

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: P272103

Luminaire Tested: **24CZ2-60HE-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: P272103  
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: 24CZ2-60HE-UNV-L940-CD1-U  
Description: 2'x4' TROFFER LED MODULE,RIBBED LENS, 90CRI  
Light Source: (392) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5135.0 lumens  
Efficiency: N/A  
Efficacy: 116.4 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

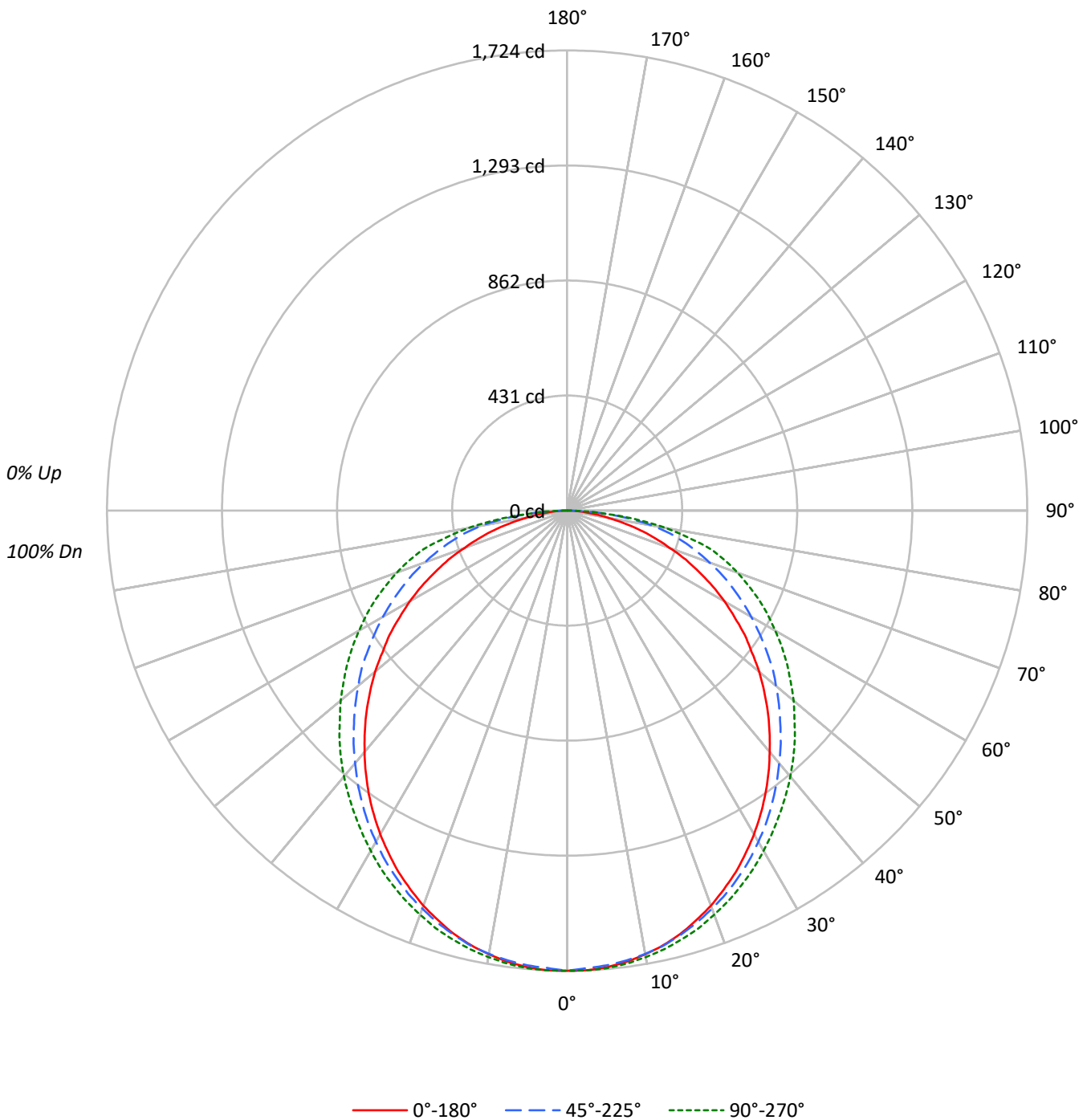
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2320	2320	2320
5°	2319	2310	2324
10°	2306	2304	2320
15°	2287	2292	2316
20°	2255	2272	2307
25°	2219	2252	2297
30°	2175	2226	2287
35°	2128	2199	2280
40°	2074	2170	2285
45°	2022	2149	2296
50°	1966	2138	2317
55°	1905	2135	2360
60°	1831	2144	2421
65°	1735	2177	2526
70°	1611	2232	2670
75°	1470	2343	2896
80°	1209	2523	2895
85°	926	2328	2487



