

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: P474839

Luminaire Tested: **22CZ2-70VHE-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P474839
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-70VHE-UNV-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

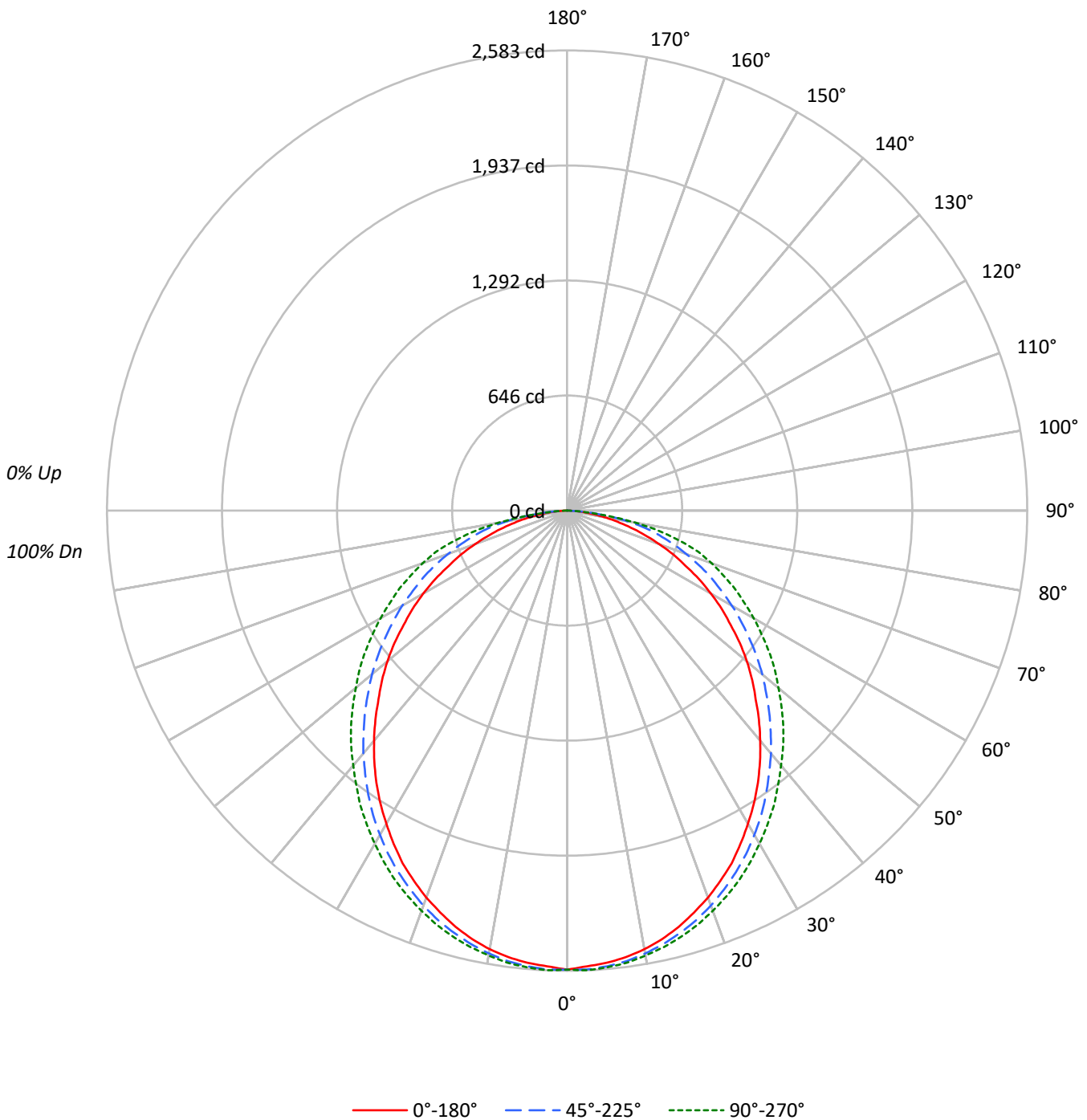
Lumens per Lamp: N/A
Luminaire Lumens: 7105.2 lumens
Efficiency: N/A
Efficacy: 144.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 49.3
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	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	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83
2	99	90	83	77	96	88	82	77	85	79	75	81	77	73	78	75	71	69
3	90	79	71	64	87	78	70	64	75	68	63	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	58	53	62	56	52	50
5	76	63	54	47	73	62	53	47	59	52	46	57	51	46	56	50	45	43
6	70	56	47	41	68	55	47	41	54	46	40	52	45	40	50	44	40	38
7	65	51	42	36	63	50	42	36	49	41	36	47	41	36	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	32	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	29	27
10	53	40	32	26	52	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6934	6934	6934
5°	6883	6936	6952
10°	6832	6897	6930
15°	6739	6835	6898
20°	6618	6755	6846
25°	6487	6652	6790
30°	6308	6532	6710
35°	6132	6393	6644
40°	5924	6251	6562
45°	5697	6109	6532
50°	5513	5984	6481
55°	5256	5854	6495
60°	5019	5754	6514
65°	4666	5679	6616
70°	4312	5600	6781
75°	3856	5574	6823
80°	3234	5283	5957
85°	2504	3616	3384



