

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: P474383

Luminaire Tested: **24CZ2-35VHE-HRP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474383  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-35VHE-HRP-UNV-L830-CD1-U  
Description: 2'X4' 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: 2769.0 lumens  
Efficiency: N/A  
Efficacy: 115.9 lumens/watt  
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

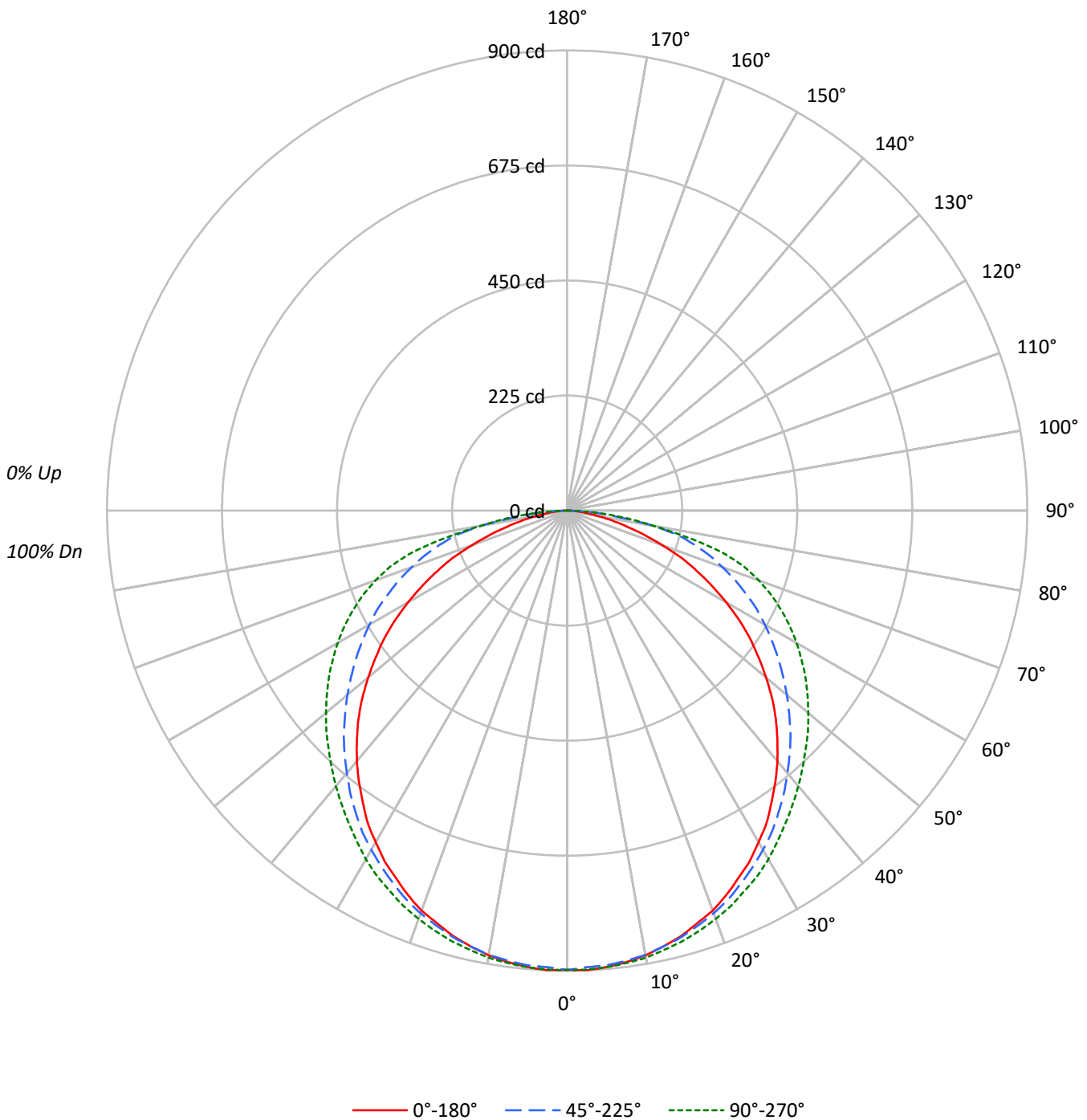
Input Watts (W): 23.9  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73		80	75	71		77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61		70	64	59		68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51		62	56	50		60	54	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	38		50	43	38		49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		41	34	30	28
9	55	41	33	27	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	24		35	29	24	23

