

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: P475128

Luminaire Tested: **22CZ2-65VHE-HRP-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475128  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-65VHE-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: 5087.2 lumens  
Efficiency: N/A  
Efficacy: 111.3 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

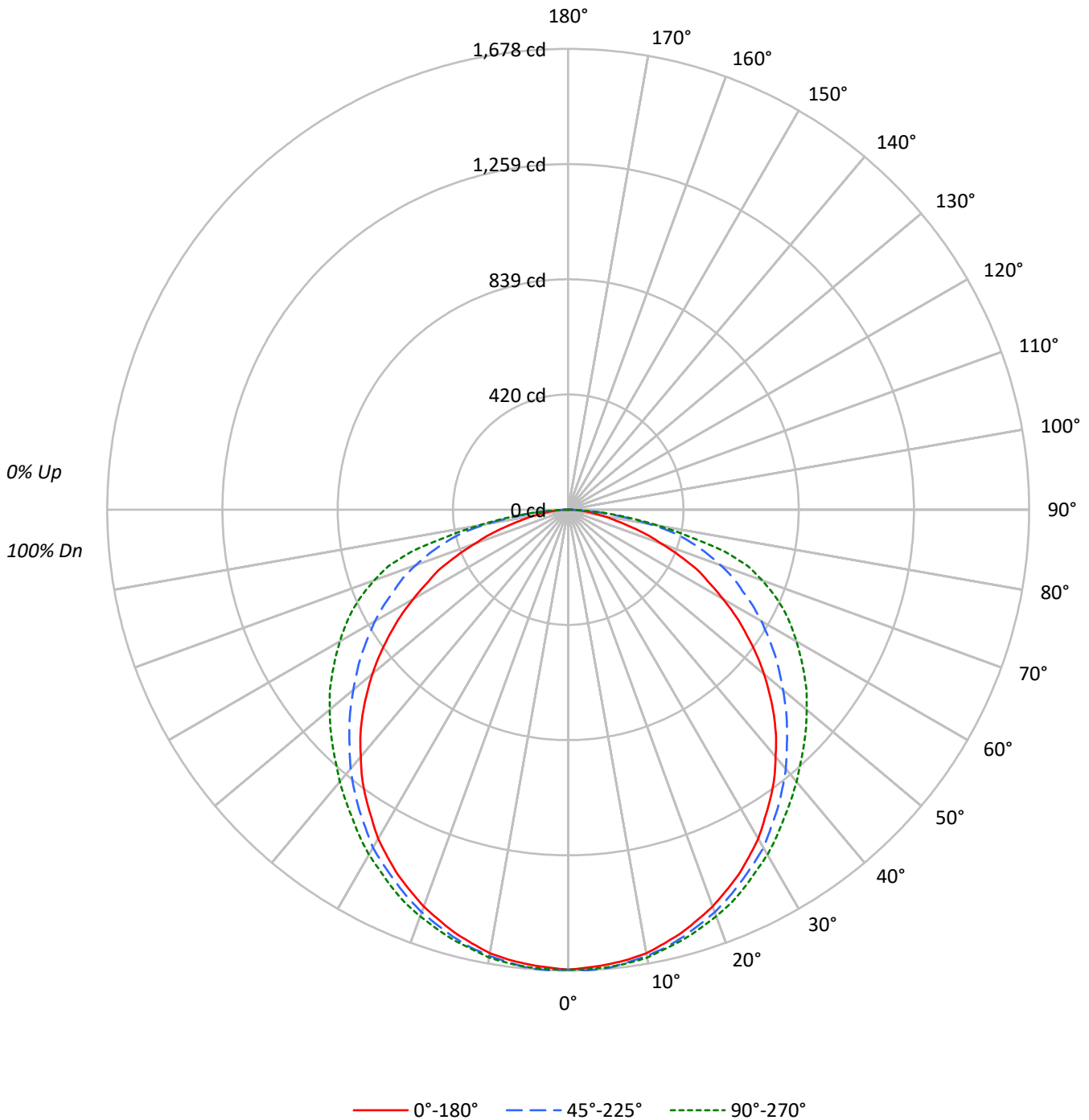
Input Watts (W): 45.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	4507	4507	4507
5°	4490	4525	4516
10°	4481	4507	4525
15°	4443	4488	4515
20°	4402	4466	4512
25°	4355	4431	4507
30°	4298	4417	4507
35°	4217	4365	4502
40°	4125	4329	4543
45°	4031	4287	4616
50°	3896	4272	4742
55°	3719	4306	4923
60°	3506	4370	5165
65°	3310	4455	5518
70°	2828	4646	5908
75°	2370	4840	6140
80°	1942	4674	5122
85°	1680	3464	3764