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	243.4	3.4
10°-20°	691.1	9.7
20°-30°	1030.4	14.5
30°-40°	1216.4	17.1
40°-50°	1239.8	17.4
50°-60°	1118.0	15.7
60°-70°	878.7	12.4
70°-80°	550.2	7.7
80°-90°	137.2	1.9
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°	1964.9	27.7
0°-40°	3181.3	44.8
0°-60°	5539.1	78.0
0°-90°	7105.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7105.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2577	2577	2577	2577	2577	
5°	2548	2554	2568	2574	2574	242
15°	2419	2430	2454	2472	2476	681
25°	2185	2201	2240	2275	2287	1004
35°	1866	1890	1946	2000	2023	1166
45°	1497	1530	1605	1683	1716	1158
55°	1120	1155	1248	1344	1384	1005
65°	733	778	892	991	1039	731
75°	371	426	536	632	656	394
85°	81	104	117	117	110	98
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2576.7	2576.7	2576.7	2576.7	2576.7
2.5°	2560.2	2566.2	2578.2	2582.7	2582.7
5°	2548.2	2554.2	2567.7	2573.7	2573.7
7.5°	2528.7	2534.7	2551.2	2558.7	2560.2
10°	2500.1	2507.6	2524.2	2536.2	2536.2
12.5°	2464.1	2471.6	2492.6	2507.6	2509.1
15°	2419.0	2429.6	2453.6	2471.6	2476.1
17.5°	2366.5	2383.0	2410.0	2432.6	2437.1
20°	2310.9	2327.5	2359.0	2384.5	2390.5
22.5°	2249.4	2264.4	2301.9	2333.5	2341.0
25°	2184.8	2201.3	2240.4	2274.9	2286.9
27.5°	2108.2	2127.7	2174.3	2213.3	2225.3
30°	2030.1	2054.2	2102.2	2145.8	2159.3
32.5°	1950.6	1973.1	2027.1	2073.7	2091.7
35°	1866.5	1890.5	1946.1	2000.1	2022.6
37.5°	1777.9	1801.9	1862.0	1923.5	1944.5
40°	1686.3	1714.8	1779.4	1845.4	1868.0
42.5°	1593.2	1623.2	1690.8	1764.4	1794.4
45°	1497.1	1530.1	1605.2	1683.3	1716.3
47.5°	1410.0	1437.0	1515.1	1600.7	1632.2
50°	1316.9	1342.4	1429.5	1515.1	1548.1
52.5°	1222.3	1246.3	1339.4	1429.5	1470.0
55°	1120.2	1154.7	1247.8	1343.9	1384.5
57.5°	1030.1	1061.6	1157.7	1255.3	1294.4
60°	932.5	965.5	1069.1	1168.2	1210.3
62.5°	834.9	870.9	976.0	1082.6	1121.7
65°	732.8	777.8	891.9	991.0	1039.1
67.5°	645.7	689.2	801.8	905.5	947.5
70°	548.1	599.1	711.7	816.9	861.9
72.5°	456.5	507.5	623.2	728.3	773.3
75°	370.9	426.4	536.1	632.2	656.2
77.5°	288.3	340.9	450.5	506.0	531.6
80°	208.7	259.8	340.9	378.4	384.4
82.5°	141.1	184.7	231.2	241.8	235.7
85°	81.1	103.6	117.1	117.1	109.6
87.5°	33.0	33.0	28.5	18.0	10.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)