

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: P474003

Luminaire Tested: **24CZ2-145VHE-S-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474003
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-145VHE-S-UNV-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

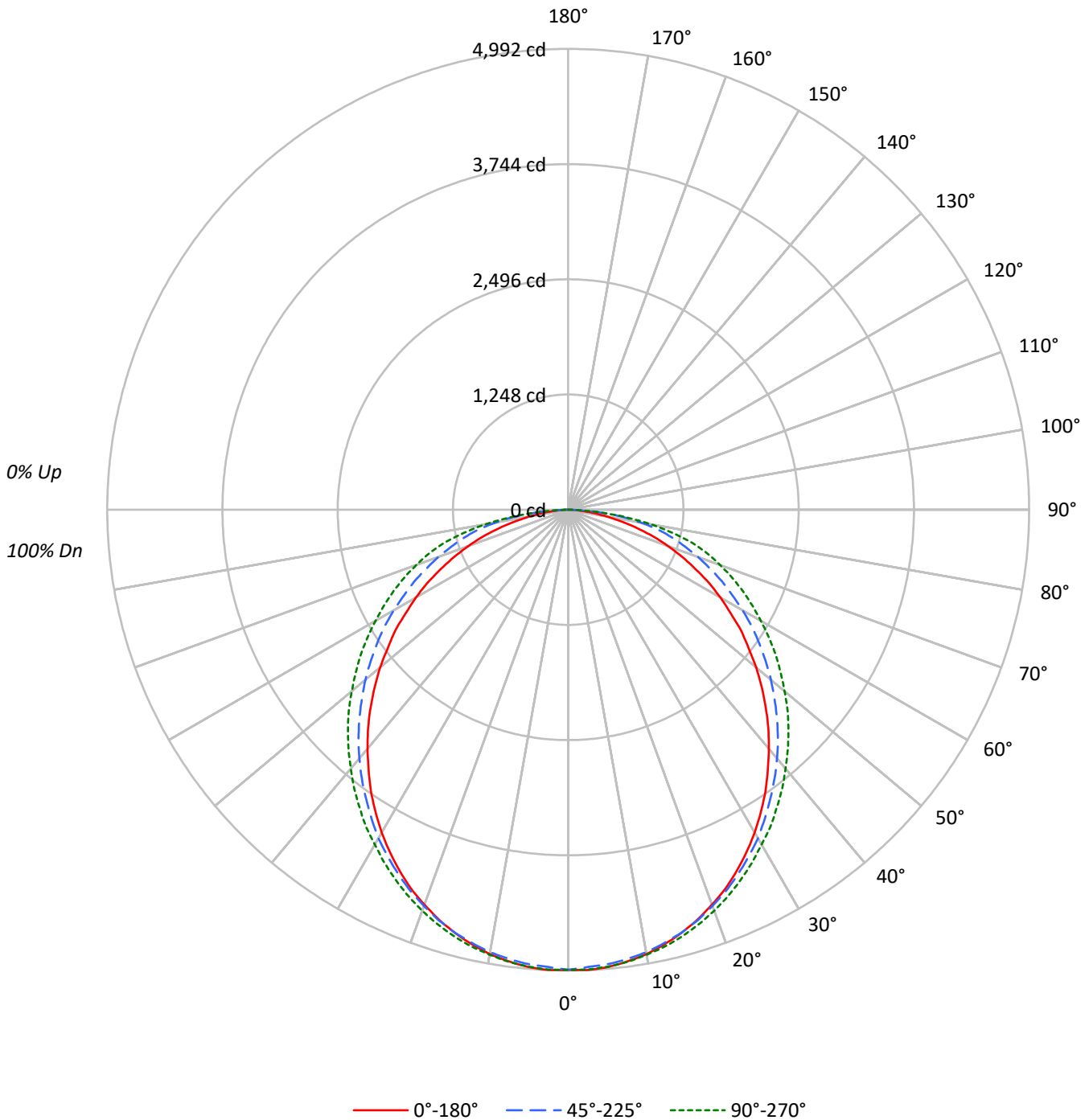
Lumens per Lamp: N/A
Luminaire Lumens: 14280.3 lumens
Efficiency: N/A
Efficacy: 135.6 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 105.3
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	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6707	6707	6707
5°	6716	6675	6710
10°	6679	6650	6688
15°	6610	6607	6662
20°	6519	6539	6620
25°	6411	6467	6568
30°	6275	6385	6505
35°	6118	6272	6469
40°	5937	6180	6431
45°	5758	6083	6418
50°	5563	6000	6403
55°	5365	5926	6438
60°	5119	5870	6483
65°	4847	5847	6639
70°	4522	5878	6875
75°	4024	6048	7243
80°	3290	6179	7070
85°	2317	5395	5504



