

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: P474053

Luminaire Tested: **24CZ2-145VHE-S-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474053
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-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: 14798.3 lumens
Efficiency: N/A
Efficacy: 140.5 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

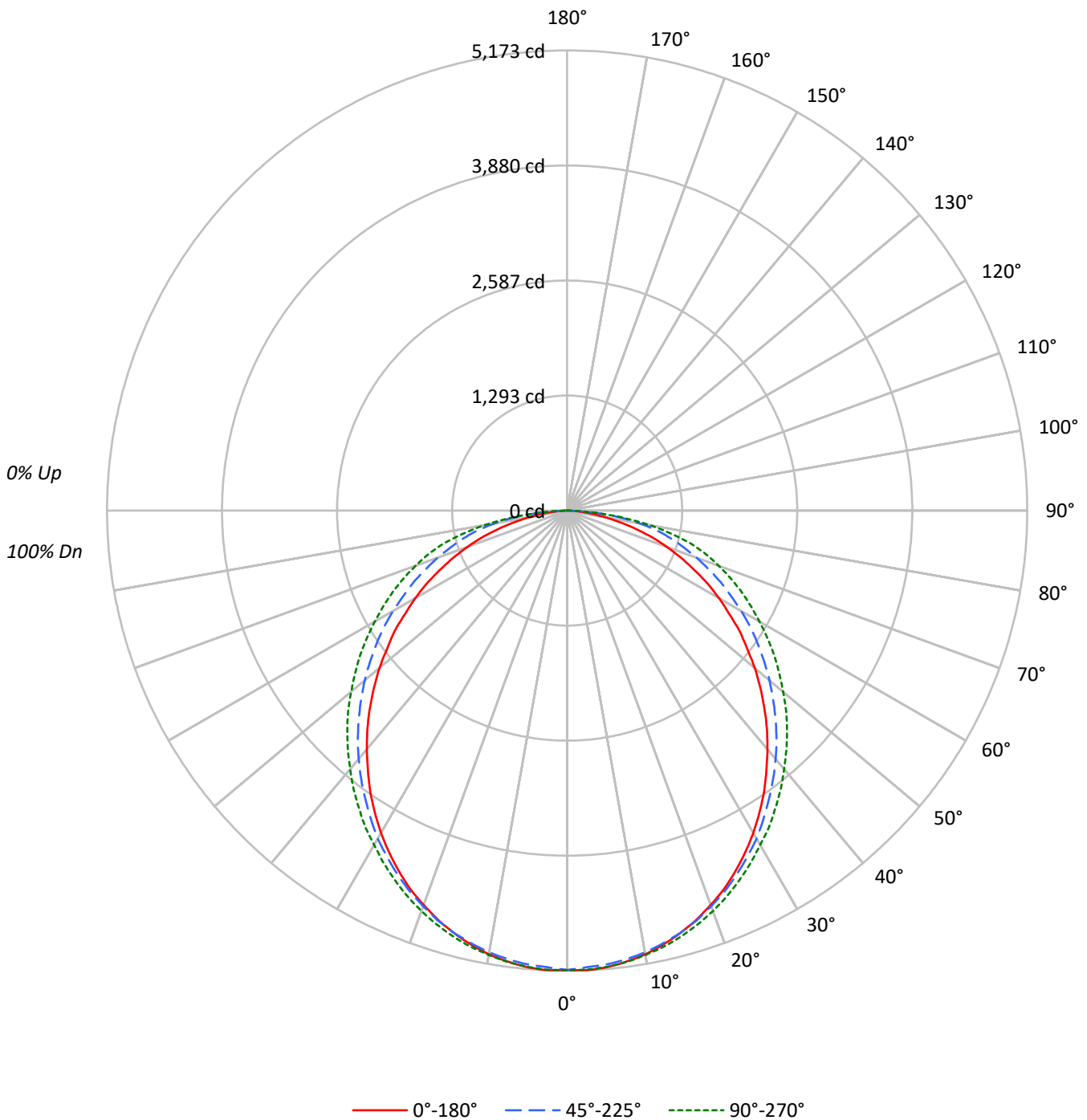
Input Watts (W): 105.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P474053

CATALOG NUMBER: 24CZ2-145VHE-S-UNV-L835-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474053

