

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: P474088

Luminaire Tested: **24CZ2-70VHE-S-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474088
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70VHE-S-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7269.5 lumens
Efficiency: N/A
Efficacy: 152.1 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

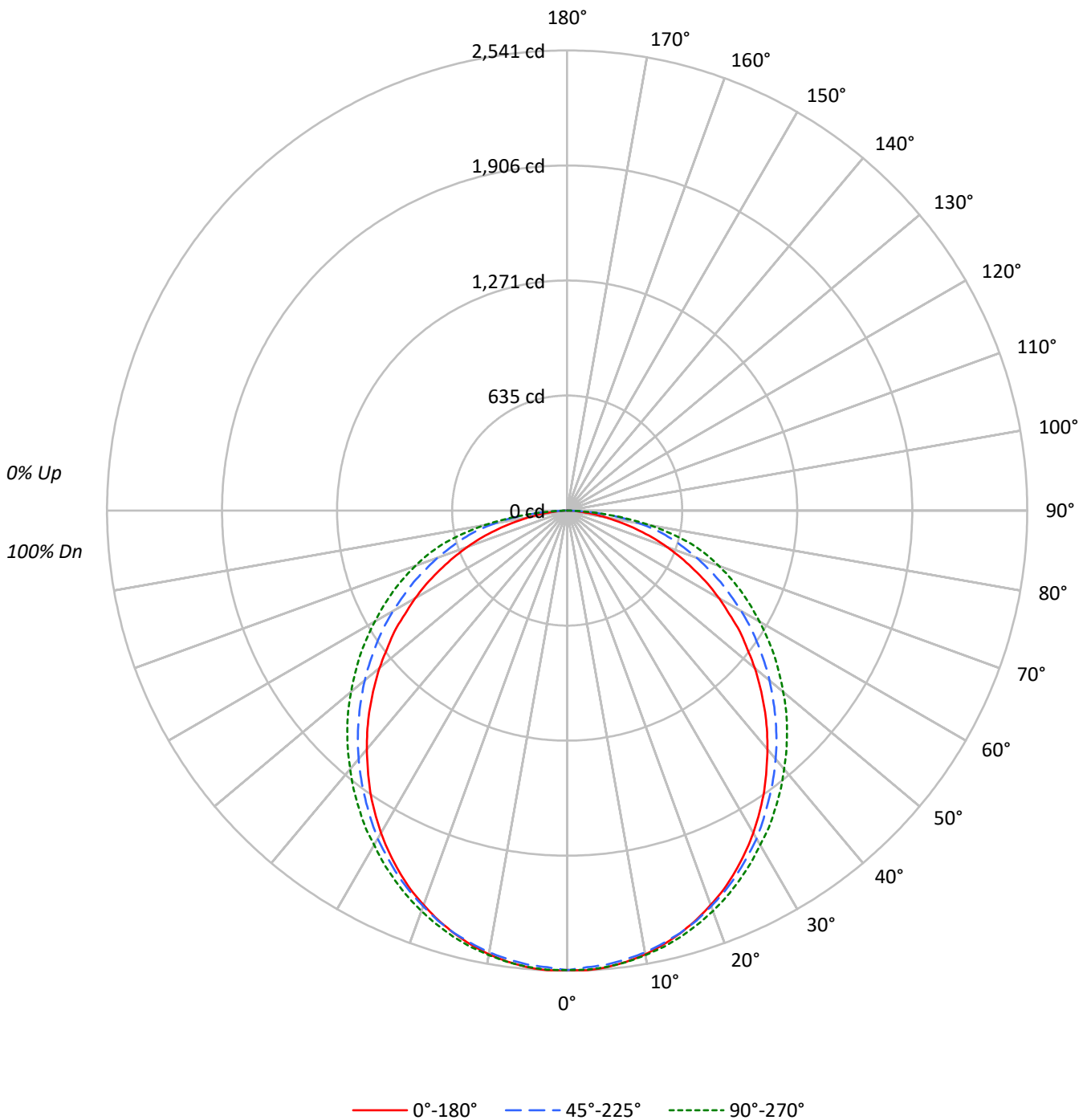
Input Watts (W): 47.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3414	3414	3414
5°	3419	3398	3416
10°	3400	3385	3405
15°	3365	3363	3391
20°	3319	3329	3370
25°	3264	3292	3343
30°	3195	3250	3311
35°	3115	3193	3293
40°	3022	3146	3274
45°	2931	3097	3267
50°	2832	3054	3259
55°	2731	3017	3277
60°	2606	2988	3300
65°	2467	2976	3379
70°	2302	2992	3500
75°	2048	3079	3687
80°	1674	3146	3599
85°	1179	2746	2802