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	158.8	3.1
10°-20°	454.1	8.9
20°-30°	688.3	13.5
30°-40°	831.1	16.3
40°-50°	873.3	17.2
50°-60°	821.7	16.2
60°-70°	685.1	13.5
70°-80°	454.0	8.9
80°-90°	121.0	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°	1301.2	25.6
0°-40°	2132.3	41.9
0°-60°	3827.2	75.2
0°-90°	5087.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5087.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1675	1675	1675	1675	1675	
5°	1662	1665	1675	1675	1672	158
15°	1595	1601	1611	1618	1621	450
25°	1467	1476	1492	1512	1518	675
35°	1284	1297	1329	1358	1370	803
45°	1059	1075	1126	1184	1213	816
55°	793	828	918	1011	1049	709
65°	520	565	700	815	867	506
75°	228	318	466	562	590	247
85°	54	83	112	122	122	63
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1675.0	1675.0	1675.0	1675.0	1675.0
2.5°	1668.8	1671.9	1678.5	1678.5	1675.0
5°	1662.3	1665.4	1675.0	1675.0	1671.9
7.5°	1652.6	1656.1	1662.3	1668.8	1665.4
10°	1639.9	1643.0	1649.5	1656.1	1656.1
12.5°	1617.5	1620.6	1633.4	1636.8	1636.8
15°	1594.8	1601.3	1611.0	1617.5	1620.6
17.5°	1566.2	1572.4	1585.2	1598.2	1598.2
20°	1537.3	1543.5	1559.7	1572.4	1575.5
22.5°	1501.8	1511.5	1527.6	1543.5	1550.0
25°	1466.7	1476.3	1492.2	1511.5	1518.0
27.5°	1424.7	1434.4	1457.1	1479.5	1482.6
30°	1383.1	1392.7	1421.6	1440.9	1450.5
32.5°	1331.8	1344.5	1373.4	1402.3	1412.0
35°	1283.6	1296.6	1328.6	1357.6	1370.3
37.5°	1232.3	1245.0	1280.5	1315.9	1331.8
40°	1174.4	1190.6	1232.3	1270.8	1293.2
42.5°	1120.0	1136.2	1177.8	1229.1	1251.5
45°	1059.1	1074.9	1126.5	1184.1	1213.0
47.5°	994.7	1014.0	1074.9	1145.8	1174.4
50°	930.6	953.0	1020.5	1100.7	1132.8
52.5°	863.2	892.1	969.2	1056.0	1094.2
55°	792.6	828.0	917.9	1010.9	1049.4
57.5°	725.1	757.4	863.2	962.7	1004.3
60°	651.4	693.1	811.9	914.5	959.6
62.5°	580.8	625.9	757.4	866.6	914.5
65°	519.9	564.7	699.6	815.0	866.6
67.5°	439.7	500.6	651.4	760.6	811.9
70°	359.4	442.8	590.5	702.7	750.9
72.5°	298.5	378.7	529.5	641.8	686.9
75°	227.9	317.8	465.5	561.6	590.5
77.5°	170.1	263.1	398.0	446.2	449.3
80°	125.3	202.1	301.6	317.8	330.5
82.5°	86.8	141.2	195.9	214.9	221.4
85°	54.4	83.3	112.2	121.9	121.9
87.5°	28.9	32.0	38.6	38.6	38.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)