

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: P474505

Luminaire Tested: **24CZ2-155VHE-HRP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474505
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-155VHE-HRP-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 12832.5 lumens
Efficiency: N/A
Efficacy: 112.6 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

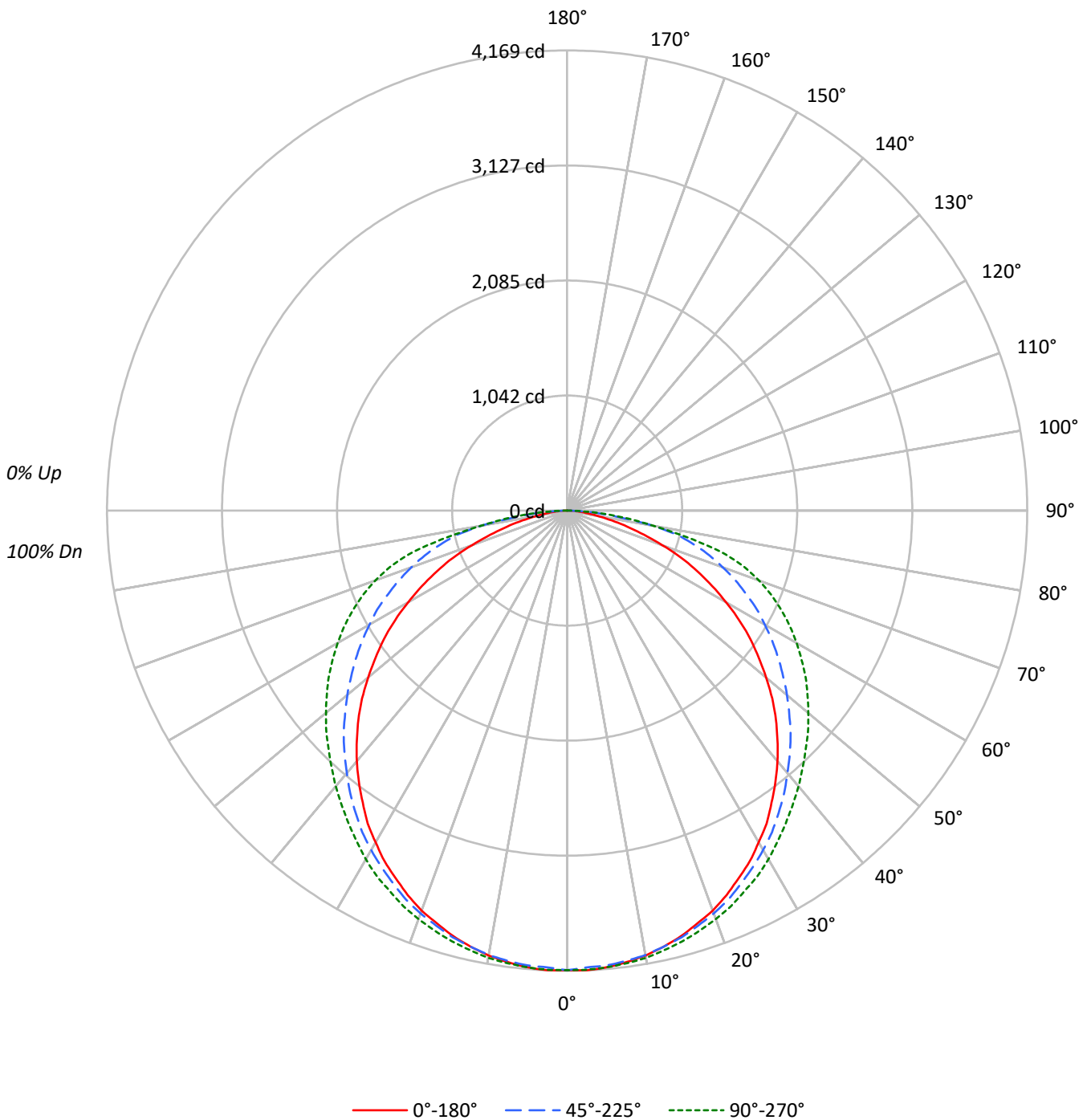
Input Watts (W): 114
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	5602	5602	5602
5°	5609	5587	5609
10°	5593	5586	5622
15°	5560	5575	5628
20°	5523	5561	5639
25°	5455	5535	5646
30°	5392	5517	5668
35°	5304	5488	5674
40°	5208	5454	5727
45°	5091	5448	5817
50°	4926	5443	5972
55°	4751	5482	6188
60°	4481	5565	6462
65°	4139	5696	6825
70°	3614	5896	7271
75°	2933	6200	7513
80°	2166	6079	6079
85°	1660	4477	5056



