

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: P475158

Luminaire Tested: **22CZ2-70VHE-HRP-UNV-L835-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475158  
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-L835-CD1-U  
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP  
INSERT  
Light Source: 3500K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 5648.4 lumens  
Efficiency: N/A  
Efficacy: 114.6 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

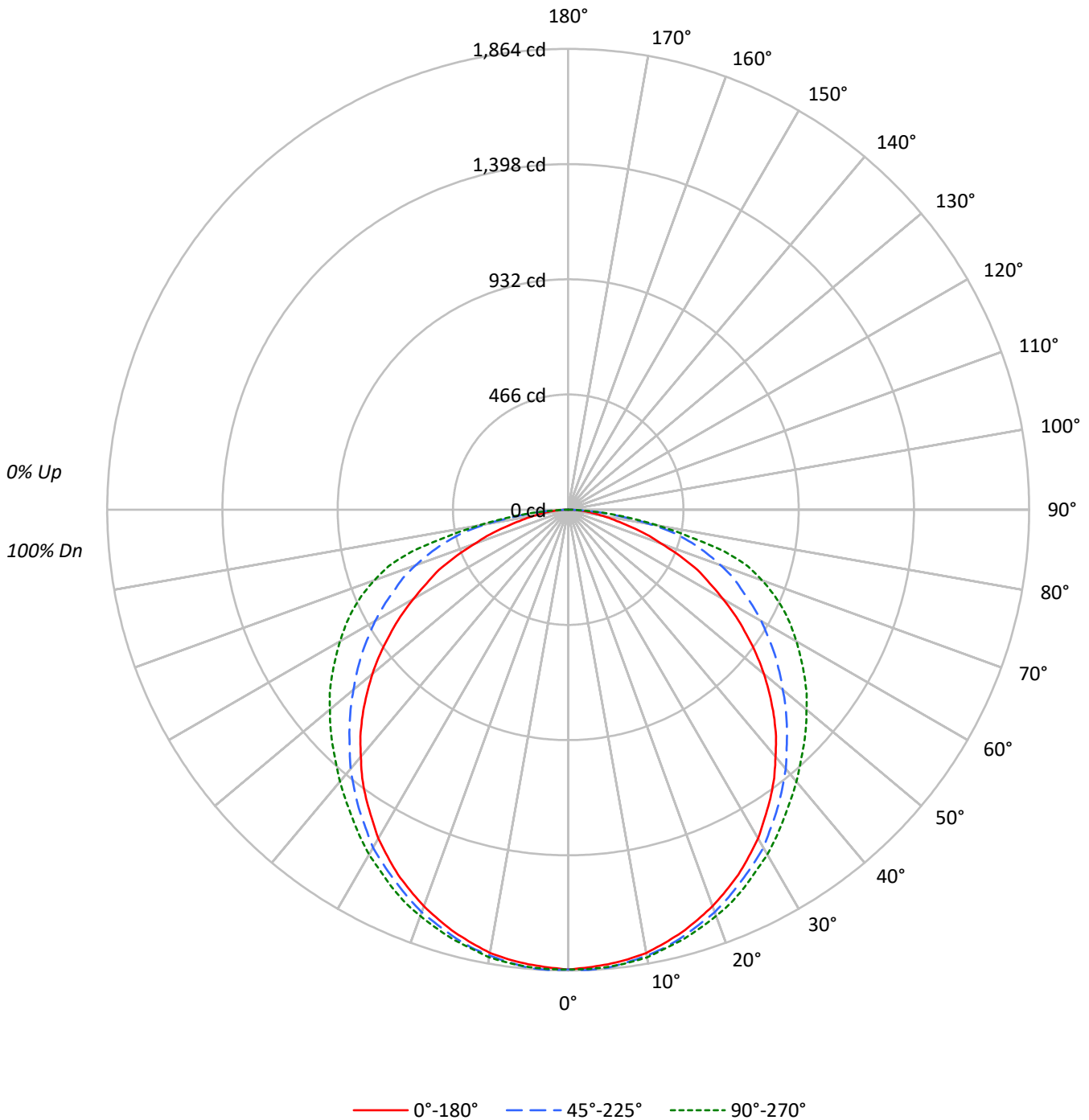
Input Watts (W): 49.3  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	5005	5005	5005
5°	4986	5024	5015
10°	4975	5005	5024
15°	4933	4983	5013
20°	4888	4959	5009
25°	4835	4919	5005
30°	4772	4905	5004
35°	4682	4846	4998
40°	4581	4806	5044
45°	4475	4760	5125
50°	4326	4744	5265
55°	4129	4781	5467
60°	3893	4851	5734
65°	3675	4946	6127
70°	3140	5158	6560
75°	2632	5373	6816
80°	2156	5190	5687
85°	1865	3847	4177



