

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: P473906

Luminaire Tested: **24CZ2-160VHE-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P473906
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-160VHE-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: 16403.6 lumens
Efficiency: N/A
Efficacy: 138.4 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

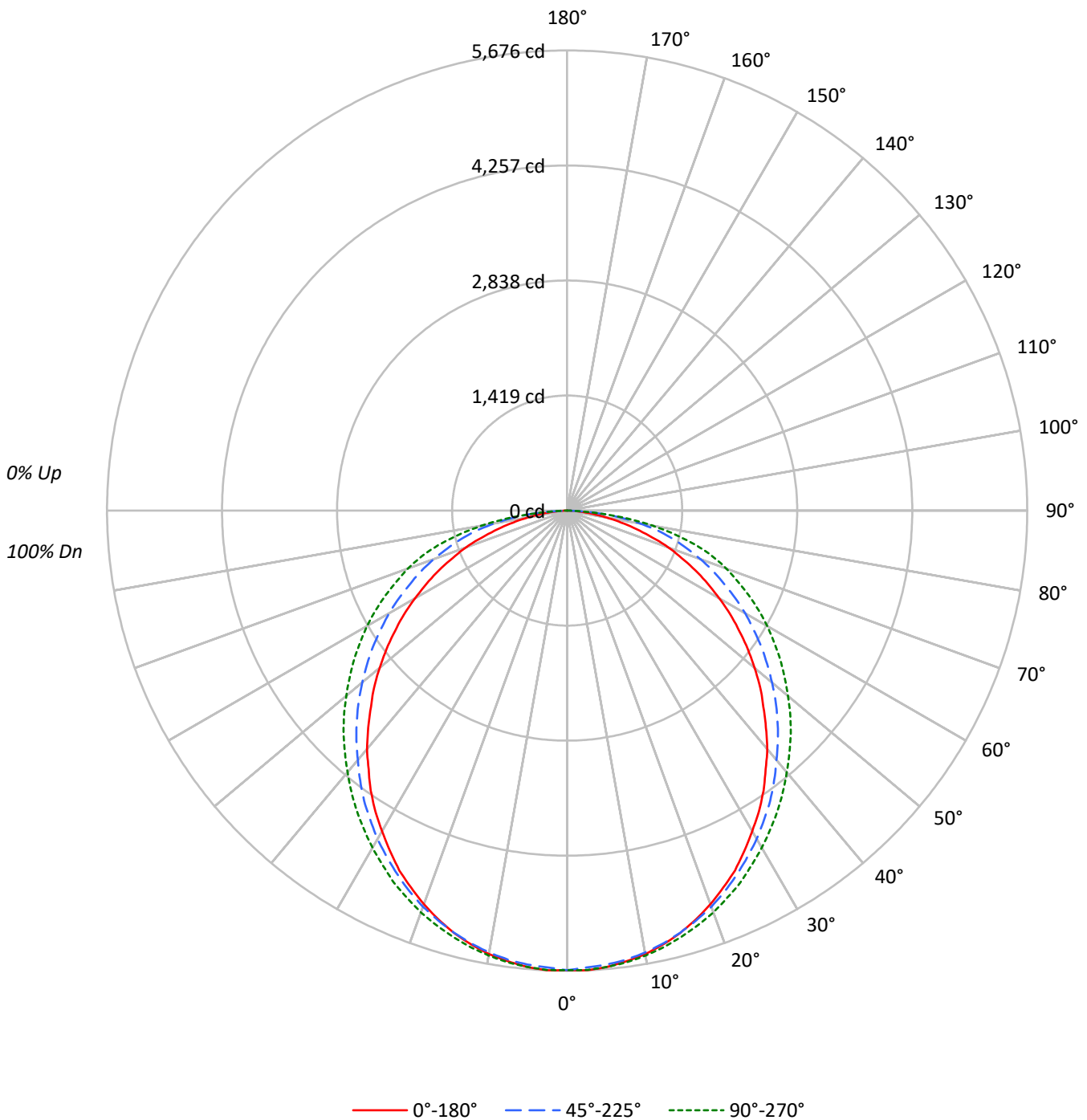
Input Watts (W): 118.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85
2	98	89	82	76	95	88	81	75	84	78	74	81	76	72	78	74	70
3	89	78	70	63	87	77	69	63	74	67	61	71	65	60	68	63	59
4	82	69	60	53	79	68	59	53	65	58	52	63	57	51	61	55	51
5	75	62	53	46	73	61	52	46	58	51	45	56	50	44	55	49	44
6	69	56	46	40	67	55	46	40	53	45	39	51	44	39	49	43	39
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31
9	56	42	34	28	54	42	34	28	40	33	28	39	33	28	38	32	28
10	52	39	31	26	51	38	31	26	37	30	25	36	30	25	36	30	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	7627	7627	7627
5°	7631	7592	7631
10°	7589	7564	7614
15°	7512	7508	7582
20°	7399	7445	7551
25°	7270	7353	7514
30°	7094	7267	7460
35°	6934	7173	7430
40°	6744	7056	7401
45°	6515	6984	7423
50°	6318	6906	7444
55°	6086	6857	7528
60°	5833	6825	7666
65°	5560	6800	7863
70°	5233	6870	8225
75°	4601	7012	8555
80°	3840	7063	8254
85°	2742	6055	6137



