

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: P389070

Luminaire Tested: **24CZ2-70VHE-SQR-UNV-L940-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: P389070
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-SDWPD1-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: 5650.3 lumens
Efficiency: N/A
Efficacy: 123.6 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

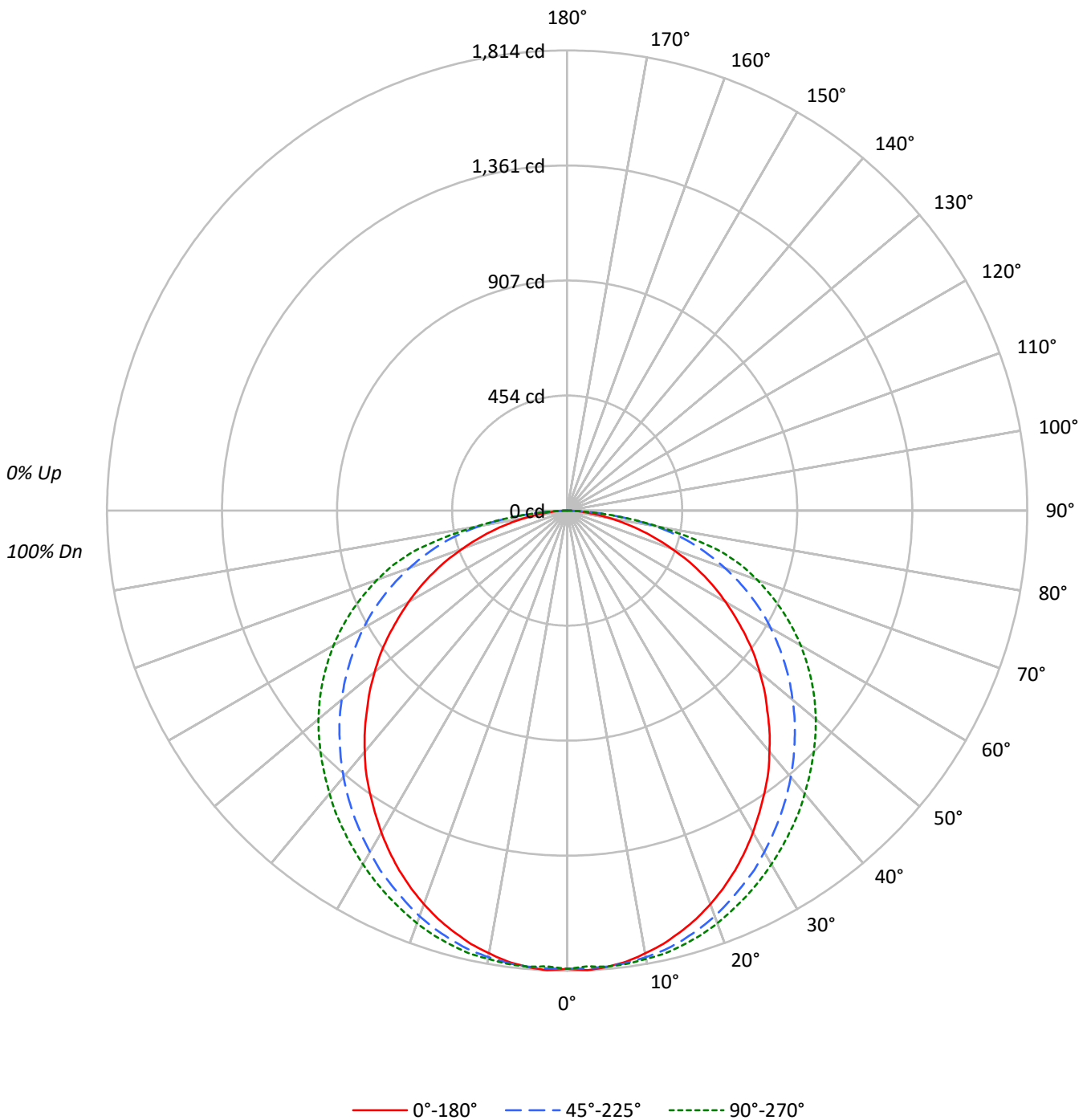
Input Watts (W): 45.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2430	2430	2430
5°	2439	2437	2437
10°	2422	2442	2452
15°	2396	2443	2469
20°	2364	2436	2479
25°	2324	2424	2487
30°	2276	2415	2502
35°	2228	2409	2525
40°	2179	2409	2559
45°	2123	2414	2610
50°	2074	2429	2679
55°	2013	2455	2762
60°	1943	2495	2862
65°	1859	2543	2982
70°	1725	2606	3134
75°	1562	2696	3278
80°	1316	2703	2819
85°	1008	2046	2046