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	394.4	3.1
10°-20°	1132.6	8.8
20°-30°	1724.3	13.4
30°-40°	2093.6	16.3
40°-50°	2212.0	17.2
50°-60°	2087.2	16.3
60°-70°	1735.4	13.5
70°-80°	1141.7	8.9
80°-90°	311.2	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°	3251.3	25.3
0°-40°	5344.9	41.7
0°-60°	9644.1	75.2
0°-90°	12832.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	12832.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	4164	4164	4164	4164	4164	
5°	4153	4153	4136	4153	4153	394
15°	3992	3997	4002	4040	4040	1126
25°	3674	3696	3728	3793	3803	1695
35°	3229	3266	3341	3427	3454	2021
45°	2675	2729	2863	3003	3057	2060
55°	2025	2111	2337	2557	2638	1804
65°	1300	1451	1789	2052	2144	1285
75°	564	822	1193	1413	1445	608
85°	108	236	290	323	328	131
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	4163.5	4163.5	4163.5	4163.5	4163.5
2.5°	4169.0	4163.5	4142.0	4163.5	4163.5
5°	4153.0	4153.0	4136.5	4153.0	4153.0
7.5°	4126.0	4126.0	4115.0	4136.5	4136.5
10°	4093.5	4093.5	4088.5	4115.0	4115.0
12.5°	4045.5	4050.5	4045.5	4077.5	4077.5
15°	3991.5	3997.0	4002.5	4040.0	4040.0
17.5°	3922.0	3932.5	3943.5	3985.9	3991.5
20°	3857.5	3862.4	3883.9	3932.5	3938.0
22.5°	3771.5	3787.5	3814.5	3862.4	3879.0
25°	3674.4	3695.9	3728.5	3793.0	3803.4
27.5°	3583.4	3599.4	3642.4	3712.5	3734.0
30°	3470.4	3497.4	3550.9	3620.9	3648.0
32.5°	3362.9	3389.9	3454.4	3529.4	3550.9
35°	3228.9	3266.4	3341.4	3427.4	3454.4
37.5°	3099.9	3137.4	3228.9	3325.4	3357.9
40°	2965.3	3008.3	3105.4	3217.9	3260.9
42.5°	2820.3	2879.3	2986.8	3110.4	3158.9
45°	2675.3	2729.3	2863.3	3002.8	3056.9
47.5°	2519.8	2584.3	2729.3	2895.9	2960.4
50°	2353.3	2433.8	2600.3	2782.8	2852.9
52.5°	2186.8	2277.8	2465.8	2669.8	2745.3
55°	2025.2	2111.2	2336.8	2557.3	2637.8
57.5°	1848.2	1955.8	2202.8	2438.8	2519.8
60°	1665.2	1783.7	2068.2	2315.3	2401.3
62.5°	1482.7	1617.2	1939.2	2186.8	2277.8
65°	1300.2	1450.7	1789.2	2052.2	2143.8
67.5°	1122.6	1289.1	1649.2	1912.7	2003.7
70°	918.6	1128.1	1498.7	1756.7	1848.2
72.5°	730.6	972.6	1353.6	1595.7	1676.2
75°	564.1	822.1	1192.6	1412.6	1445.2
77.5°	413.5	671.6	1026.1	1101.1	1106.6
80°	279.6	537.0	784.6	773.6	784.6
82.5°	182.5	403.1	494.0	553.6	558.6
85°	107.5	236.5	290.0	322.6	327.5
87.5°	53.5	80.5	102.0	107.5	118.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)