

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: P474471

Luminaire Tested: **24CZ2-40HE-HRP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474471
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40HE-HRP-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS W/ HRP INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3420.9 lumens
Efficiency: N/A
Efficacy: 111.4 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

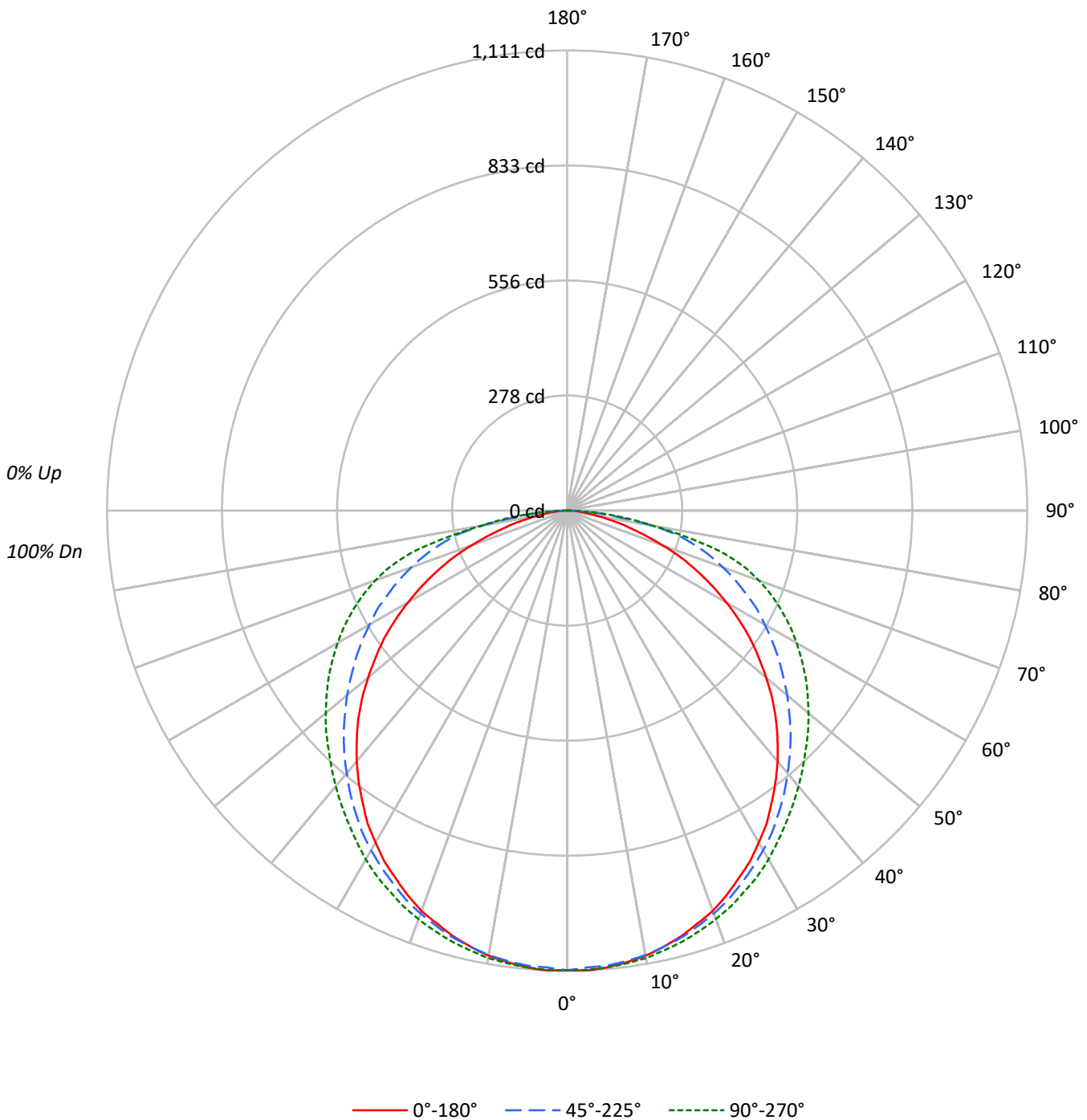
Input Watts (W): 30.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	101	96	93	96	93	90	92	90	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	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1493	1493	1493
5°	1495	1489	1495
10°	1491	1489	1499
15°	1482	1486	1500
20°	1472	1483	1503
25°	1454	1476	1505
30°	1437	1471	1511
35°	1414	1463	1513
40°	1388	1454	1527
45°	1357	1452	1551
50°	1313	1451	1592
55°	1266	1461	1650
60°	1195	1484	1722
65°	1103	1519	1819
70°	963	1572	1938
75°	782	1653	2003
80°	577	1621	1621
85°	443	1193	1348



