35°	2284	2469	2588
40°	2234	2469	2623
45°	2176	2474	2674
50°	2125	2490	2746
55°	2064	2517	2831
60°	1992	2558	2933
65°	1906	2606	3056
70°	1768	2671	3212
75°	1601	2764	3360
80°	1348	2771	2889
85°	1033	2096	2096



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	175.7	3.0
10°-20°	505.5	8.7
20°-30°	767.9	13.3
30°-40°	934.0	16.1
40°-50°	994.4	17.2
50°-60°	947.2	16.4
60°-70°	792.1	13.7
70°-80°	528.1	9.1
80°-90°	146.1	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°	1449.2	25.0
0°-40°	2383.2	41.2
0°-60°	4324.8	74.7
0°-90°	5791.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5791.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1851	1851	1851	1851	1851	
5°	1851	1840	1849	1849	1849	176
15°	1763	1767	1798	1811	1817	497
25°	1604	1626	1673	1702	1717	739
35°	1390	1430	1503	1553	1576	870
45°	1144	1205	1300	1373	1406	884
55°	880	956	1073	1166	1207	786
65°	599	686	818	920	960	591
75°	308	405	532	622	646	326
85°	67	124	136	134	136	81
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1851.1	1851.1	1851.1	1851.1	1851.1
2.5°	1858.8	1845.4	1851.1	1851.1	1843.5
5°	1851.1	1839.6	1849.2	1849.2	1849.2
7.5°	1837.7	1828.2	1843.5	1847.3	1847.3
10°	1816.7	1812.9	1832.0	1837.7	1839.6
12.5°	1793.7	1791.8	1818.6	1826.3	1832.0
15°	1763.2	1767.0	1797.6	1811.0	1816.7
17.5°	1730.6	1738.3	1772.7	1791.8	1797.6
20°	1692.4	1703.9	1744.0	1763.2	1774.6
22.5°	1650.3	1667.5	1709.6	1732.6	1745.9
25°	1604.4	1625.5	1673.3	1702.0	1717.3
27.5°	1554.7	1581.5	1636.9	1669.4	1684.7
30°	1501.2	1531.8	1593.0	1631.2	1650.3
32.5°	1445.7	1482.0	1549.0	1591.0	1614.0
35°	1390.3	1430.4	1503.1	1552.8	1575.7
37.5°	1334.8	1375.0	1455.3	1508.8	1537.5
40°	1271.7	1319.5	1405.5	1464.8	1493.5
42.5°	1210.5	1262.1	1353.9	1418.9	1449.5
45°	1143.6	1204.8	1300.4	1373.0	1405.5
47.5°	1082.4	1143.6	1246.8	1323.3	1359.7
50°	1015.4	1080.5	1189.5	1273.6	1311.8
52.5°	950.4	1017.3	1132.1	1222.0	1260.2
55°	879.7	956.2	1072.8	1166.5	1206.7
57.5°	808.9	891.1	1011.6	1109.1	1149.3
60°	740.1	824.2	950.4	1047.9	1090.0
62.5°	671.2	755.4	887.3	986.8	1026.9
65°	598.6	686.5	818.5	919.8	960.0
67.5°	525.9	617.7	749.6	851.0	889.2
70°	449.4	546.9	678.9	778.3	816.6
72.5°	378.6	476.2	606.2	703.7	740.1
75°	307.9	405.4	531.6	621.5	646.4
77.5°	239.0	336.6	449.4	508.7	514.4
80°	174.0	265.8	357.6	374.8	372.9
82.5°	116.7	198.9	246.7	248.6	254.3
85°	66.9	124.3	135.8	133.9	135.8
87.5°	26.8	44.0	38.2	28.7	28.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)