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	163.1	3.2
10°-20°	465.5	9.1
20°-30°	700.5	13.6
30°-40°	839.5	16.3
40°-50°	874.8	17.0
50°-60°	813.9	15.9
60°-70°	670.4	13.1
70°-80°	456.6	8.9
80°-90°	150.7	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°	1329.1	25.9
0°-40°	2168.6	42.2
0°-60°	3857.3	75.1
0°-90°	5135.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5135.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1724	1724	1724	1724	1724	
5°	1717	1717	1710	1719	1721	163
15°	1642	1644	1645	1661	1662	463
25°	1494	1501	1517	1542	1548	688
35°	1296	1311	1338	1374	1388	810
45°	1062	1085	1129	1186	1206	819
55°	812	840	910	982	1006	724
65°	545	591	684	764	794	541
75°	283	346	451	531	557	298
85°	60	116	151	161	161	74
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1724.1	1724.1	1724.1	1724.1	1724.1
2.5°	1724.1	1724.1	1715.5	1724.1	1724.1
5°	1717.2	1717.2	1710.3	1718.9	1720.6
7.5°	1705.2	1706.9	1700.1	1710.3	1712.1
10°	1688.1	1689.8	1686.4	1696.6	1698.4
12.5°	1667.5	1669.2	1669.2	1681.2	1682.9
15°	1641.8	1643.5	1645.2	1660.6	1662.4
17.5°	1609.2	1614.4	1617.8	1636.7	1640.1
20°	1575.0	1580.1	1587.0	1607.5	1610.9
22.5°	1535.5	1542.4	1554.4	1576.7	1581.8
25°	1494.4	1501.3	1516.7	1542.4	1547.5
27.5°	1448.1	1458.4	1477.3	1504.7	1511.6
30°	1400.2	1410.4	1432.7	1461.9	1472.1
32.5°	1348.7	1362.5	1388.2	1420.7	1431.0
35°	1295.6	1311.0	1338.5	1374.4	1388.2
37.5°	1239.1	1256.2	1288.8	1328.2	1345.3
40°	1180.8	1201.4	1235.6	1281.9	1300.8
42.5°	1122.5	1141.4	1184.2	1233.9	1254.5
45°	1062.5	1084.8	1129.4	1185.9	1206.5
47.5°	1000.8	1023.1	1076.3	1136.2	1155.1
50°	939.1	961.4	1021.4	1084.8	1107.1
52.5°	872.3	901.4	970.0	1033.4	1055.7
55°	812.3	839.8	910.0	982.0	1006.0
57.5°	743.8	776.3	853.5	928.9	954.6
60°	680.4	714.6	796.9	874.0	899.7
62.5°	615.2	652.9	740.4	819.2	848.3
65°	545.0	591.3	683.8	764.3	793.5
67.5°	481.6	529.6	627.2	709.5	735.2
70°	409.6	467.9	567.3	649.5	678.7
72.5°	347.9	406.2	510.7	591.3	620.4
75°	282.8	346.2	450.7	531.3	557.0
77.5°	217.6	287.9	392.5	454.2	462.7
80°	156.0	229.6	325.6	361.6	373.6
82.5°	109.7	176.5	239.9	263.9	270.8
85°	60.0	116.5	150.8	161.1	161.1
87.5°	25.7	49.7	60.0	61.7	63.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)