

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: P475150

Luminaire Tested: **22CZ2-24VHE-HRP-UNV-L835-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475150  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-24VHE-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: 1958.6 lumens  
Efficiency: N/A  
Efficacy: 118.7 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

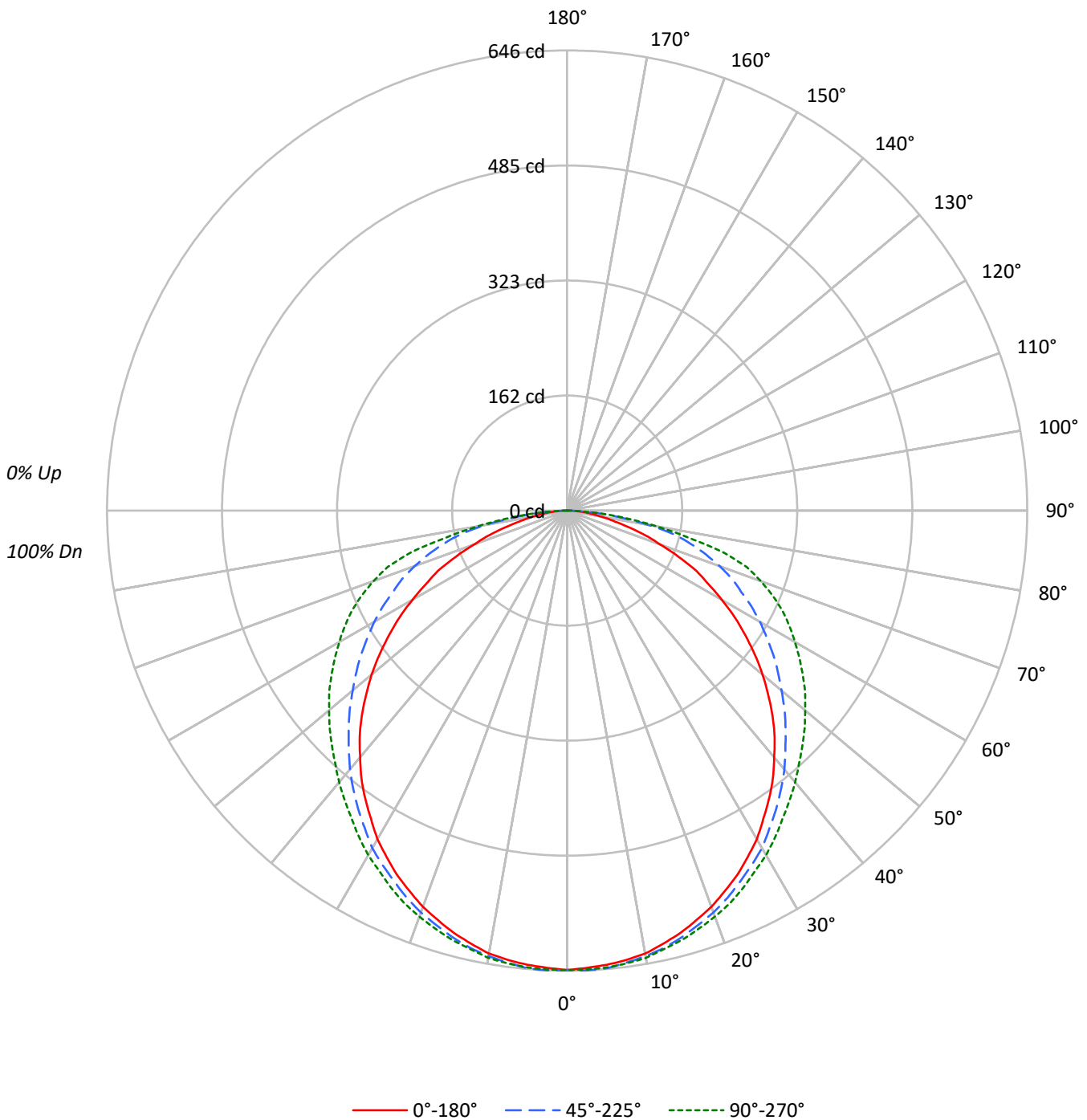
Input Watts (W): 16.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1735	1735	1735
5°	1729	1742	1739
10°	1725	1735	1742
15°	1711	1728	1738
20°	1695	1720	1737
25°	1677	1706	1735
30°	1655	1701	1735
35°	1623	1681	1733
40°	1588	1666	1749
45°	1552	1650	1777
50°	1500	1645	1826
55°	1432	1658	1895
60°	1350	1682	1988
65°	1275	1715	2125
70°	1089	1788	2275
75°	913	1863	2363
80°	747	1799	1973
85°	648	1334	1448



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	61.1	3.1
10°-20°	174.9	8.9
20°-30°	265.0	13.5
30°-40°	320.0	16.3
40°-50°	336.2	17.2
50°-60°	316.3	16.2
60°-70°	263.8	13.5
70°-80°	174.8	8.9
80°-90°	46.6	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°	501.0	25.6
0°-40°	821.0	41.9
0°-60°	1473.5	75.2
0°-90°	1958.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1958.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	645	645	645	645	645	
5°	640	641	645	645	644	61
15°	614	616	620	623	624	173
25°	565	568	574	582	584	260
35°	494	499	512	523	528	309
45°	408	414	434	456	467	314
55°	305	319	353	389	404	273
65°	200	217	269	314	334	195
75°	88	122	179	216	227	95
85°	21	32	43	47	47	24
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	644.9	644.9	644.9	644.9	644.9
2.5°	642.5	643.7	646.2	646.2	644.9
5°	640.0	641.2	644.9	644.9	643.7
7.5°	636.3	637.6	640.0	642.5	641.2
10°	631.4	632.6	635.1	637.6	637.6
12.5°	622.8	624.0	628.9	630.2	630.2
15°	614.0	616.5	620.3	622.8	624.0
17.5°	603.0	605.4	610.3	615.3	615.3
20°	591.9	594.3	600.5	605.4	606.6
22.5°	578.2	581.9	588.2	594.3	596.8
25°	564.7	568.4	574.5	581.9	584.5
27.5°	548.5	552.3	561.0	569.6	570.8
30°	532.5	536.2	547.3	554.8	558.5
32.5°	512.8	517.7	528.8	539.9	543.6
35°	494.2	499.2	511.6	522.7	527.6
37.5°	474.4	479.3	493.0	506.6	512.8
40°	452.2	458.4	474.4	489.3	497.9
42.5°	431.2	437.4	453.5	473.2	481.9
45°	407.8	413.9	433.7	455.9	467.0
47.5°	383.0	390.4	413.9	441.2	452.2
50°	358.3	366.9	392.9	423.8	436.1
52.5°	332.3	343.5	373.2	406.6	421.3
55°	305.2	318.8	353.4	389.2	404.0
57.5°	279.2	291.6	332.3	370.6	386.7
60°	250.8	266.9	312.6	352.1	369.4
62.5°	223.6	241.0	291.6	333.7	352.1
65°	200.2	217.4	269.4	313.8	333.7
67.5°	169.3	192.7	250.8	292.8	312.6
70°	138.4	170.5	227.3	270.6	289.1
72.5°	114.9	145.8	203.9	247.1	264.5
75°	87.8	122.4	179.2	216.2	227.3
77.5°	65.5	101.3	153.2	171.8	173.0
80°	48.2	77.8	116.1	122.4	127.3
82.5°	33.4	54.4	75.4	82.7	85.2
85°	21.0	32.1	43.2	46.9	46.9
87.5°	11.1	12.3	14.8	14.8	14.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)