

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: P388787

Luminaire Tested: **24CZ2-50HE-SQR-UNV-L950-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: P388787  
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: 24CZ2-50HE-SQR-UNV-L950-CD1-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: 4372.2 lumens  
Efficiency: N/A  
Efficacy: 113.3 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

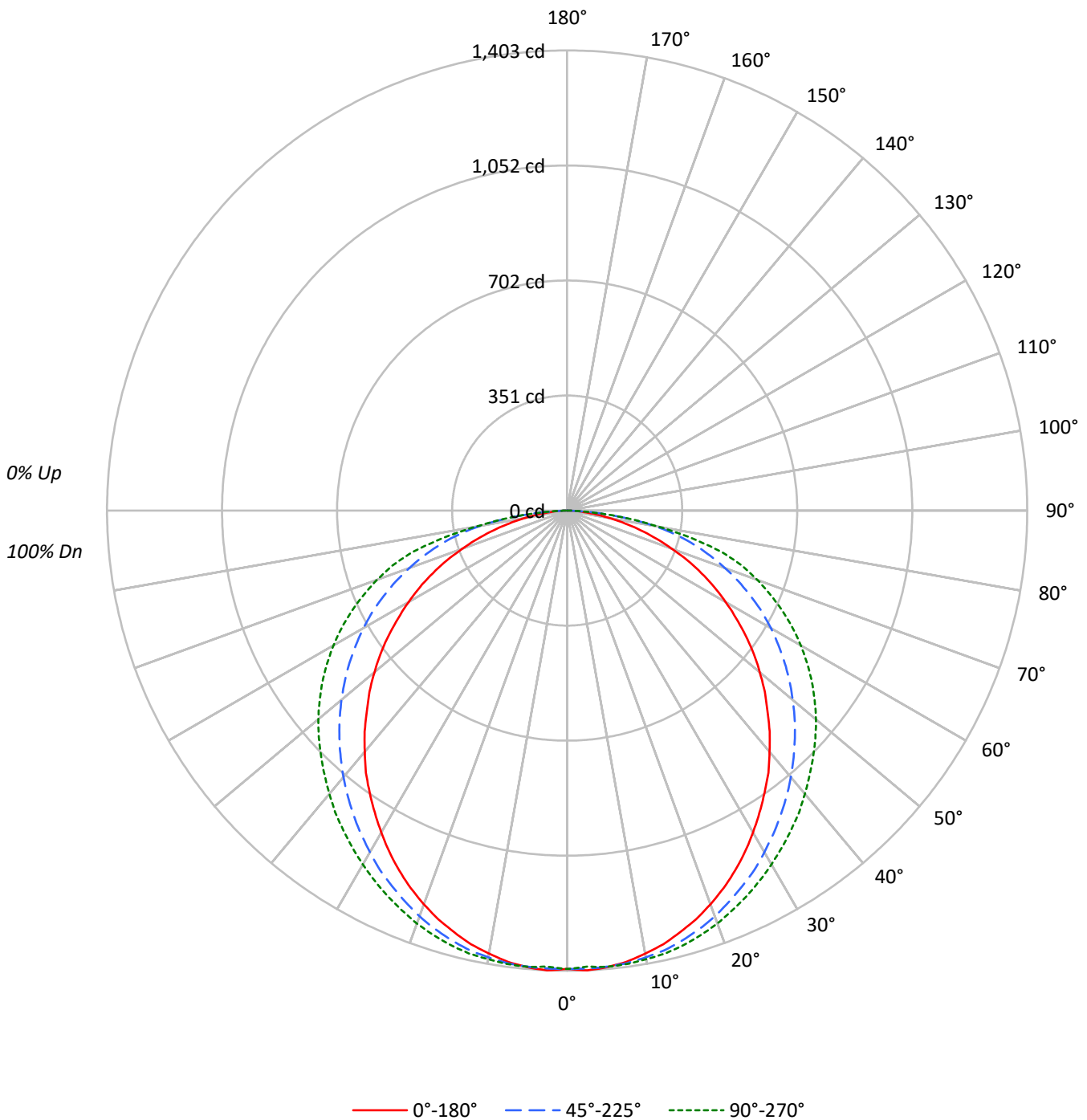
Input Watts (W): 38.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	100	96	92	96	93	89	92	89	87	89	86	84
2	98	89	81	75	95	87	80	74	83	78	73	80	75	71	77	73	69
3	89	77	69	62	86	76	68	61	73	66	60	70	64	59	67	62	58
4	81	68	59	52	78	67	58	52	64	57	51	62	55	50	60	54	49
5	74	61	51	44	72	60	51	44	57	50	44	55	49	43	54	48	43
6	68	55	45	39	66	54	45	38	52	44	38	50	43	38	48	42	37
7	63	49	40	34	62	49	40	34	47	39	34	45	39	33	44	38	33
8	59	45	36	30	57	44	36	30	43	35	30	42	35	30	40	34	30
9	55	41	33	27	54	41	33	27	39	32	27	38	32	27	37	31	27
10	52	38	30	25	50	37	30	24	36	29	24	36	29	24	35	29	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	1880	1880	1880
5°	1888	1886	1886
10°	1874	1890	1898
15°	1854	1890	1911
20°	1829	1885	1918
25°	1798	1875	1925
30°	1761	1869	1936
35°	1724	1864	1954
40°	1686	1864	1981
45°	1643	1868	2019
50°	1605	1880	2073
55°	1558	1900	2137
60°	1503	1931	2214
65°	1439	1967	2308
70°	1335	2016	2425
75°	1208	2087	2537
80°	1018	2092	2181
85°	780	1582	1582



