

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: P474285

Luminaire Tested: **24CZ2-45VHE-RDP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474285  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-45VHE-RDP-UNV-L840-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ RDP  
INSERT  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3109.9 lumens  
Efficiency: N/A  
Efficacy: 101.3 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

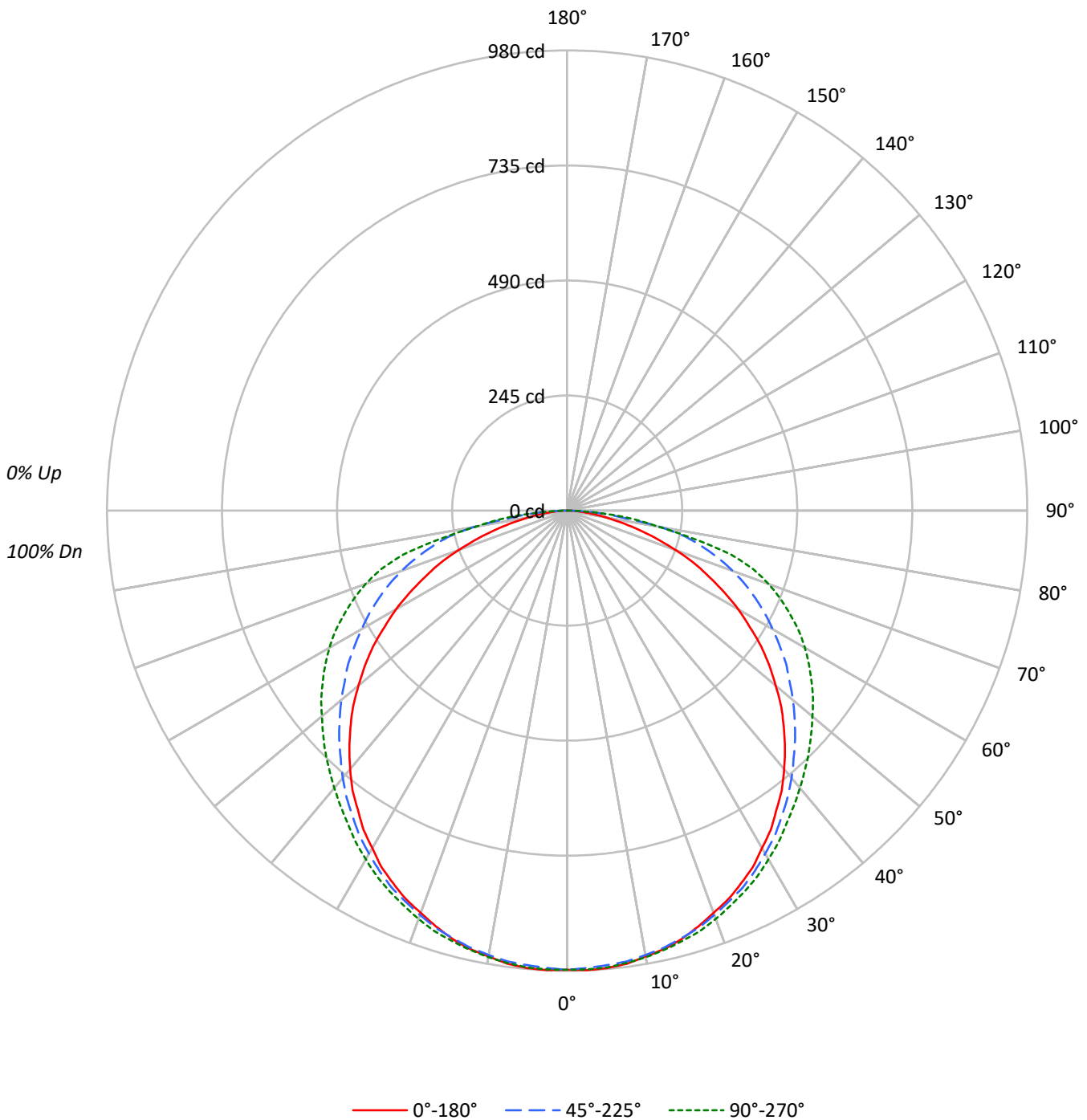
Input Watts (W): 30.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	100	96	92	96	93	89		92	89	87		88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		34	28	24	22

