

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: P272102

Luminaire Tested: **24CZ2-60HE-UNV-L935-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: P272102  
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-L935-CD1-U  
Description: 2'x4' TROFFER LED MODULE,RIBBED LENS, 90CRI  
Light Source: (392) 3500K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5082.0 lumens  
Efficiency: N/A  
Efficacy: 115.2 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

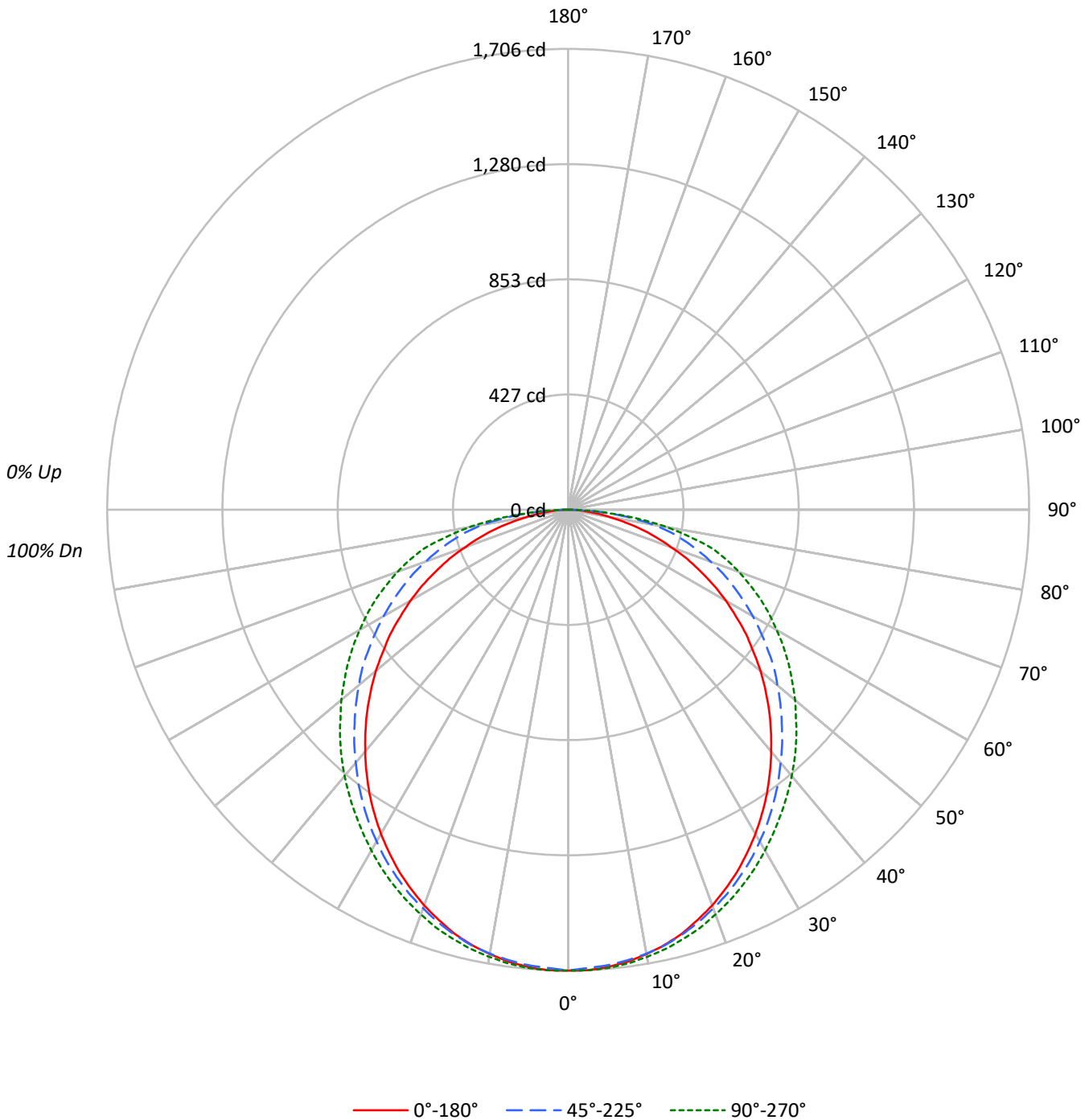
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	2296	2296	2296
5°	2295	2286	2300
10°	2282	2280	2296
15°	2263	2268	2292
20°	2232	2249	2283
25°	2196	2228	2274
30°	2153	2203	2263
35°	2106	2176	2257
40°	2053	2148	2261
45°	2001	2127	2272
50°	1946	2116	2294
55°	1886	2113	2335
60°	1812	2122	2396
65°	1717	2154	2500
70°	1595	2209	2642
75°	1455	2319	2865
80°	1196	2497	2865
85°	917	2305	2461



