

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: P473905

Luminaire Tested: **24CZ2-155VHE-UNV-L840-CD1-U**

Issue Date: 01/28/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P473905  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 01/28/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-155VHE-UNV-L840-CD1-U  
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 15840.1 lumens  
Efficiency: N/A  
Efficacy: 138.9 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

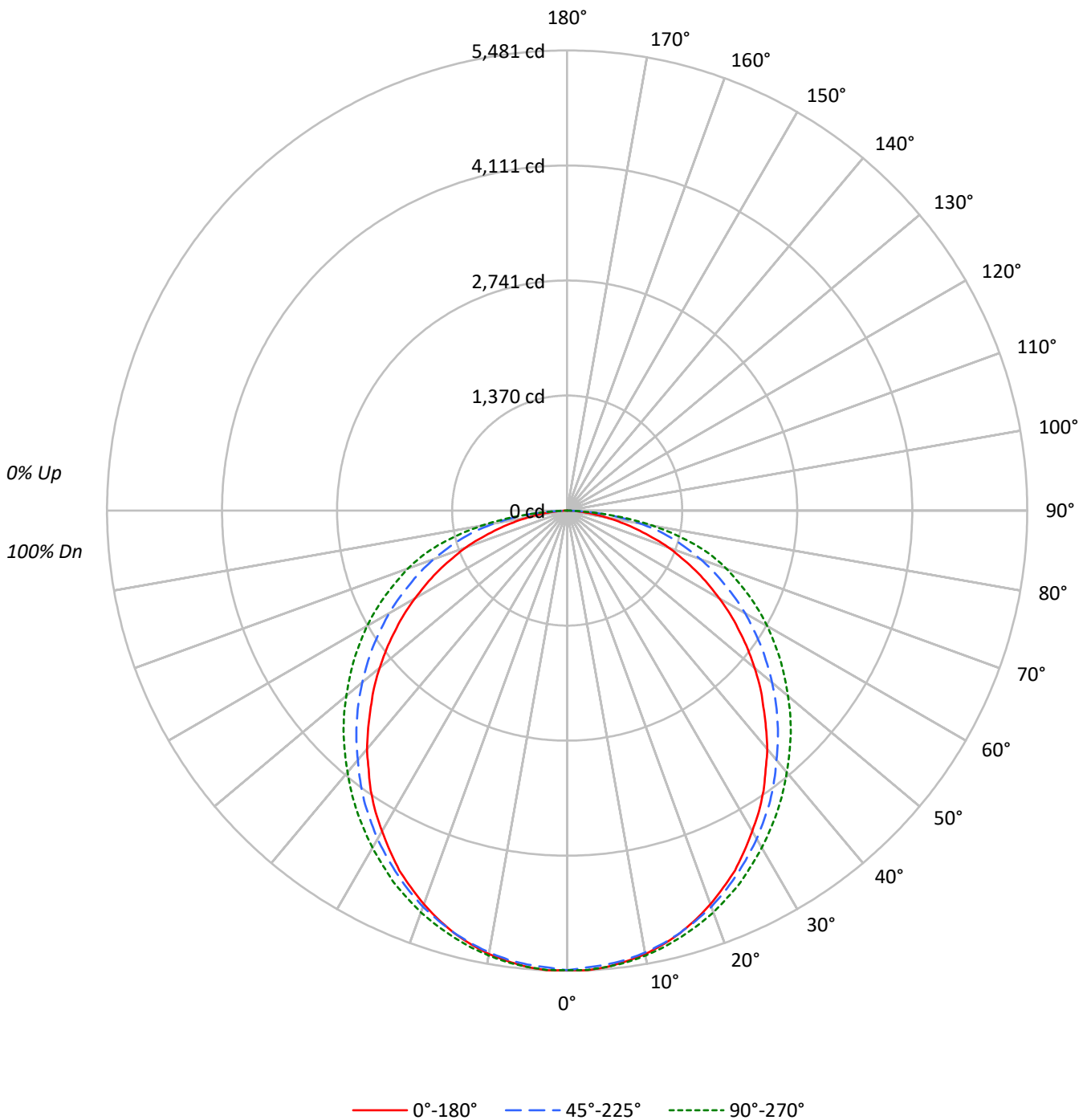
Input Watts (W): 114  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	105	101	97	93	97	93	90		93	90	87		89	87	85	83
2	98	89	82	76	95	88	81	75	84	78	74		81	76	72		78	74	70	68
3	89	78	70	63	87	77	69	63	74	67	61		71	65	60		68	63	59	57
4	82	69	60	53	79	68	59	53	65	58	52		63	57	51		61	55	51	48
5	75	62	53	46	73	61	52	46	58	51	45		56	50	44		55	49	44	42
6	69	56	46	40	67	55	46	40	53	45	39		51	44	39		49	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35		47	40	35		45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31		43	36	31		41	35	31	29
9	56	42	34	28	54	42	34	28	40	33	28		39	33	28		38	32	28	26
10	52	39	31	26	51	38	31	26	37	30	25		36	30	25		36	30	25	23