CATALOG NUMBER: 24CZ2-145VHE-S-UNV-L835-CD1-U

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°	6950	6950	6950
5°	6960	6917	6953
10°	6921	6891	6931
15°	6850	6846	6904
20°	6755	6776	6860
25°	6643	6701	6806
30°	6503	6616	6741
35°	6340	6500	6704
40°	6152	6404	6664
45°	5966	6304	6651
50°	5765	6217	6635
55°	5559	6141	6671
60°	5305	6083	6717
65°	5022	6059	6880
70°	4685	6091	7124
75°	4170	6267	7506
80°	3409	6403	7326
85°	2402	5592	5704



TEST NUMBER: P474053

CATALOG NUMBER: 24CZ2-145VHE-S-UNV-L835-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	488.3	3.3
10°-20°	1390.8	9.4
20°-30°	2084.8	14.1
30°-40°	2483.1	16.8
40°-50°	2560.3	17.3
50°-60°	2336.2	15.8
60°-70°	1868.1	12.6
70°-80°	1220.2	8.2
80°-90°	366.4	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°	3963.9	26.8
0°-40°	6447.0	43.6
0°-60°	11343.5	76.7
0°-90°	14798.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	14798.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	5165	5165	5165	5165	5165	
5°	5153	5143	5122	5153	5148	489
15°	4917	4920	4915	4956	4956	1386
25°	4475	4482	4514	4580	4584	2060
35°	3860	3887	3957	4057	4081	2411
45°	3136	3192	3313	3452	3495	2418
55°	2370	2438	2618	2790	2844	2111
65°	1578	1684	1903	2090	2161	1564
75°	802	936	1206	1400	1444	852
85°	156	280	362	370	370	197
90°	0	0	0	0	0	



TEST NUMBER: P474053

CATALOG NUMBER: 24CZ2-145VHE-S-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	5165.3	5165.3	5165.3	5165.3	5165.3
2.5°	5172.6	5165.3	5138.5	5170.1	5165.3
5°	5153.1	5143.4	5121.5	5153.1	5148.2
7.5°	5114.2	5109.4	5087.5	5123.9	5119.1
10°	5065.6	5060.7	5043.7	5080.2	5072.9
12.5°	4997.5	4995.1	4983.0	5026.7	5021.8
15°	4917.3	4919.8	4914.9	4956.2	4956.2
17.5°	4825.0	4822.5	4832.3	4883.3	4878.4
20°	4718.0	4720.4	4732.6	4790.9	4790.9
22.5°	4606.2	4603.8	4630.5	4688.8	4693.7
25°	4474.9	4482.2	4513.8	4579.5	4584.3
27.5°	4334.0	4346.1	4385.0	4460.4	4467.6
30°	4185.7	4200.3	4258.6	4329.1	4338.8
32.5°	4022.8	4054.4	4107.9	4197.8	4222.1
35°	3860.0	3886.7	3957.2	4056.9	4081.2
37.5°	3680.1	3723.8	3804.1	3913.4	3945.0
40°	3502.7	3546.4	3646.1	3760.3	3794.3
42.5°	3322.8	3369.0	3483.2	3612.0	3648.5
45°	3135.6	3191.5	3313.1	3451.6	3495.4
47.5°	2943.6	3009.2	3140.5	3291.2	3339.8
50°	2754.0	2819.6	2970.3	3125.9	3169.6
52.5°	2549.8	2632.5	2792.9	2960.6	3004.4
55°	2369.9	2438.0	2617.9	2790.5	2843.9
57.5°	2158.5	2250.8	2442.9	2617.9	2668.9
60°	1971.3	2056.4	2260.6	2438.0	2496.3
62.5°	1781.7	1869.2	2073.4	2275.1	2328.6
65°	1577.5	1684.5	1903.2	2090.4	2160.9
67.5°	1383.1	1494.9	1718.5	1917.8	1990.8
70°	1191.0	1305.3	1548.4	1752.5	1810.9
72.5°	1001.5	1120.6	1373.4	1572.7	1640.7
75°	802.1	935.8	1205.6	1400.1	1443.8
77.5°	615.0	763.2	1035.5	1166.7	1198.3
80°	440.0	602.8	826.4	921.2	945.5
82.5°	289.3	447.3	617.4	668.4	661.2
85°	155.6	279.5	362.2	369.5	369.5
87.5°	60.8	111.8	114.2	87.5	82.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)