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	171.4	3.0
10°-20°	493.3	8.7
20°-30°	749.2	13.3
30°-40°	911.3	16.1
40°-50°	970.3	17.2
50°-60°	924.1	16.4
60°-70°	772.8	13.7
70°-80°	515.3	9.1
80°-90°	142.6	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°	1413.9	25.0
0°-40°	2325.2	41.2
0°-60°	4219.6	74.7
0°-90°	5650.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5650.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1806	1806	1806	1806	1806	
5°	1806	1795	1804	1804	1804	171
15°	1720	1724	1754	1767	1772	485
25°	1565	1586	1633	1661	1676	721
35°	1356	1396	1466	1515	1537	849
45°	1116	1176	1269	1340	1371	863
55°	858	933	1047	1138	1177	767
65°	584	670	799	898	937	577
75°	300	396	519	606	631	318
85°	65	121	132	131	132	79
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1806.1	1806.1	1806.1	1806.1	1806.1
2.5°	1813.6	1800.5	1806.1	1806.1	1798.6
5°	1806.1	1794.9	1804.2	1804.2	1804.2
7.5°	1793.1	1783.7	1798.6	1802.4	1802.4
10°	1772.5	1768.8	1787.5	1793.1	1794.9
12.5°	1750.1	1748.3	1774.4	1781.9	1787.5
15°	1720.3	1724.0	1753.9	1766.9	1772.5
17.5°	1688.6	1696.0	1729.6	1748.3	1753.9
20°	1651.2	1662.4	1701.6	1720.3	1731.5
22.5°	1610.2	1627.0	1668.0	1690.4	1703.5
25°	1565.4	1585.9	1632.6	1660.6	1675.5
27.5°	1516.9	1543.0	1597.1	1628.9	1643.8
30°	1464.7	1494.5	1554.2	1591.5	1610.2
32.5°	1410.6	1446.0	1511.3	1552.4	1574.7
35°	1356.4	1395.6	1466.5	1515.0	1537.4
37.5°	1302.3	1341.5	1419.9	1472.1	1500.1
40°	1240.8	1287.4	1371.4	1429.2	1457.2
42.5°	1181.1	1231.4	1321.0	1384.4	1414.3
45°	1115.8	1175.5	1268.8	1339.7	1371.4
47.5°	1056.1	1115.8	1216.5	1291.1	1326.6
50°	990.7	1054.2	1160.5	1242.6	1280.0
52.5°	927.3	992.6	1104.6	1192.3	1229.6
55°	858.3	932.9	1046.7	1138.1	1177.3
57.5°	789.2	869.5	987.0	1082.2	1121.4
60°	722.1	804.2	927.3	1022.5	1063.5
62.5°	654.9	737.0	865.7	962.8	1001.9
65°	584.0	669.8	798.6	897.5	936.6
67.5°	513.1	602.7	731.4	830.3	867.6
70°	438.5	533.6	662.4	759.4	796.7
72.5°	369.4	464.6	591.5	686.6	722.1
75°	300.4	395.6	518.7	606.4	630.6
77.5°	233.2	328.4	438.5	496.3	501.9
80°	169.8	259.3	348.9	365.7	363.8
82.5°	113.8	194.0	240.7	242.6	248.2
85°	65.3	121.3	132.5	130.6	132.5
87.5°	26.1	42.9	37.3	28.0	28.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)