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	176.3	3.1
10°-20°	504.2	8.9
20°-30°	764.2	13.5
30°-40°	922.8	16.3
40°-50°	969.6	17.2
50°-60°	912.3	16.2
60°-70°	760.7	13.5
70°-80°	504.0	8.9
80°-90°	134.3	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°	1444.7	25.6
0°-40°	2367.5	41.9
0°-60°	4249.4	75.2
0°-90°	5648.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5648.4	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1860	1860	1860	1860	1860	
5°	1846	1849	1860	1860	1856	175
15°	1771	1778	1789	1796	1799	499
25°	1628	1639	1657	1678	1686	750
35°	1425	1440	1475	1507	1522	891
45°	1176	1194	1251	1315	1347	906
55°	880	919	1019	1122	1165	787
65°	577	627	777	905	962	562
75°	253	353	517	624	656	275
85°	60	92	125	135	135	70
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1859.8	1859.8	1859.8	1859.8	1859.8
2.5°	1852.9	1856.4	1863.6	1863.6	1859.8
5°	1845.7	1849.1	1859.8	1859.8	1856.4
7.5°	1835.0	1838.7	1845.7	1852.9	1849.1
10°	1820.8	1824.2	1831.5	1838.7	1838.7
12.5°	1795.9	1799.4	1813.5	1817.3	1817.3
15°	1770.7	1778.0	1788.7	1795.9	1799.4
17.5°	1739.0	1745.9	1760.0	1774.5	1774.5
20°	1706.9	1713.8	1731.7	1745.9	1749.3
22.5°	1667.5	1678.2	1696.2	1713.8	1721.0
25°	1628.5	1639.2	1656.8	1678.2	1685.5
27.5°	1581.9	1592.6	1617.8	1642.7	1646.1
30°	1535.6	1546.3	1578.4	1599.8	1610.5
32.5°	1478.7	1492.8	1524.9	1557.0	1567.7
35°	1425.2	1439.7	1475.2	1507.3	1521.5
37.5°	1368.2	1382.3	1421.7	1461.1	1478.7
40°	1304.0	1321.9	1368.2	1411.0	1435.9
42.5°	1243.6	1261.5	1307.8	1364.7	1389.6
45°	1175.9	1193.5	1250.8	1314.7	1346.8
47.5°	1104.4	1125.8	1193.5	1272.2	1304.0
50°	1033.3	1058.2	1133.1	1222.2	1257.7
52.5°	958.4	990.5	1076.1	1172.4	1214.9
55°	880.0	919.4	1019.1	1122.4	1165.2
57.5°	805.1	841.0	958.4	1068.9	1115.1
60°	723.3	769.5	901.4	1015.4	1065.4
62.5°	644.9	695.0	841.0	962.2	1015.4
65°	577.2	627.0	776.8	904.9	962.2
67.5°	488.2	555.8	723.3	844.5	901.4
70°	399.1	491.6	655.6	780.2	833.8
72.5°	331.4	420.5	587.9	712.6	762.6
75°	253.1	352.8	516.8	623.5	655.6
77.5°	188.8	292.1	441.9	495.4	498.9
80°	139.1	224.4	334.9	352.8	367.0
82.5°	96.3	156.7	217.5	238.6	245.8
85°	60.4	92.5	124.6	135.3	135.3
87.5°	32.1	35.6	42.8	42.8	42.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)