

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: P474458

Luminaire Tested: **24CZ2-170VHE-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474458
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-170VHE-HRP-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 13833.6 lumens
Efficiency: N/A
Efficacy: 109.3 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

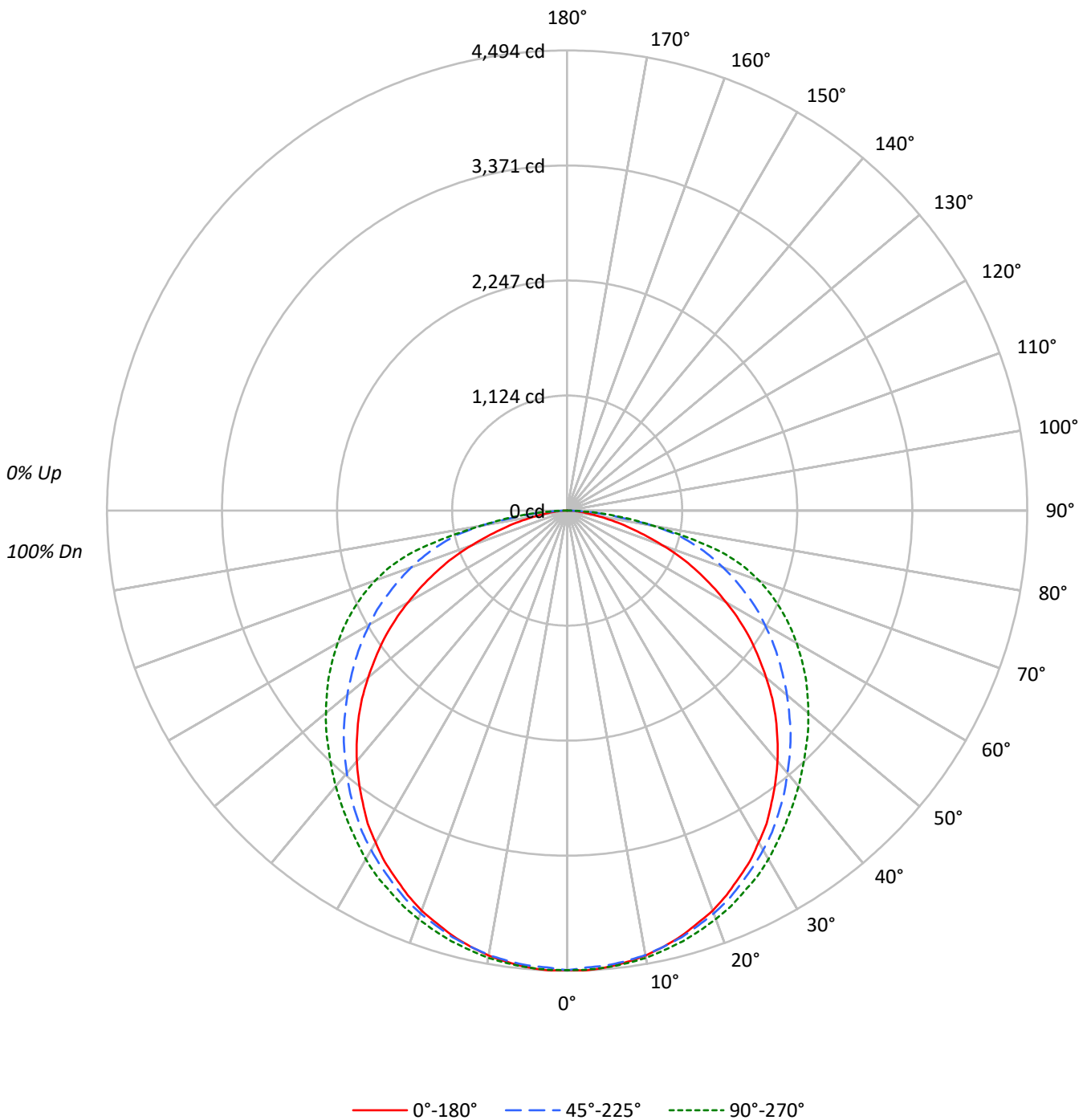
Input Watts (W): 126.6
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6039	6039	6039
5°	6047	6023	6047
10°	6029	6022	6061
15°	5994	6010	6066
20°	5954	5995	6078
25°	5880	5967	6087
30°	5812	5947	6110
35°	5717	5916	6117
40°	5615	5880	6174
45°	5488	5873	6270
50°	5310	5868	6437
55°	5121	5909	6670
60°	4831	6000	6966
65°	4462	6141	7358
70°	3896	6356	7838
75°	3161	6684	8099
80°	2335	6554	6554
85°	1789	4827	5451