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	161.4	3.2
10°-20°	460.7	9.1
20°-30°	693.3	13.6
30°-40°	830.8	16.3
40°-50°	865.8	17.0
50°-60°	805.5	15.9
60°-70°	663.5	13.1
70°-80°	451.8	8.9
80°-90°	149.2	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°	1315.4	25.9
0°-40°	2146.2	42.2
0°-60°	3817.5	75.1
0°-90°	5082.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5082.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1706	1706	1706	1706	1706	
5°	1700	1700	1693	1701	1703	161
15°	1625	1626	1628	1644	1645	458
25°	1479	1486	1501	1526	1532	681
35°	1282	1298	1325	1360	1374	802
45°	1052	1074	1118	1174	1194	811
55°	804	831	901	972	996	717
65°	539	585	677	756	785	535
75°	280	343	446	526	551	295
85°	59	115	149	159	159	74
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1706.3	1706.3	1706.3	1706.3	1706.3
2.5°	1706.3	1706.3	1697.8	1706.3	1706.3
5°	1699.5	1699.5	1692.7	1701.2	1702.9
7.5°	1687.6	1689.3	1682.5	1692.7	1694.4
10°	1670.6	1672.3	1668.9	1679.1	1680.8
12.5°	1650.3	1652.0	1652.0	1663.9	1665.6
15°	1624.9	1626.5	1628.2	1643.5	1645.2
17.5°	1592.6	1597.7	1601.1	1619.8	1623.2
20°	1558.7	1563.8	1570.6	1590.9	1594.3
22.5°	1519.7	1526.5	1538.4	1560.4	1565.5
25°	1479.0	1485.8	1501.0	1526.5	1531.6
27.5°	1433.2	1443.4	1462.0	1489.2	1495.9
30°	1385.7	1395.9	1417.9	1446.8	1456.9
32.5°	1334.8	1348.4	1373.8	1406.1	1416.2
35°	1282.2	1297.5	1324.6	1360.3	1373.8
37.5°	1226.3	1243.2	1275.5	1314.5	1331.4
40°	1168.6	1189.0	1222.9	1268.7	1287.3
42.5°	1110.9	1129.6	1172.0	1221.2	1241.5
45°	1051.6	1073.6	1117.7	1173.7	1194.0
47.5°	990.5	1012.6	1065.1	1124.5	1143.2
50°	929.5	951.5	1010.9	1073.6	1095.7
52.5°	863.3	892.1	960.0	1022.7	1044.8
55°	803.9	831.1	900.6	971.9	995.6
57.5°	736.1	768.3	844.7	919.3	944.7
60°	673.3	707.3	788.7	865.0	890.4
62.5°	608.9	646.2	732.7	810.7	839.6
65°	539.4	585.2	676.7	756.5	785.3
67.5°	476.6	524.1	620.8	702.2	727.6
70°	405.4	463.0	561.4	642.8	671.7
72.5°	344.3	402.0	505.4	585.2	614.0
75°	279.9	342.6	446.1	525.8	551.2
77.5°	215.4	284.9	388.4	449.5	457.9
80°	154.3	227.3	322.3	357.9	369.7
82.5°	108.5	174.7	237.5	261.2	268.0
85°	59.4	115.3	149.3	159.4	159.4
87.5°	25.4	49.2	59.4	61.1	62.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)