

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: P475129

Luminaire Tested: **22CZ2-70VHE-HRP-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475129  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-70VHE-HRP-UNV-L830-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP  
INSERT  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5450.7 lumens  
Efficiency: N/A  
Efficacy: 110.6 lumens/watt  
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

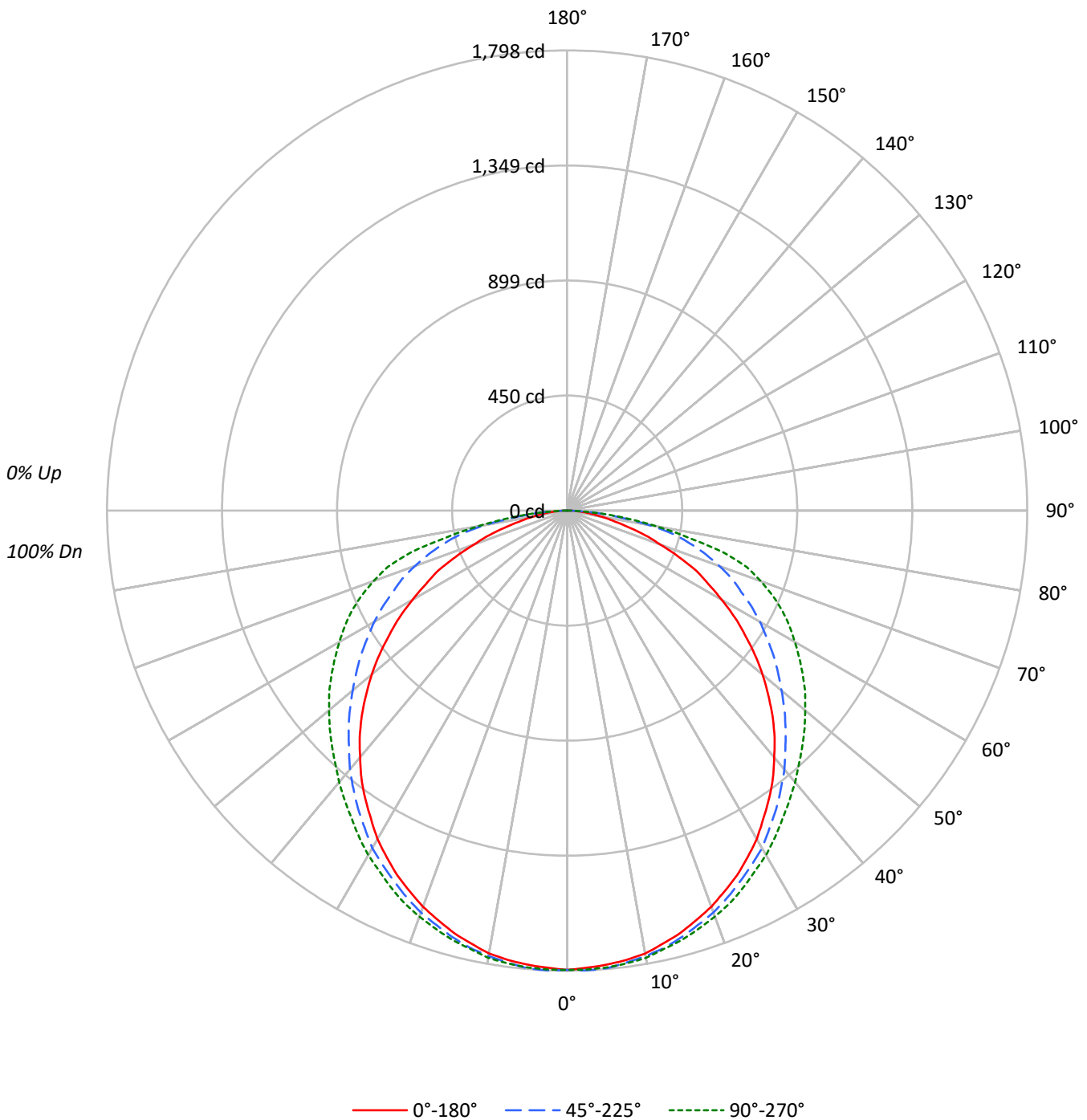
Input Watts (W): 49.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	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	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
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	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	25	35	29	24	23

