

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: P272071

Luminaire Tested: **24CZ2-40HE-UNV-L940-CD1-U**

Issue Date: 3/3/2020

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: P272071  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-5)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-40HE-UNV-L940-CD1-U  
Description: 2'x4' TROFFER LED MODULE,RIBBED LENS, 90CRI  
Light Source: (168) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3442.0 lumens  
Efficiency: N/A  
Efficacy: 112.5 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.27 / 1.37  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

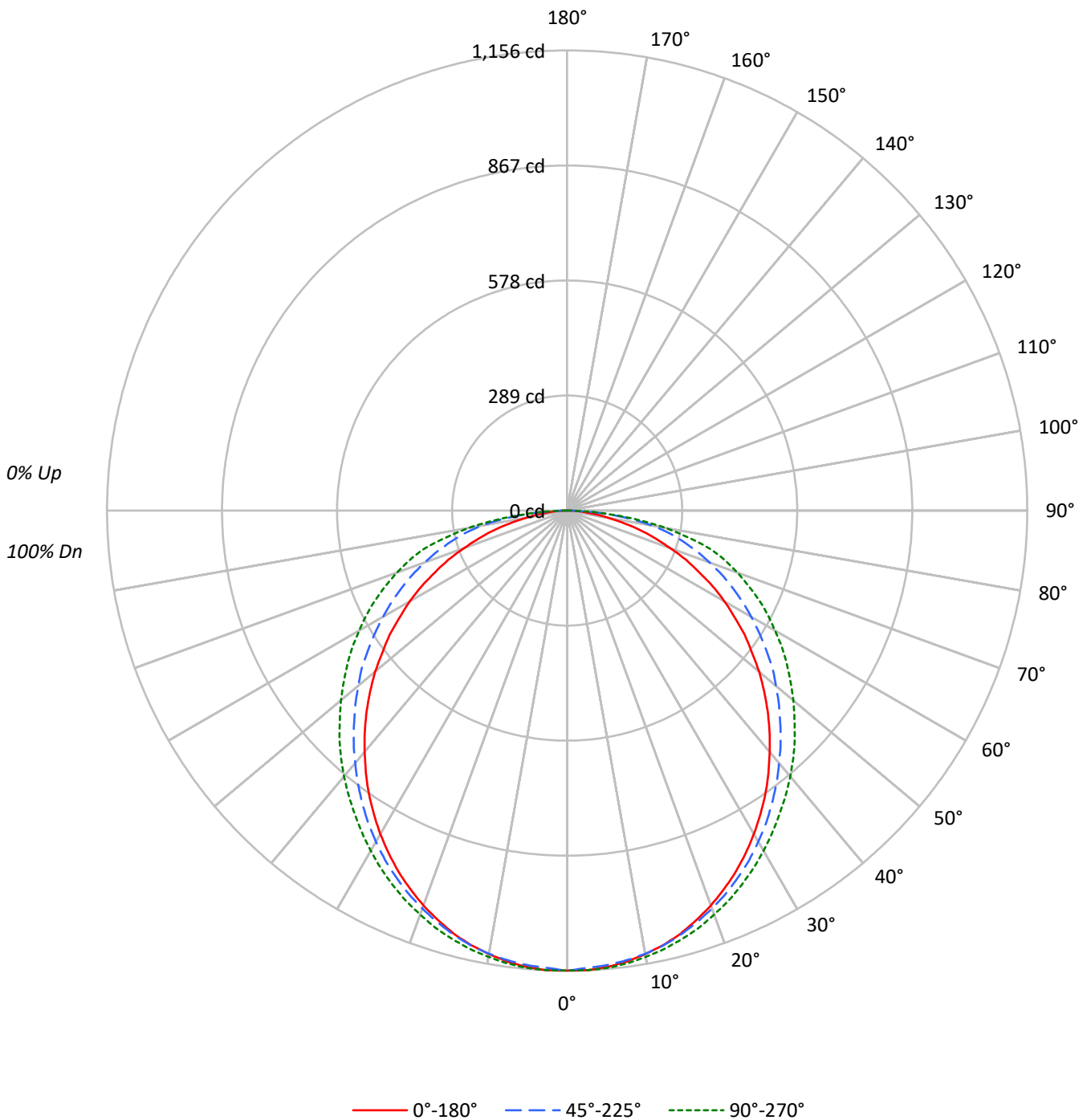
Input Watts (W): 30.6  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	58	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

