

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: P388783

Luminaire Tested: **24CZ2-50HE-SQR-UNV-L940-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: P388783  
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-L940-CD1-SWPD1-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: 4068.0 lumens  
Efficiency: N/A  
Efficacy: 105.4 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

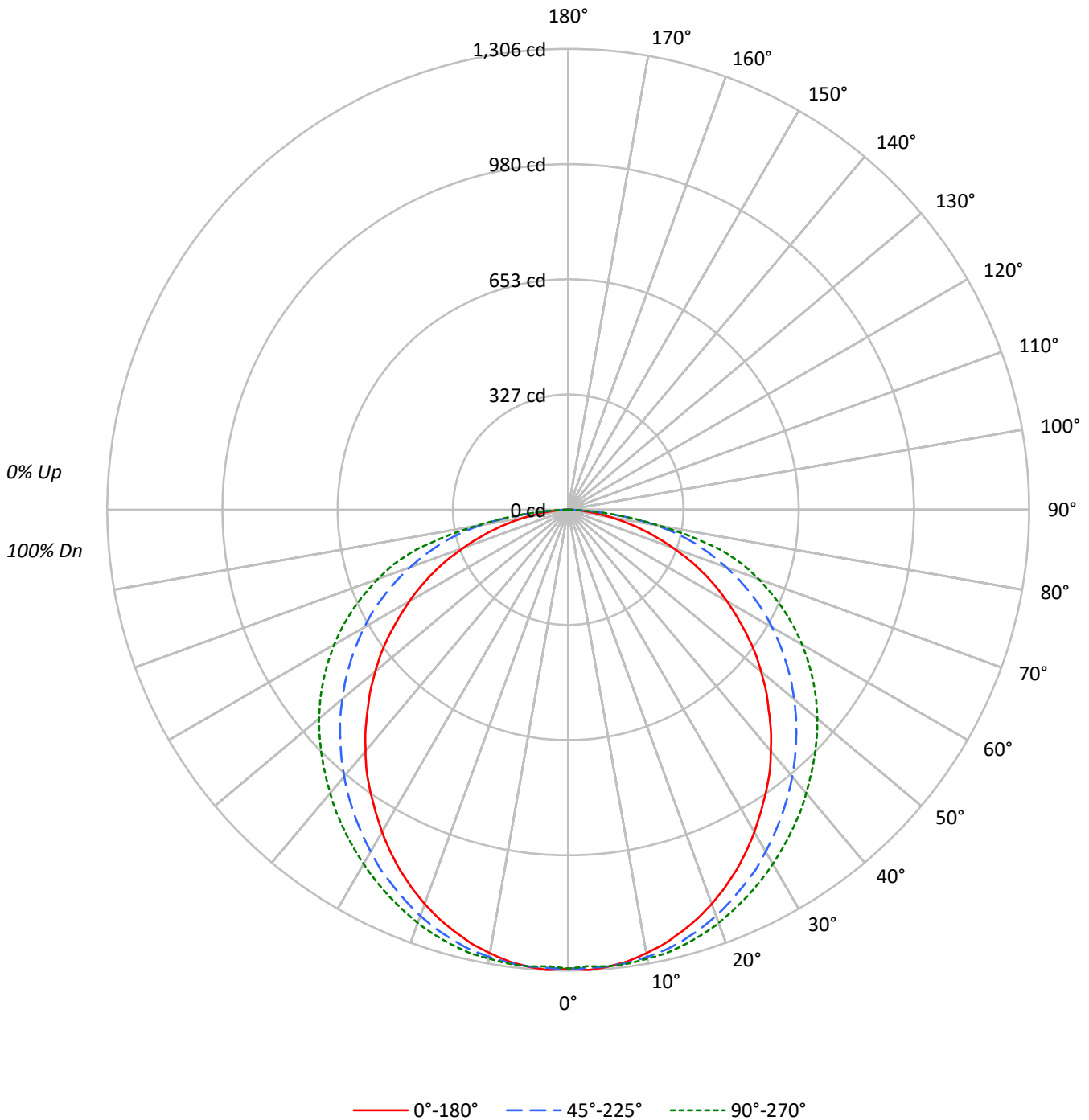
Input Watts (W): 38.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	1750	1750	1750
5°	1756	1754	1754
10°	1744	1758	1766
15°	1725	1759	1778
20°	1702	1754	1785
25°	1673	1745	1791
30°	1638	1739	1801
35°	1604	1734	1818
40°	1569	1734	1843
45°	1529	1738	1879
50°	1493	1749	1929
55°	1449	1768	1988
60°	1399	1796	2060
65°	1339	1830	2147
70°	1242	1876	2257
75°	1124	1941	2360
80°	947	1946	2029
85°	726	1473	1473