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	105.1	3.1
10°-20°	301.9	8.8
20°-30°	459.7	13.4
30°-40°	558.1	16.3
40°-50°	589.7	17.2
50°-60°	556.4	16.3
60°-70°	462.6	13.5
70°-80°	304.4	8.9
80°-90°	83.0	2.4
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°	866.7	25.3
0°-40°	1424.9	41.7
0°-60°	2570.9	75.2
0°-90°	3420.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3420.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1110	1110	1110	1110	1110	
5°	1107	1107	1103	1107	1107	105
15°	1064	1066	1067	1077	1077	300
25°	980	985	994	1011	1014	452
35°	861	871	891	914	921	539
45°	713	728	763	800	815	549
55°	540	563	623	682	703	481
65°	347	387	477	547	572	343
75°	150	219	318	377	385	162
85°	29	63	77	86	87	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1109.9	1109.9	1109.9	1109.9	1109.9
2.5°	1111.4	1109.9	1104.2	1109.9	1109.9
5°	1107.1	1107.1	1102.7	1107.1	1107.1
7.5°	1099.9	1099.9	1097.0	1102.7	1102.7
10°	1091.2	1091.2	1089.9	1097.0	1097.0
12.5°	1078.5	1079.8	1078.5	1087.0	1087.0
15°	1064.0	1065.5	1067.0	1077.0	1077.0
17.5°	1045.5	1048.3	1051.3	1062.6	1064.0
20°	1028.3	1029.7	1035.4	1048.3	1049.8
22.5°	1005.4	1009.7	1016.9	1029.7	1034.1
25°	979.5	985.3	993.9	1011.1	1013.9
27.5°	955.3	959.5	971.0	989.7	995.4
30°	925.1	932.3	946.6	965.3	972.5
32.5°	896.5	903.7	920.9	940.9	946.6
35°	860.8	870.8	890.7	913.7	920.9
37.5°	826.4	836.4	860.8	886.5	895.2
40°	790.5	802.0	827.8	857.8	869.3
42.5°	751.8	767.6	796.2	829.2	842.1
45°	713.2	727.6	763.3	800.5	814.9
47.5°	671.7	688.9	727.6	772.0	789.2
50°	627.3	648.8	693.2	741.8	760.5
52.5°	583.0	607.2	657.3	711.7	731.9
55°	539.9	562.8	622.9	681.7	703.2
57.5°	492.7	521.4	587.2	650.1	671.7
60°	443.9	475.5	551.4	617.2	640.1
62.5°	395.3	431.1	517.0	583.0	607.2
65°	346.6	386.7	477.0	547.1	571.5
67.5°	299.3	343.7	439.6	509.9	534.2
70°	244.9	300.7	399.5	468.3	492.7
72.5°	194.8	259.3	360.9	425.4	446.8
75°	150.4	219.2	317.9	376.6	385.3
77.5°	110.2	179.0	273.5	293.5	295.0
80°	74.5	143.2	209.2	206.2	209.2
82.5°	48.7	107.4	131.7	147.6	148.9
85°	28.7	63.1	77.3	86.0	87.3
87.5°	14.3	21.5	27.2	28.7	31.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)