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	239.9	3.3
10°-20°	683.2	9.4
20°-30°	1024.1	14.1
30°-40°	1219.8	16.8
40°-50°	1257.7	17.3
50°-60°	1147.7	15.8
60°-70°	917.7	12.6
70°-80°	599.4	8.2
80°-90°	180.0	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°	1947.2	26.8
0°-40°	3167.0	43.6
0°-60°	5572.4	76.7
0°-90°	7269.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7269.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2537	2537	2537	2537	2537	
5°	2531	2527	2516	2531	2529	240
15°	2416	2417	2414	2435	2435	681
25°	2198	2202	2217	2250	2252	1012
35°	1896	1909	1944	1993	2005	1185
45°	1540	1568	1628	1696	1717	1188
55°	1164	1198	1286	1371	1397	1037
65°	775	828	935	1027	1062	768
75°	394	460	592	688	709	419
85°	76	137	178	182	182	97
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2537.4	2537.4	2537.4	2537.4	2537.4
2.5°	2541.0	2537.4	2524.2	2539.8	2537.4
5°	2531.4	2526.6	2515.9	2531.4	2529.0
7.5°	2512.3	2509.9	2499.2	2517.1	2514.7
10°	2488.4	2486.0	2477.7	2495.6	2492.0
12.5°	2455.0	2453.8	2447.8	2469.3	2466.9
15°	2415.6	2416.8	2414.4	2434.7	2434.7
17.5°	2370.2	2369.0	2373.8	2398.9	2396.5
20°	2317.7	2318.9	2324.8	2353.5	2353.5
22.5°	2262.7	2261.5	2274.7	2303.3	2305.7
25°	2198.3	2201.8	2217.4	2249.6	2252.0
27.5°	2129.0	2135.0	2154.1	2191.1	2194.7
30°	2056.2	2063.3	2092.0	2126.6	2131.4
32.5°	1976.2	1991.7	2018.0	2062.1	2074.1
35°	1896.2	1909.3	1943.9	1992.9	2004.8
37.5°	1807.8	1829.3	1868.7	1922.4	1938.0
40°	1720.6	1742.1	1791.1	1847.2	1863.9
42.5°	1632.3	1655.0	1711.1	1774.4	1792.3
45°	1540.3	1567.8	1627.5	1695.6	1717.1
47.5°	1446.0	1478.2	1542.7	1616.8	1640.6
50°	1352.9	1385.1	1459.1	1535.6	1557.1
52.5°	1252.6	1293.2	1372.0	1454.4	1475.9
55°	1164.2	1197.6	1286.0	1370.8	1397.0
57.5°	1060.3	1105.7	1200.0	1286.0	1311.1
60°	968.4	1010.2	1110.5	1197.6	1226.3
62.5°	875.2	918.2	1018.5	1117.6	1143.9
65°	774.9	827.5	934.9	1026.9	1061.5
67.5°	679.4	734.3	844.2	942.1	977.9
70°	585.1	641.2	760.6	860.9	889.6
72.5°	492.0	550.5	674.6	772.6	806.0
75°	394.0	459.7	592.3	687.8	709.3
77.5°	302.1	374.9	508.7	573.1	588.7
80°	216.1	296.1	406.0	452.5	464.5
82.5°	142.1	219.7	303.3	328.4	324.8
85°	76.4	137.3	177.9	181.5	181.5
87.5°	29.9	54.9	56.1	43.0	40.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)