

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: P388761

Luminaire Tested: **24CZ2-50-SQR-UNV-L950-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: P388761  
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: 24CZ2-50-SQR-UNV-L950-CD1-SDWPD1-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: 4260.8 lumens  
Efficiency: N/A  
Efficacy: 87.7 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

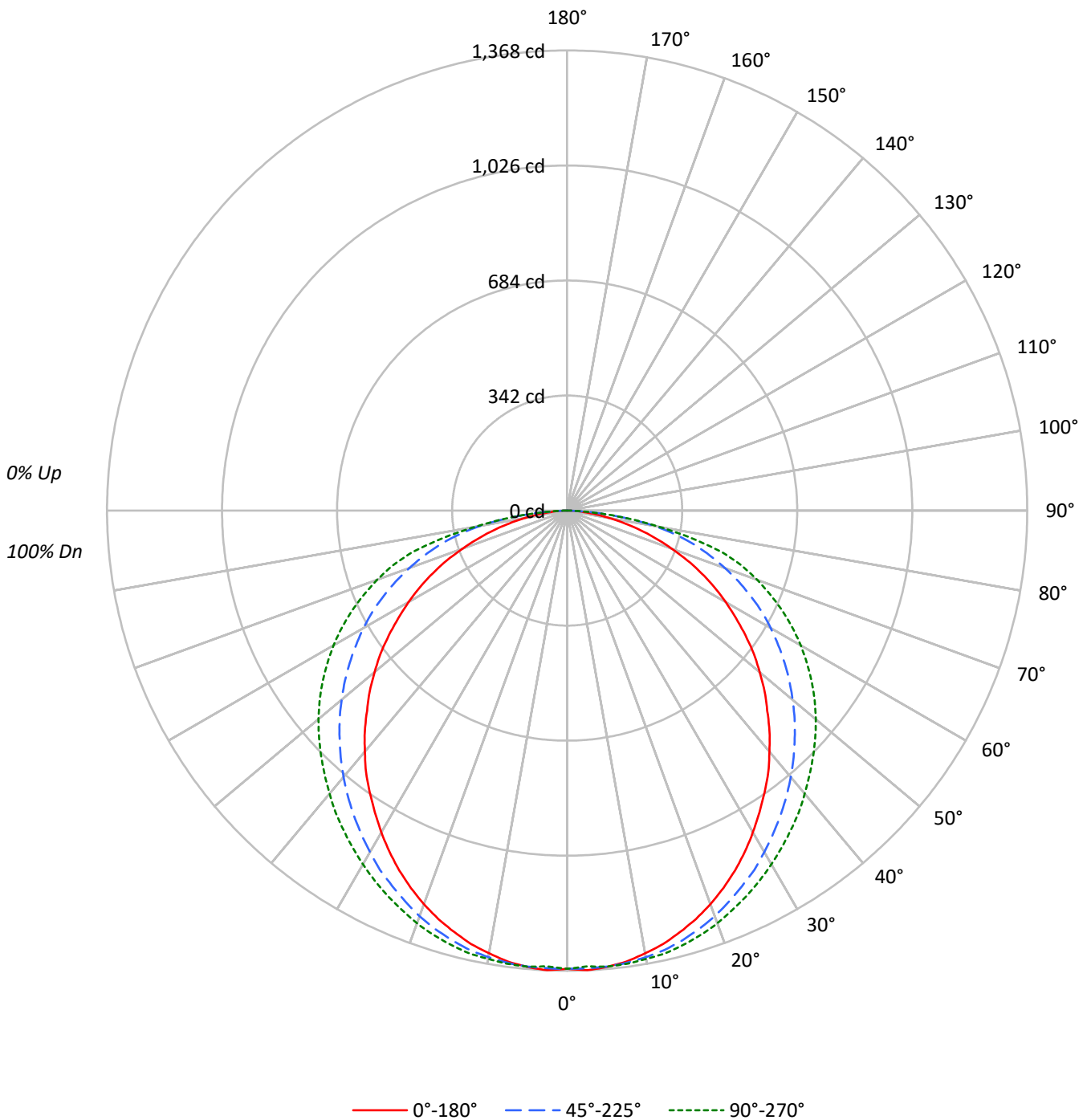
Input Watts (W): 48.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1833	1833	1833
5°	1840	1838	1838
10°	1826	1842	1849
15°	1807	1842	1862
20°	1783	1837	1870
25°	1753	1828	1876
30°	1716	1821	1886
35°	1680	1816	1904
40°	1643	1816	1930
45°	1601	1820	1968
50°	1564	1832	2020
55°	1518	1852	2083
60°	1465	1882	2158
65°	1402	1917	2249
70°	1301	1965	2364
75°	1177	2033	2472
80°	992	2039	2126
85°	760	1542	1542



