

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: P474057

Luminaire Tested: **24CZ2-165VHE-S-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474057
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-165VHE-S-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 16863.8 lumens
Efficiency: N/A
Efficacy: 138.1 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

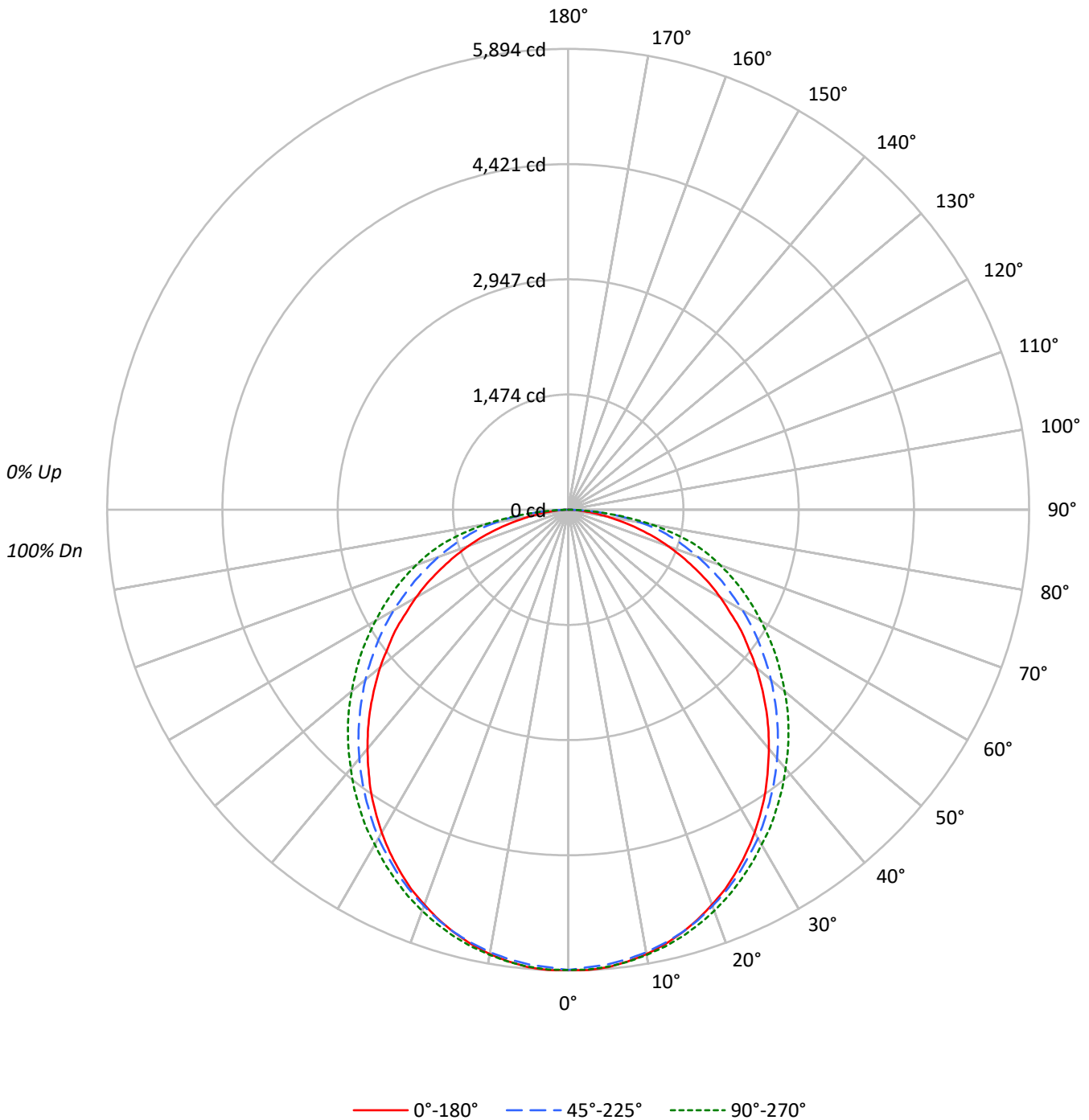
Input Watts (W): 122.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7920	7920	7920
5°	7931	7883	7924
10°	7887	7853	7898
15°	7806	7802	7867
20°	7698	7722	7817
25°	7571	7637	7756
30°	7411	7540	7682
35°	7225	7407	7639
40°	7011	7298	7595
45°	6799	7184	7579
50°	6569	7085	7561
55°	6335	6998	7602
60°	6045	6932	7655
65°	5723	6905	7840
70°	5340	6941	8118
75°	4752	7142	8554
80°	3885	7297	8349
85°	2737	6371	6499