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	535.8	3.3
10°-20°	1526.3	9.3
20°-30°	2289.7	14.0
30°-40°	2733.7	16.7
40°-50°	2831.6	17.3
50°-60°	2606.8	15.9
60°-70°	2102.8	12.8
70°-80°	1373.9	8.4
80°-90°	402.8	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°	4351.9	26.5
0°-40°	7085.6	43.2
0°-60°	12524.0	76.3
0°-90°	16403.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	16403.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5668	5668	5668	5668	5668	
5°	5650	5645	5621	5653	5650	536
15°	5393	5393	5390	5443	5443	1520
25°	4897	4908	4953	5043	5062	2252
35°	4222	4259	4367	4486	4524	2637
45°	3424	3509	3670	3835	3901	2647
55°	2594	2706	2923	3138	3209	2322
65°	1746	1866	2136	2380	2470	1727
75°	885	1052	1349	1582	1646	945
85°	178	307	392	416	398	220
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5668.5	5668.5	5668.5	5668.5	5668.5
2.5°	5676.4	5668.5	5639.3	5673.8	5671.1
5°	5649.9	5644.6	5620.8	5652.6	5649.9
7.5°	5607.5	5604.9	5586.3	5620.8	5620.8
10°	5554.5	5549.2	5536.0	5575.7	5573.1
12.5°	5480.3	5477.7	5469.7	5517.4	5514.8
15°	5392.9	5392.9	5390.2	5443.2	5443.2
17.5°	5286.9	5289.5	5300.1	5361.1	5363.7
20°	5167.6	5178.2	5199.4	5268.3	5273.6
22.5°	5032.5	5053.7	5082.8	5159.7	5167.6
25°	4897.3	4907.9	4953.0	5043.1	5061.6
27.5°	4733.0	4759.5	4817.8	4910.6	4929.1
30°	4566.1	4603.2	4677.4	4772.8	4801.9
32.5°	4401.7	4433.5	4521.0	4629.7	4664.1
35°	4221.5	4258.6	4367.3	4486.5	4523.6
37.5°	4022.8	4081.1	4195.0	4332.8	4372.6
40°	3839.9	3892.9	4017.5	4171.2	4213.6
42.5°	3630.6	3696.8	3847.9	4004.2	4057.2
45°	3423.9	3508.7	3670.3	3834.6	3900.9
47.5°	3230.4	3299.3	3490.1	3675.6	3733.9
50°	3018.4	3097.9	3299.3	3495.4	3556.4
52.5°	2809.1	2904.5	3108.5	3315.2	3381.5
55°	2594.4	2705.7	2923.0	3137.7	3209.2
57.5°	2387.7	2499.0	2724.3	2952.2	3026.4
60°	2167.7	2287.0	2536.1	2756.1	2848.8
62.5°	1955.7	2075.0	2337.4	2575.9	2663.3
65°	1746.4	1865.6	2135.9	2379.8	2469.9
67.5°	1529.1	1658.9	1947.8	2183.6	2271.1
70°	1330.3	1454.9	1746.4	1998.1	2090.9
72.5°	1102.4	1250.8	1547.6	1796.7	1884.2
75°	885.1	1052.1	1348.9	1582.1	1645.7
77.5°	683.7	850.7	1147.5	1322.4	1362.1
80°	495.6	665.2	911.6	1033.5	1065.3
82.5°	320.7	495.6	659.9	742.0	752.6
85°	177.6	307.4	392.2	416.1	397.5
87.5°	63.6	116.6	114.0	92.8	74.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)