

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: P389074

Luminaire Tested: **24CZ2-70VHE-SQR-UNV-L950-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: P389074  
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-L950-CD1-SWPD1-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: 6070.6 lumens  
Efficiency: N/A  
Efficacy: 132.8 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

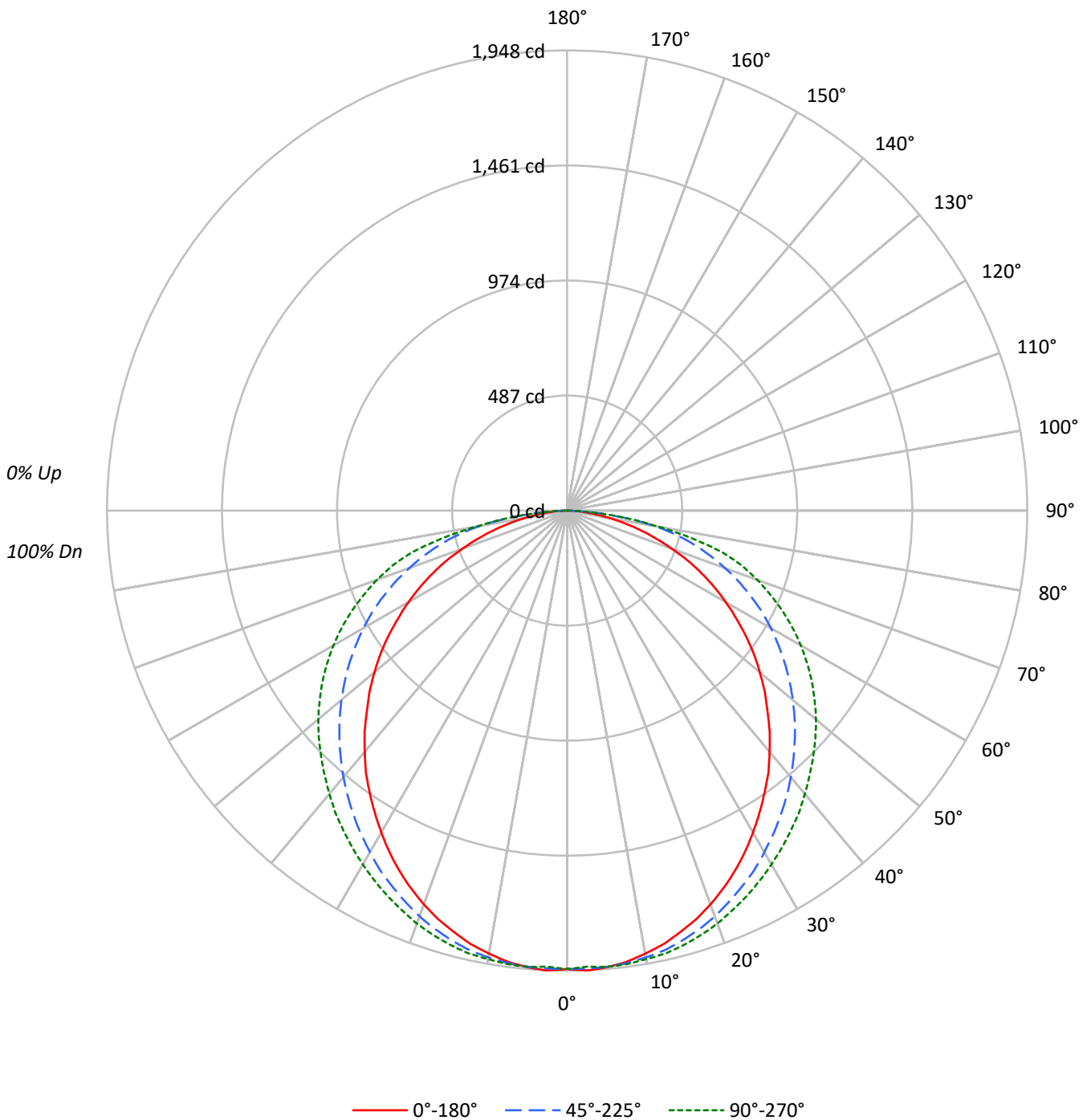
Input Watts (W): 45.7  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