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

	0°	45°	90°
0°	1316	1316	1316
5°	1321	1313	1319
10°	1317	1313	1319
15°	1315	1313	1321
20°	1305	1312	1325
25°	1301	1314	1328
30°	1289	1311	1332
35°	1277	1307	1338
40°	1263	1306	1355
45°	1242	1306	1385
50°	1214	1314	1427
55°	1183	1335	1491
60°	1133	1361	1573
65°	1061	1409	1670
70°	965	1475	1796
75°	818	1556	1877
80°	645	1565	1518
85°	477	1192	1334



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	92.8	3.0
10°-20°	267.0	8.6
20°-30°	408.3	13.1
30°-40°	499.1	16.0
40°-50°	532.0	17.1
50°-60°	508.6	16.4
60°-70°	430.9	13.9
70°-80°	289.6	9.3
80°-90°	81.7	2.6
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°	768.1	24.7
0°-40°	1267.1	40.7
0°-60°	2307.7	74.2
0°-90°	3109.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3109.9	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	978	978	978	978	978	
5°	978	976	972	976	976	93
15°	944	944	942	950	949	266
25°	876	879	885	893	895	404
35°	777	784	796	811	814	487
45°	652	663	686	716	728	503
55°	504	523	569	614	636	449
65°	333	367	443	501	524	331
75°	157	214	299	350	361	168
85°	31	63	77	83	86	38
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	978.0	978.0	978.0	978.0	978.0
2.5°	979.6	979.6	974.9	978.0	978.0
5°	978.0	976.5	971.8	976.5	976.5
7.5°	973.4	971.8	968.8	973.4	971.8
10°	964.1	964.1	961.0	965.7	965.7
12.5°	956.4	954.9	953.3	959.5	958.0
15°	944.1	944.1	942.5	950.2	948.7
17.5°	928.6	930.2	931.7	937.9	939.4
20°	911.7	914.7	916.3	925.5	925.5
22.5°	896.2	897.8	900.8	910.1	910.1
25°	876.2	879.2	885.4	893.1	894.7
27.5°	856.1	857.6	865.4	876.2	877.7
30°	829.9	834.5	843.7	856.1	857.6
32.5°	806.7	811.3	822.1	834.5	837.6
35°	777.4	783.6	795.9	811.3	814.4
37.5°	751.1	755.8	771.2	788.2	792.8
40°	718.9	728.0	743.4	763.5	771.2
42.5°	686.5	695.7	714.3	740.3	749.6
45°	652.5	663.3	686.5	715.8	728.0
47.5°	618.6	630.9	657.2	691.1	705.0
50°	580.0	595.4	627.8	666.4	681.8
52.5°	542.9	561.5	597.0	640.2	660.2
55°	504.4	522.9	569.2	613.9	635.5
57.5°	461.2	485.8	536.8	587.7	610.9
60°	421.2	444.2	505.9	561.5	584.6
62.5°	378.0	408.8	475.0	533.7	556.8
65°	333.2	367.2	442.6	501.3	524.4
67.5°	293.1	330.1	410.4	468.9	492.0
70°	245.2	291.5	374.9	433.4	456.5
72.5°	200.5	251.4	337.8	394.9	416.5
75°	157.3	214.4	299.3	350.2	361.0
77.5°	117.3	177.3	259.1	280.7	273.0
80°	83.3	142.0	202.0	191.2	195.9
82.5°	54.0	108.0	125.0	142.0	146.5
85°	30.9	63.3	77.2	83.3	86.4
87.5°	13.9	23.2	30.9	30.9	29.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)