

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: P474089

Luminaire Tested: **24CZ2-75VHE-S-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474089  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-75VHE-S-UNV-L840-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 7784.0 lumens  
Efficiency: N/A  
Efficacy: 151.4 lumens/watt  
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

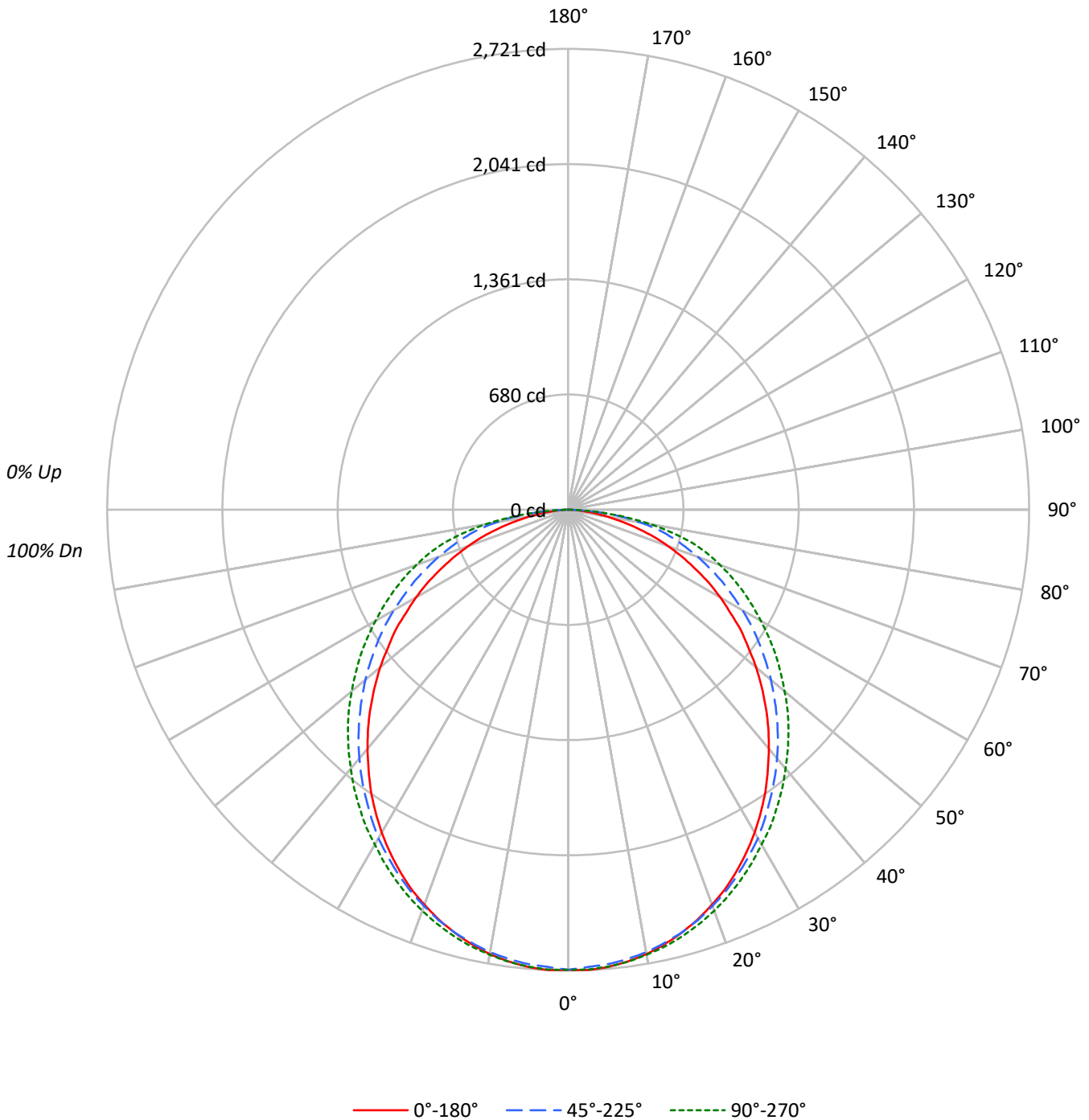
Input Watts (W): 51.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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					100			
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83					83			
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68					68			
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57					57			
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49					49			
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42					42			
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37					37			
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32					32			
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29					29			
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26					26			
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24					24			