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	123.4	3.0
10°-20°	355.1	8.7
20°-30°	539.4	13.3
30°-40°	656.1	16.1
40°-50°	698.6	17.2
50°-60°	665.3	16.4
60°-70°	556.4	13.7
70°-80°	371.0	9.1
80°-90°	102.6	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°	1018.0	25.0
0°-40°	1674.1	41.2
0°-60°	3038.0	74.7
0°-90°	4068.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4068.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1300	1300	1300	1300	1300	
5°	1300	1292	1299	1299	1299	123
15°	1238	1241	1263	1272	1276	349
25°	1127	1142	1175	1196	1206	519
35°	977	1005	1056	1091	1107	611
45°	803	846	914	964	987	621
55°	618	672	754	819	848	552
65°	420	482	575	646	674	415
75°	216	285	373	437	454	229
85°	47	87	95	94	95	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1300.3	1300.3	1300.3	1300.3	1300.3
2.5°	1305.7	1296.3	1300.3	1300.3	1295.0
5°	1300.3	1292.3	1299.0	1299.0	1299.0
7.5°	1290.9	1284.2	1295.0	1297.6	1297.6
10°	1276.2	1273.5	1286.9	1290.9	1292.3
12.5°	1260.0	1258.7	1277.5	1282.9	1286.9
15°	1238.5	1241.2	1262.7	1272.1	1276.2
17.5°	1215.7	1221.1	1245.3	1258.7	1262.7
20°	1188.8	1196.9	1225.1	1238.5	1246.6
22.5°	1159.3	1171.4	1200.9	1217.0	1226.4
25°	1127.0	1141.8	1175.4	1195.6	1206.3
27.5°	1092.1	1110.9	1149.9	1172.7	1183.5
30°	1054.5	1076.0	1119.0	1145.8	1159.3
32.5°	1015.5	1041.1	1088.1	1117.6	1133.8
35°	976.6	1004.8	1055.8	1090.8	1106.9
37.5°	937.6	965.8	1022.3	1059.9	1080.0
40°	893.3	926.9	987.3	1029.0	1049.1
42.5°	850.3	886.6	951.1	996.7	1018.2
45°	803.3	846.3	913.5	964.5	987.3
47.5°	760.3	803.3	875.8	929.6	955.1
50°	713.3	759.0	835.5	894.6	921.5
52.5°	667.6	714.6	795.2	858.4	885.2
55°	617.9	671.7	753.6	819.4	847.6
57.5°	568.2	626.0	710.6	779.1	807.3
60°	519.9	579.0	667.6	736.1	765.7
62.5°	471.5	530.6	623.3	693.2	721.4
65°	420.5	482.3	574.9	646.1	674.3
67.5°	369.4	433.9	526.6	597.8	624.6
70°	315.7	384.2	476.9	546.7	573.6
72.5°	266.0	334.5	425.8	494.3	519.9
75°	216.3	284.8	373.4	436.6	454.0
77.5°	167.9	236.4	315.7	357.3	361.4
80°	122.2	186.7	251.2	263.3	261.9
82.5°	81.9	139.7	173.3	174.6	178.7
85°	47.0	87.3	95.4	94.0	95.4
87.5°	18.8	30.9	26.9	20.1	20.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)