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

	0°	45°	90°
0°	4829	4829	4829
5°	4811	4848	4839
10°	4801	4829	4849
15°	4761	4809	4837
20°	4717	4785	4834
25°	4666	4747	4829
30°	4605	4733	4829
35°	4518	4677	4823
40°	4420	4638	4867
45°	4318	4593	4946
50°	4174	4577	5081
55°	3984	4614	5275
60°	3757	4682	5533
65°	3547	4773	5912
70°	3030	4978	6331
75°	2539	5185	6578
80°	2081	5009	5487
85°	1800	3714	4032



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	170.1	3.1
10°-20°	486.6	8.9
20°-30°	737.4	13.5
30°-40°	890.5	16.3
40°-50°	935.7	17.2
50°-60°	880.4	16.2
60°-70°	734.0	13.5
70°-80°	486.4	8.9
80°-90°	129.6	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°	1394.2	25.6
0°-40°	2284.6	41.9
0°-60°	4100.6	75.2
0°-90°	5450.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5450.7	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1795	1795	1795	1795	1795	
5°	1781	1784	1795	1795	1791	169
15°	1709	1716	1726	1733	1736	482
25°	1572	1582	1599	1620	1626	723
35°	1375	1389	1424	1455	1468	860
45°	1135	1152	1207	1269	1300	874
55°	849	887	984	1083	1124	760
65°	557	605	750	873	928	542
75°	244	340	499	602	633	265
85°	58	89	120	131	131	68
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1794.7	1794.7	1794.7	1794.7	1794.7
2.5°	1788.1	1791.4	1798.4	1798.4	1794.7
5°	1781.1	1784.4	1794.7	1794.7	1791.4
7.5°	1770.7	1774.4	1781.1	1788.1	1784.4
10°	1757.1	1760.4	1767.4	1774.4	1774.4
12.5°	1733.1	1736.4	1750.1	1753.7	1753.7
15°	1708.8	1715.8	1726.1	1733.1	1736.4
17.5°	1678.1	1684.8	1698.4	1712.4	1712.4
20°	1647.1	1653.8	1671.1	1684.8	1688.1
22.5°	1609.1	1619.5	1636.8	1653.8	1660.8
25°	1571.5	1581.8	1598.8	1619.5	1626.5
27.5°	1526.5	1536.9	1561.2	1585.2	1588.5
30°	1481.9	1492.2	1523.2	1543.8	1554.2
32.5°	1426.9	1440.6	1471.6	1502.5	1512.9
35°	1375.3	1389.3	1423.6	1454.6	1468.2
37.5°	1320.3	1334.0	1371.9	1409.9	1426.9
40°	1258.3	1275.7	1320.3	1361.6	1385.6
42.5°	1200.0	1217.4	1262.0	1317.0	1341.0
45°	1134.7	1151.7	1207.0	1268.7	1299.6
47.5°	1065.8	1086.4	1151.7	1227.7	1258.3
50°	997.1	1021.1	1093.4	1179.4	1213.7
52.5°	924.8	955.8	1038.4	1131.4	1172.4
55°	849.2	887.2	983.5	1083.1	1124.4
57.5°	776.9	811.6	924.8	1031.5	1076.1
60°	698.0	742.6	869.9	979.8	1028.1
62.5°	622.3	670.6	811.6	928.5	979.8
65°	557.0	605.0	749.6	873.2	928.5
67.5°	471.1	536.4	698.0	814.9	869.9
70°	385.1	474.4	632.7	752.9	804.6
72.5°	319.8	405.8	567.4	687.6	735.9
75°	244.2	340.5	498.7	601.7	632.7
77.5°	182.2	281.9	426.4	478.1	481.4
80°	134.3	216.6	323.2	340.5	354.1
82.5°	93.0	151.3	209.9	230.2	237.2
85°	58.3	89.3	120.3	130.6	130.6
87.5°	31.0	34.3	41.3	41.3	41.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)