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	129.3	3.0
10°-20°	372.0	8.7
20°-30°	565.0	13.3
30°-40°	687.2	16.1
40°-50°	731.7	17.2
50°-60°	696.9	16.4
60°-70°	582.8	13.7
70°-80°	388.6	9.1
80°-90°	107.5	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°	1066.2	25.0
0°-40°	1753.4	41.2
0°-60°	3182.0	74.7
0°-90°	4260.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4260.8	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1362	1362	1362	1362	1362	
5°	1362	1354	1361	1361	1361	129
15°	1297	1300	1323	1332	1337	366
25°	1180	1196	1231	1252	1264	544
35°	1023	1052	1106	1142	1159	640
45°	841	886	957	1010	1034	650
55°	647	704	789	858	888	579
65°	440	505	602	677	706	435
75°	226	298	391	457	476	240
85°	49	92	100	98	100	59
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1362.0	1362.0	1362.0	1362.0	1362.0
2.5°	1367.6	1357.7	1362.0	1362.0	1356.3
5°	1362.0	1353.5	1360.6	1360.6	1360.6
7.5°	1352.1	1345.1	1356.3	1359.1	1359.1
10°	1336.6	1333.8	1347.9	1352.1	1353.5
12.5°	1319.7	1318.3	1338.0	1343.7	1347.9
15°	1297.2	1300.1	1322.6	1332.4	1336.6
17.5°	1273.3	1278.9	1304.3	1318.3	1322.6
20°	1245.2	1253.6	1283.2	1297.2	1305.7
22.5°	1214.2	1226.9	1257.8	1274.7	1284.6
25°	1180.5	1195.9	1231.1	1252.2	1263.5
27.5°	1143.9	1163.6	1204.4	1228.3	1239.6
30°	1104.5	1127.0	1172.0	1200.2	1214.2
32.5°	1063.7	1090.4	1139.7	1170.6	1187.5
35°	1022.9	1052.4	1105.9	1142.5	1159.4
37.5°	982.1	1011.6	1070.7	1110.1	1131.2
40°	935.6	970.8	1034.1	1077.7	1098.9
42.5°	890.6	928.6	996.1	1044.0	1066.5
45°	841.4	886.4	956.7	1010.2	1034.1
47.5°	796.4	841.4	917.4	973.6	1000.4
50°	747.1	794.9	875.1	937.1	965.2
52.5°	699.3	748.5	832.9	899.1	927.2
55°	647.2	703.5	789.3	858.3	887.8
57.5°	595.2	655.7	744.3	816.0	845.6
60°	544.5	606.4	699.3	771.0	802.0
62.5°	493.9	555.8	652.8	726.0	755.5
65°	440.4	505.1	602.2	676.8	706.3
67.5°	386.9	454.5	551.5	626.1	654.2
70°	330.6	402.4	499.5	572.6	600.8
72.5°	278.6	350.3	446.0	517.8	544.5
75°	226.5	298.3	391.1	457.3	475.6
77.5°	175.9	247.6	330.6	374.3	378.5
80°	128.0	195.6	263.1	275.8	274.4
82.5°	85.8	146.3	181.5	182.9	187.1
85°	49.2	91.5	99.9	98.5	99.9
87.5°	19.7	32.4	28.1	21.1	21.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)