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	471.2	3.3
10°-20°	1342.1	9.4
20°-30°	2011.8	14.1
30°-40°	2396.2	16.8
40°-50°	2470.6	17.3
50°-60°	2254.5	15.8
60°-70°	1802.8	12.6
70°-80°	1177.5	8.2
80°-90°	353.5	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°	3825.2	26.8
0°-40°	6221.4	43.6
0°-60°	10946.5	76.7
0°-90°	14280.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14280.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4984	4984	4984	4984	4984	
5°	4973	4963	4942	4973	4968	472
15°	4745	4748	4743	4783	4783	1338
25°	4318	4325	4356	4419	4424	1988
35°	3725	3751	3819	3915	3938	2327
45°	3026	3080	3197	3331	3373	2333
55°	2287	2353	2526	2693	2744	2037
65°	1522	1626	1837	2017	2085	1510
75°	774	903	1163	1351	1393	823
85°	150	270	350	356	356	190
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4984.5	4984.5	4984.5	4984.5	4984.5
2.5°	4991.5	4984.5	4958.7	4989.2	4984.5
5°	4972.7	4963.4	4942.3	4972.7	4968.1
7.5°	4935.2	4930.5	4909.4	4944.6	4939.9
10°	4888.3	4883.6	4867.2	4902.4	4895.3
12.5°	4822.6	4820.3	4808.6	4850.8	4846.1
15°	4745.2	4747.6	4742.9	4782.7	4782.7
17.5°	4656.1	4653.7	4663.1	4712.4	4707.7
20°	4552.9	4555.2	4567.0	4623.2	4623.2
22.5°	4445.0	4442.6	4468.4	4524.7	4529.4
25°	4318.3	4325.4	4355.8	4419.2	4423.9
27.5°	4182.3	4194.0	4231.5	4304.2	4311.3
30°	4039.2	4053.3	4109.6	4177.6	4187.0
32.5°	3882.0	3912.5	3964.1	4050.9	4074.4
35°	3724.9	3750.7	3818.7	3914.9	3938.3
37.5°	3551.3	3593.5	3670.9	3776.5	3807.0
40°	3380.1	3422.3	3518.5	3628.7	3661.5
42.5°	3206.5	3251.0	3361.3	3485.6	3520.8
45°	3025.9	3079.8	3197.1	3330.8	3373.0
47.5°	2840.6	2903.9	3030.6	3176.0	3222.9
50°	2657.6	2720.9	2866.4	3016.5	3058.7
52.5°	2460.6	2540.3	2695.1	2857.0	2899.2
55°	2287.0	2352.7	2526.2	2692.8	2744.4
57.5°	2082.9	2172.1	2357.4	2526.2	2575.5
60°	1902.3	1984.4	2181.4	2352.7	2409.0
62.5°	1719.4	1803.8	2000.8	2195.5	2247.1
65°	1522.3	1625.5	1836.6	2017.2	2085.3
67.5°	1334.7	1442.6	1658.4	1850.7	1921.1
70°	1149.4	1259.6	1494.2	1691.2	1747.5
72.5°	966.4	1081.3	1325.3	1517.6	1583.3
75°	774.1	903.1	1163.4	1351.1	1393.3
77.5°	593.4	736.5	999.2	1125.9	1156.4
80°	424.6	581.7	797.5	889.0	912.5
82.5°	279.1	431.6	595.8	645.0	638.0
85°	150.1	269.7	349.5	356.5	356.5
87.5°	58.6	107.9	110.2	84.4	79.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)