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

	0°	45°	90°
0°	3656	3656	3656
5°	3661	3638	3658
10°	3640	3625	3646
15°	3603	3601	3631
20°	3553	3564	3608
25°	3494	3525	3580
30°	3421	3480	3546
35°	3335	3419	3526
40°	3236	3369	3505
45°	3138	3316	3499
50°	3032	3270	3490
55°	2924	3230	3509
60°	2790	3200	3534
65°	2642	3187	3619
70°	2465	3204	3747
75°	2193	3297	3948
80°	1793	3368	3854
85°	1263	2941	3000



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	256.9	3.3
10°-20°	731.6	9.4
20°-30°	1096.6	14.1
30°-40°	1306.1	16.8
40°-50°	1346.7	17.3
50°-60°	1228.9	15.8
60°-70°	982.6	12.6
70°-80°	641.9	8.2
80°-90°	192.7	2.5
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°	2085.1	26.8
0°-40°	3391.2	43.6
0°-60°	5966.8	76.7
0°-90°	7784.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7784.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2717	2717	2717	2717	2717	
5°	2711	2705	2694	2711	2708	257
15°	2586	2588	2585	2607	2607	729
25°	2354	2358	2374	2409	2411	1084
35°	2030	2044	2082	2134	2147	1268
45°	1649	1679	1743	1816	1839	1272
55°	1247	1282	1377	1468	1496	1110
65°	830	886	1001	1100	1137	823
75°	422	492	634	736	760	448
85°	82	147	190	194	194	104
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2717.0	2717.0	2717.0	2717.0	2717.0
2.5°	2720.8	2717.0	2702.9	2719.5	2717.0
5°	2710.6	2705.4	2693.9	2710.6	2708.0
7.5°	2690.1	2687.5	2676.0	2695.2	2692.7
10°	2664.5	2662.0	2653.0	2672.2	2668.4
12.5°	2628.7	2627.5	2621.1	2644.1	2641.5
15°	2586.5	2587.8	2585.3	2607.0	2607.0
17.5°	2538.0	2536.7	2541.8	2568.6	2566.1
20°	2481.7	2483.0	2489.4	2520.1	2520.1
22.5°	2422.9	2421.6	2435.7	2466.4	2468.9
25°	2353.8	2357.7	2374.3	2408.8	2411.4
27.5°	2279.7	2286.1	2306.5	2346.2	2350.0
30°	2201.7	2209.4	2240.0	2277.1	2282.2
32.5°	2116.0	2132.7	2160.8	2208.1	2220.9
35°	2030.4	2044.4	2081.5	2133.9	2146.7
37.5°	1935.8	1958.8	2001.0	2058.5	2075.1
40°	1842.4	1865.4	1917.9	1977.9	1995.8
42.5°	1747.8	1772.1	1832.2	1900.0	1919.1
45°	1649.4	1678.8	1742.7	1815.6	1838.6
47.5°	1548.3	1582.9	1651.9	1731.2	1756.8
50°	1448.6	1483.1	1562.4	1644.2	1667.3
52.5°	1341.2	1384.7	1469.1	1557.3	1580.3
55°	1246.6	1282.4	1377.0	1467.8	1495.9
57.5°	1135.4	1184.0	1285.0	1377.0	1403.9
60°	1036.9	1081.7	1189.1	1282.4	1313.1
62.5°	937.2	983.2	1090.6	1196.7	1224.9
65°	829.8	886.0	1001.1	1099.6	1136.6
67.5°	727.5	786.3	903.9	1008.8	1047.1
70°	626.5	686.6	814.4	921.8	952.5
72.5°	526.8	589.4	722.4	827.2	863.0
75°	421.9	492.2	634.2	736.5	759.5
77.5°	323.5	401.5	544.7	613.7	630.3
80°	231.4	317.1	434.7	484.6	497.4
82.5°	152.1	235.3	324.8	351.6	347.8
85°	81.8	147.0	190.5	194.3	194.3
87.5°	32.0	58.8	60.1	46.0	43.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)