TEST NUMBER: P389074

CATALOG NUMBER: 24CZ2-70VHE-SQR-UNV-L950-CD1-SWPD1-U

### Luminous Intensity Polar Plot





TEST NUMBER: P389074

CATALOG NUMBER: 24CZ2-70VHE-SQR-UNV-L950-CD1-SWPD1-U

**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°	2611	2611	2611
5°	2621	2618	2618
10°	2602	2624	2635
15°	2574	2625	2653
20°	2540	2618	2664
25°	2497	2604	2672
30°	2445	2594	2688
35°	2394	2588	2713
40°	2341	2588	2750
45°	2281	2594	2804
50°	2228	2610	2879
55°	2163	2638	2967
60°	2088	2681	3075
65°	1997	2732	3204
70°	1853	2799	3367
75°	1678	2897	3523
80°	1413	2905	3029
85°	1084	2197	2197



TEST NUMBER: P389074

CATALOG NUMBER: 24CZ2-70VHE-SQR-UNV-L950-CD1-SWPD1-U

**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	184.2	3.0
10°-20°	529.9	8.7
20°-30°	804.9	13.3
30°-40°	979.1	16.1
40°-50°	1042.4	17.2
50°-60°	992.9	16.4
60°-70°	830.3	13.7
70°-80°	553.6	9.1
80°-90°	153.2	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°	1519.1	25.0
0°-40°	2498.2	41.2
0°-60°	4533.5	74.7
0°-90°	6070.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6070.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1940	1940	1940	1940	1940	
5°	1940	1928	1938	1938	1938	184
15°	1848	1852	1884	1898	1904	521
25°	1682	1704	1754	1784	1800	774
35°	1457	1499	1576	1628	1652	912
45°	1199	1263	1363	1439	1473	927
55°	922	1002	1125	1223	1265	824
65°	627	720	858	964	1006	620
75°	323	425	557	652	678	342
85°	70	130	142	140	142	85
90°	0	0	0	0	0	



TEST NUMBER: P389074

CATALOG NUMBER: 24CZ2-70VHE-SQR-UNV-L950-CD1-SWPD1-U

**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1940.5	1940.5	1940.5	1940.5	1940.5
2.5°	1948.5	1934.4	1940.5	1940.5	1932.4
5°	1940.5	1928.4	1938.5	1938.5	1938.5
7.5°	1926.4	1916.4	1932.4	1936.4	1936.4
10°	1904.4	1900.4	1920.4	1926.4	1928.4
12.5°	1880.3	1878.3	1906.4	1914.4	1920.4
15°	1848.2	1852.3	1884.3	1898.4	1904.4
17.5°	1814.2	1822.2	1858.3	1878.3	1884.3
20°	1774.1	1786.1	1828.2	1848.2	1860.3
22.5°	1730.0	1748.0	1792.1	1816.2	1830.2
25°	1681.9	1703.9	1754.0	1784.1	1800.1
27.5°	1629.7	1657.8	1715.9	1750.0	1766.1
30°	1573.6	1605.7	1669.8	1709.9	1730.0
32.5°	1515.5	1553.6	1623.7	1667.8	1691.9
35°	1457.3	1499.4	1575.6	1627.7	1651.8
37.5°	1399.2	1441.3	1525.5	1581.6	1611.7
40°	1333.1	1383.2	1473.4	1535.5	1565.6
42.5°	1268.9	1323.0	1419.3	1487.4	1519.5
45°	1198.8	1262.9	1363.1	1439.3	1473.4
47.5°	1134.6	1198.8	1307.0	1387.2	1425.3
50°	1064.4	1132.6	1246.9	1335.1	1375.2
52.5°	996.3	1066.5	1186.7	1280.9	1321.0
55°	922.1	1002.3	1124.6	1222.8	1264.9
57.5°	847.9	934.1	1060.4	1162.7	1204.8
60°	775.8	864.0	996.3	1098.5	1142.6
62.5°	703.6	791.8	930.1	1034.4	1076.5
65°	627.4	719.7	858.0	964.2	1006.3
67.5°	551.3	647.5	785.8	892.0	932.1
70°	471.1	573.3	711.6	815.9	856.0
72.5°	396.9	499.1	635.5	737.7	775.8
75°	322.7	425.0	557.3	651.5	677.6
77.5°	250.6	352.8	471.1	533.2	539.2
80°	182.4	278.6	374.9	392.9	390.9
82.5°	122.3	208.5	258.6	260.6	266.6
85°	70.2	130.3	142.3	140.3	142.3
87.5°	28.1	46.1	40.1	30.1	30.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)