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	425.2	3.1
10°-20°	1221.0	8.8
20°-30°	1858.8	13.4
30°-40°	2257.0	16.3
40°-50°	2384.5	17.2
50°-60°	2250.0	16.3
60°-70°	1870.8	13.5
70°-80°	1230.8	8.9
80°-90°	335.5	2.4
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°	3504.9	25.3
0°-40°	5761.9	41.7
0°-60°	10396.4	75.2
0°-90°	13833.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	13833.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4488	4488	4488	4488	4488	
5°	4477	4477	4459	4477	4477	425
15°	4303	4309	4315	4355	4355	1214
25°	3961	3984	4019	4089	4100	1827
35°	3481	3521	3602	3695	3724	2179
45°	2884	2942	3087	3237	3295	2221
55°	2183	2276	2519	2757	2844	1945
65°	1402	1564	1929	2212	2311	1385
75°	608	886	1286	1523	1558	655
85°	116	255	313	348	353	142
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4488.3	4488.3	4488.3	4488.3	4488.3
2.5°	4494.2	4488.3	4465.1	4488.3	4488.3
5°	4477.0	4477.0	4459.1	4477.0	4477.0
7.5°	4447.9	4447.9	4436.0	4459.1	4459.1
10°	4412.8	4412.8	4407.4	4436.0	4436.0
12.5°	4361.1	4366.4	4361.1	4395.5	4395.5
15°	4302.8	4308.8	4314.7	4355.1	4355.1
17.5°	4227.9	4239.2	4251.1	4296.9	4302.8
20°	4158.4	4163.7	4186.9	4239.2	4245.2
22.5°	4065.7	4082.9	4112.0	4163.7	4181.6
25°	3961.0	3984.2	4019.3	4088.8	4100.1
27.5°	3863.0	3880.2	3926.6	4002.1	4025.2
30°	3741.1	3770.2	3827.9	3903.4	3932.5
32.5°	3625.2	3654.3	3723.9	3804.7	3827.9
35°	3480.8	3521.2	3602.0	3694.8	3723.9
37.5°	3341.7	3382.1	3480.8	3584.8	3619.9
40°	3196.7	3243.0	3347.6	3468.9	3515.2
42.5°	3040.3	3103.9	3219.8	3353.0	3405.3
45°	2884.0	2942.3	3086.7	3237.1	3295.3
47.5°	2716.4	2785.9	2942.3	3121.8	3191.3
50°	2536.9	2623.7	2803.2	2999.9	3075.4
52.5°	2357.4	2455.4	2658.1	2878.1	2959.5
55°	2183.2	2275.9	2519.0	2756.8	2843.6
57.5°	1992.4	2108.3	2374.6	2629.0	2716.4
60°	1795.1	1922.9	2229.6	2495.9	2588.6
62.5°	1598.3	1743.4	2090.5	2357.4	2455.4
65°	1401.6	1563.9	1928.8	2212.3	2311.0
67.5°	1210.2	1389.7	1777.8	2062.0	2160.0
70°	990.3	1216.1	1615.6	1893.7	1992.4
72.5°	787.6	1048.5	1459.2	1720.2	1807.0
75°	608.1	886.2	1285.7	1522.8	1557.9
77.5°	445.8	724.0	1106.2	1187.0	1192.9
80°	301.4	578.9	845.8	833.9	845.8
82.5°	196.7	434.5	532.6	596.8	602.1
85°	115.9	255.0	312.7	347.7	353.1
87.5°	57.7	86.8	110.0	115.9	127.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)