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	132.7	3.0
10°-20°	381.7	8.7
20°-30°	579.8	13.3
30°-40°	705.2	16.1
40°-50°	750.8	17.2
50°-60°	715.1	16.4
60°-70°	598.0	13.7
70°-80°	398.7	9.1
80°-90°	110.3	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°	1094.1	25.0
0°-40°	1799.3	41.2
0°-60°	3265.2	74.7
0°-90°	4372.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4372.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1398	1398	1398	1398	1398	
5°	1398	1389	1396	1396	1396	133
15°	1331	1334	1357	1367	1372	375
25°	1211	1227	1263	1285	1296	558
35°	1050	1080	1135	1172	1190	657
45°	863	910	982	1037	1061	667
55°	664	722	810	881	911	594
65°	452	518	618	694	725	446
75°	232	306	401	469	488	246
85°	50	94	102	101	102	61
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1397.6	1397.6	1397.6	1397.6	1397.6
2.5°	1403.3	1393.2	1397.6	1397.6	1391.8
5°	1397.6	1388.9	1396.1	1396.1	1396.1
7.5°	1387.5	1380.2	1391.8	1394.7	1394.7
10°	1371.6	1368.7	1383.1	1387.5	1388.9
12.5°	1354.3	1352.8	1373.0	1378.8	1383.1
15°	1331.2	1334.0	1357.1	1367.2	1371.6
17.5°	1306.6	1312.4	1338.4	1352.8	1357.1
20°	1277.7	1286.4	1316.7	1331.2	1339.8
22.5°	1246.0	1259.0	1290.7	1308.1	1318.2
25°	1211.3	1227.2	1263.3	1285.0	1296.5
27.5°	1173.8	1194.0	1235.9	1260.4	1272.0
30°	1133.4	1156.5	1202.7	1231.5	1246.0
32.5°	1091.5	1118.9	1169.5	1201.2	1218.5
35°	1049.6	1079.9	1134.8	1172.3	1189.7
37.5°	1007.8	1038.1	1098.7	1139.1	1160.8
40°	960.1	996.2	1061.2	1105.9	1127.6
42.5°	913.9	952.9	1022.2	1071.3	1094.4
45°	863.4	909.6	981.8	1036.6	1061.2
47.5°	817.2	863.4	941.3	999.1	1026.5
50°	766.6	815.7	898.0	961.5	990.4
52.5°	717.6	768.1	854.7	922.6	951.4
55°	664.1	721.9	810.0	880.7	911.0
57.5°	610.7	672.8	763.8	837.4	867.7
60°	558.7	622.3	717.6	791.2	822.9
62.5°	506.8	570.3	669.9	745.0	775.3
65°	451.9	518.3	617.9	694.5	724.8
67.5°	397.0	466.3	566.0	642.5	671.4
70°	339.3	412.9	512.5	587.6	616.5
72.5°	285.9	359.5	457.7	531.3	558.7
75°	232.4	306.1	401.4	469.2	488.0
77.5°	180.5	254.1	339.3	384.0	388.4
80°	131.4	200.7	270.0	283.0	281.5
82.5°	88.1	150.2	186.2	187.7	192.0
85°	50.5	93.8	102.5	101.1	102.5
87.5°	20.2	33.2	28.9	21.7	21.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)