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

	0°	45°	90°
0°	1555	1555	1555
5°	1555	1548	1558
10°	1546	1544	1555
15°	1533	1536	1552
20°	1512	1523	1546
25°	1487	1509	1540
30°	1458	1492	1533
35°	1427	1474	1528
40°	1390	1455	1531
45°	1355	1440	1539
50°	1318	1433	1553
55°	1277	1431	1582
60°	1227	1438	1623
65°	1163	1459	1693
70°	1080	1496	1790
75°	985	1570	1941
80°	810	1691	1940
85°	621	1561	1667



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	109.3	3.2
10°-20°	312.0	9.1
20°-30°	469.6	13.6
30°-40°	562.7	16.3
40°-50°	586.4	17.0
50°-60°	545.6	15.9
60°-70°	449.4	13.1
70°-80°	306.0	8.9
80°-90°	101.0	2.9
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°	890.9	25.9
0°-40°	1453.6	42.2
0°-60°	2585.6	75.1
0°-90°	3442.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3442.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1156	1156	1156	1156	1156	
5°	1151	1151	1146	1152	1153	109
15°	1100	1102	1103	1113	1114	310
25°	1002	1006	1017	1034	1037	461
35°	868	879	897	921	930	543
45°	712	727	757	795	809	549
55°	544	563	610	658	674	485
65°	365	396	458	512	532	363
75°	190	232	302	356	373	200
85°	40	78	101	108	108	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1155.6	1155.6	1155.6	1155.6	1155.6
2.5°	1155.6	1155.6	1149.9	1155.6	1155.6
5°	1151.0	1151.0	1146.4	1152.2	1153.3
7.5°	1143.0	1144.2	1139.6	1146.4	1147.6
10°	1131.5	1132.7	1130.4	1137.3	1138.4
12.5°	1117.7	1118.9	1118.9	1126.9	1128.1
15°	1100.5	1101.6	1102.8	1113.1	1114.3
17.5°	1078.7	1082.1	1084.4	1097.1	1099.4
20°	1055.7	1059.1	1063.7	1077.5	1079.8
22.5°	1029.3	1033.9	1041.9	1056.8	1060.3
25°	1001.7	1006.3	1016.6	1033.9	1037.3
27.5°	970.7	977.6	990.2	1008.6	1013.2
30°	938.5	945.4	960.4	979.9	986.8
32.5°	904.1	913.3	930.5	952.3	959.2
35°	868.5	878.8	897.2	921.3	930.5
37.5°	830.5	842.0	863.9	890.3	901.8
40°	791.5	805.3	828.2	859.3	871.9
42.5°	752.4	765.1	793.8	827.1	840.9
45°	712.2	727.2	757.0	794.9	808.7
47.5°	670.9	685.8	721.4	761.6	774.3
50°	629.5	644.4	684.7	727.2	742.1
52.5°	584.7	604.2	650.2	692.7	707.6
55°	544.5	562.9	610.0	658.2	674.3
57.5°	498.6	520.4	572.1	622.6	639.9
60°	456.1	479.0	534.2	585.9	603.1
62.5°	412.4	437.7	496.3	549.1	568.6
65°	365.3	396.3	458.4	512.3	531.9
67.5°	322.8	355.0	420.4	475.6	492.8
70°	274.6	313.6	380.2	435.4	454.9
72.5°	233.2	272.3	342.3	396.3	415.8
75°	189.5	232.0	302.1	356.1	373.3
77.5°	145.9	193.0	263.1	304.4	310.2
80°	104.5	153.9	218.3	242.4	250.4
82.5°	73.5	118.3	160.8	176.9	181.5
85°	40.2	78.1	101.1	108.0	108.0
87.5°	17.2	33.3	40.2	41.4	42.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)