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

	0°	45°	90°
0°	7365	7365	7365
5°	7369	7331	7369
10°	7328	7304	7353
15°	7254	7250	7322
20°	7145	7189	7292
25°	7021	7100	7256
30°	6850	7017	7204
35°	6696	6927	7175
40°	6513	6814	7146
45°	6291	6744	7168
50°	6101	6669	7189
55°	5877	6621	7270
60°	5633	6590	7403
65°	5369	6567	7593
70°	5054	6634	7943
75°	4443	6771	8262
80°	3708	6821	7971
85°	2648	5846	5927



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	517.4	3.3
10°-20°	1473.9	9.3
20°-30°	2211.1	14.0
30°-40°	2639.8	16.7
40°-50°	2734.4	17.3
50°-60°	2517.3	15.9
60°-70°	2030.6	12.8
70°-80°	1326.7	8.4
80°-90°	389.0	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°	4202.4	26.5
0°-40°	6842.2	43.2
0°-60°	12093.8	76.3
0°-90°	15840.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	15840.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	5474	5474	5474	5474	5474	
5°	5456	5451	5428	5458	5456	518
15°	5208	5208	5205	5256	5256	1467
25°	4729	4739	4783	4870	4888	2174
35°	4076	4112	4217	4332	4368	2547
45°	3306	3388	3544	3703	3767	2556
55°	2505	2613	2823	3030	3099	2242
65°	1686	1802	2063	2298	2385	1668
75°	855	1016	1302	1528	1589	912
85°	172	297	379	402	384	213
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	5473.8	5473.8	5473.8	5473.8	5473.8
2.5°	5481.4	5473.8	5445.6	5478.9	5476.3
5°	5455.8	5450.7	5427.7	5458.4	5455.8
7.5°	5414.9	5412.3	5394.4	5427.7	5427.7
10°	5363.7	5358.6	5345.8	5384.2	5381.6
12.5°	5292.1	5289.5	5281.8	5327.9	5325.3
15°	5207.6	5207.6	5205.1	5256.2	5256.2
17.5°	5105.3	5107.8	5118.0	5176.9	5179.5
20°	4990.1	5000.3	5020.8	5087.3	5092.5
22.5°	4859.6	4880.1	4908.2	4982.4	4990.1
25°	4729.1	4739.3	4782.8	4869.8	4887.7
27.5°	4570.4	4596.0	4652.3	4741.9	4759.8
30°	4409.2	4445.0	4516.7	4608.8	4637.0
32.5°	4250.5	4281.2	4365.7	4470.6	4503.9
35°	4076.5	4112.4	4217.3	4332.4	4368.3
37.5°	3884.6	3940.9	4050.9	4184.0	4222.4
40°	3708.0	3759.2	3879.5	4027.9	4068.8
42.5°	3505.9	3569.8	3715.7	3866.7	3917.9
45°	3306.3	3388.1	3544.2	3702.9	3766.9
47.5°	3119.4	3186.0	3370.2	3549.4	3605.7
50°	2914.7	2991.5	3186.0	3375.4	3434.2
52.5°	2712.6	2804.7	3001.7	3201.3	3265.3
55°	2505.3	2612.8	2822.6	3029.9	3099.0
57.5°	2305.7	2413.2	2630.7	2850.8	2922.4
60°	2093.3	2208.4	2449.0	2661.4	2751.0
62.5°	1888.6	2003.7	2257.1	2487.4	2571.8
65°	1686.4	1801.6	2062.6	2298.0	2385.0
67.5°	1476.6	1601.9	1880.9	2108.6	2193.1
70°	1284.6	1404.9	1686.4	1929.5	2019.1
72.5°	1064.6	1207.9	1494.5	1735.0	1819.5
75°	854.7	1015.9	1302.5	1527.7	1589.2
77.5°	660.2	821.4	1108.1	1277.0	1315.3
80°	478.5	642.3	880.3	998.0	1028.7
82.5°	309.6	478.5	637.2	716.5	726.8
85°	171.5	296.8	378.7	401.8	383.9
87.5°	61.4	112.6	110.0	89.6	71.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)