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	556.5	3.3
10°-20°	1584.9	9.4
20°-30°	2375.8	14.1
30°-40°	2829.6	16.8
40°-50°	2917.6	17.3
50°-60°	2662.3	15.8
60°-70°	2128.9	12.6
70°-80°	1390.6	8.2
80°-90°	417.5	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°	4517.2	26.8
0°-40°	7346.8	43.6
0°-60°	12926.8	76.7
0°-90°	16863.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16863.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5886	5886	5886	5886	5886	
5°	5872	5861	5836	5872	5867	557
15°	5604	5606	5601	5648	5648	1580
25°	5100	5108	5144	5219	5224	2348
35°	4399	4429	4510	4623	4651	2748
45°	3573	3637	3776	3933	3983	2756
55°	2701	2778	2983	3180	3241	2405
65°	1798	1920	2169	2382	2462	1783
75°	914	1066	1374	1596	1645	971
85°	177	318	413	421	421	225
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5886.2	5886.2	5886.2	5886.2	5886.2
2.5°	5894.5	5886.2	5855.7	5891.8	5886.2
5°	5872.4	5861.3	5836.4	5872.4	5866.8
7.5°	5828.0	5822.5	5797.6	5839.1	5833.6
10°	5772.6	5767.1	5747.7	5789.3	5781.0
12.5°	5695.1	5692.3	5678.5	5728.3	5722.8
15°	5603.7	5606.4	5600.9	5648.0	5648.0
17.5°	5498.4	5495.6	5506.7	5564.9	5559.4
20°	5376.5	5379.3	5393.2	5459.6	5459.6
22.5°	5249.1	5246.3	5276.8	5343.3	5348.8
25°	5099.5	5107.8	5143.9	5218.6	5224.2
27.5°	4938.9	4952.7	4997.1	5082.9	5091.2
30°	4769.9	4786.5	4853.0	4933.3	4944.4
32.5°	4584.3	4620.3	4681.3	4783.8	4811.5
35°	4398.7	4429.2	4509.5	4623.1	4650.8
37.5°	4193.8	4243.6	4335.0	4459.7	4495.7
40°	3991.5	4041.4	4155.0	4285.2	4323.9
42.5°	3786.6	3839.2	3969.4	4116.2	4157.7
45°	3573.3	3637.0	3775.5	3933.4	3983.2
47.5°	3354.5	3429.2	3578.8	3750.6	3806.0
50°	3138.4	3213.2	3384.9	3562.2	3612.1
52.5°	2905.7	2999.9	3182.7	3373.8	3423.7
55°	2700.7	2778.3	2983.3	3179.9	3240.9
57.5°	2459.7	2565.0	2783.8	2983.3	3041.4
60°	2246.5	2343.4	2576.1	2778.3	2844.8
62.5°	2030.4	2130.1	2362.8	2592.7	2653.6
65°	1797.7	1919.6	2168.9	2382.2	2462.5
67.5°	1576.1	1703.5	1958.4	2185.5	2268.6
70°	1357.3	1487.5	1764.5	1997.2	2063.6
72.5°	1141.2	1277.0	1565.0	1792.2	1869.7
75°	914.1	1066.4	1373.9	1595.5	1645.4
77.5°	700.8	869.8	1180.0	1329.6	1365.6
80°	501.4	687.0	941.8	1049.8	1077.5
82.5°	329.6	509.7	703.6	761.7	753.4
85°	177.3	318.5	412.7	421.0	421.0
87.5°	69.2	127.4	130.2	99.7	94.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)