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

	0°	45°	90°
0°	1209	1209	1209
5°	1210	1206	1210
10°	1207	1205	1213
15°	1200	1203	1214
20°	1192	1200	1217
25°	1177	1194	1218
30°	1163	1190	1223
35°	1144	1184	1224
40°	1124	1177	1236
45°	1098	1176	1255
50°	1063	1175	1289
55°	1025	1183	1335
60°	967	1201	1394
65°	893	1229	1473
70°	780	1272	1569
75°	633	1338	1621
80°	467	1312	1312
85°	358	966	1091



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	85.1	3.1
10°-20°	244.4	8.8
20°-30°	372.1	13.4
30°-40°	451.8	16.3
40°-50°	477.3	17.2
50°-60°	450.4	16.3
60°-70°	374.5	13.5
70°-80°	246.4	8.9
80°-90°	67.2	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°	701.6	25.3
0°-40°	1153.3	41.7
0°-60°	2081.0	75.2
0°-90°	2769.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2769.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	898	898	898	898	898	
5°	896	896	893	896	896	85
15°	861	862	864	872	872	243
25°	793	798	804	818	821	366
35°	697	705	721	740	745	436
45°	577	589	618	648	660	445
55°	437	456	504	552	569	389
65°	280	313	386	443	463	277
75°	122	177	257	305	312	131
85°	23	51	63	70	71	28
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	898.4	898.4	898.4	898.4	898.4
2.5°	899.6	898.4	893.8	898.4	898.4
5°	896.1	896.1	892.6	896.1	896.1
7.5°	890.3	890.3	887.9	892.6	892.6
10°	883.3	883.3	882.2	887.9	887.9
12.5°	872.9	874.0	872.9	879.8	879.8
15°	861.3	862.5	863.7	871.7	871.7
17.5°	846.3	848.5	850.9	860.1	861.3
20°	832.4	833.4	838.1	848.5	849.7
22.5°	813.8	817.3	823.1	833.4	837.0
25°	792.9	797.5	804.5	818.4	820.7
27.5°	773.2	776.7	786.0	801.1	805.7
30°	748.8	754.7	766.2	781.3	787.2
32.5°	725.6	731.5	745.4	761.6	766.2
35°	696.7	704.8	721.0	739.6	745.4
37.5°	668.9	677.0	696.7	717.6	724.6
40°	639.9	649.1	670.1	694.4	703.6
42.5°	608.6	621.3	644.5	671.2	681.6
45°	577.3	588.9	617.8	648.0	659.6
47.5°	543.7	557.6	588.9	624.9	638.8
50°	507.8	525.2	561.1	600.5	615.6
52.5°	471.9	491.5	532.1	576.1	592.4
55°	437.0	455.6	504.2	551.8	569.2
57.5°	398.8	422.0	475.3	526.2	543.7
60°	359.3	384.9	446.3	499.6	518.1
62.5°	319.9	349.0	418.4	471.9	491.5
65°	280.5	313.0	386.1	442.8	462.6
67.5°	242.2	278.2	355.9	412.7	432.4
70°	198.2	243.4	323.4	379.1	398.8
72.5°	157.6	209.9	292.1	344.3	361.7
75°	121.7	177.4	257.3	304.8	311.8
77.5°	89.2	144.9	221.4	237.6	238.8
80°	60.3	115.9	169.3	166.9	169.3
82.5°	39.4	87.0	106.6	119.5	120.5
85°	23.2	51.0	62.6	69.6	70.7
87.5°	11.5	17.4	22.0	23.2	25.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)