

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: P475303

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

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475303
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-70VHE-SQR-UNV-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6750.5 lumens
Efficiency: N/A
Efficacy: 136.9 lumens/watt
Spacing Criteria (0/90/45): 1.16 / 1.31 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

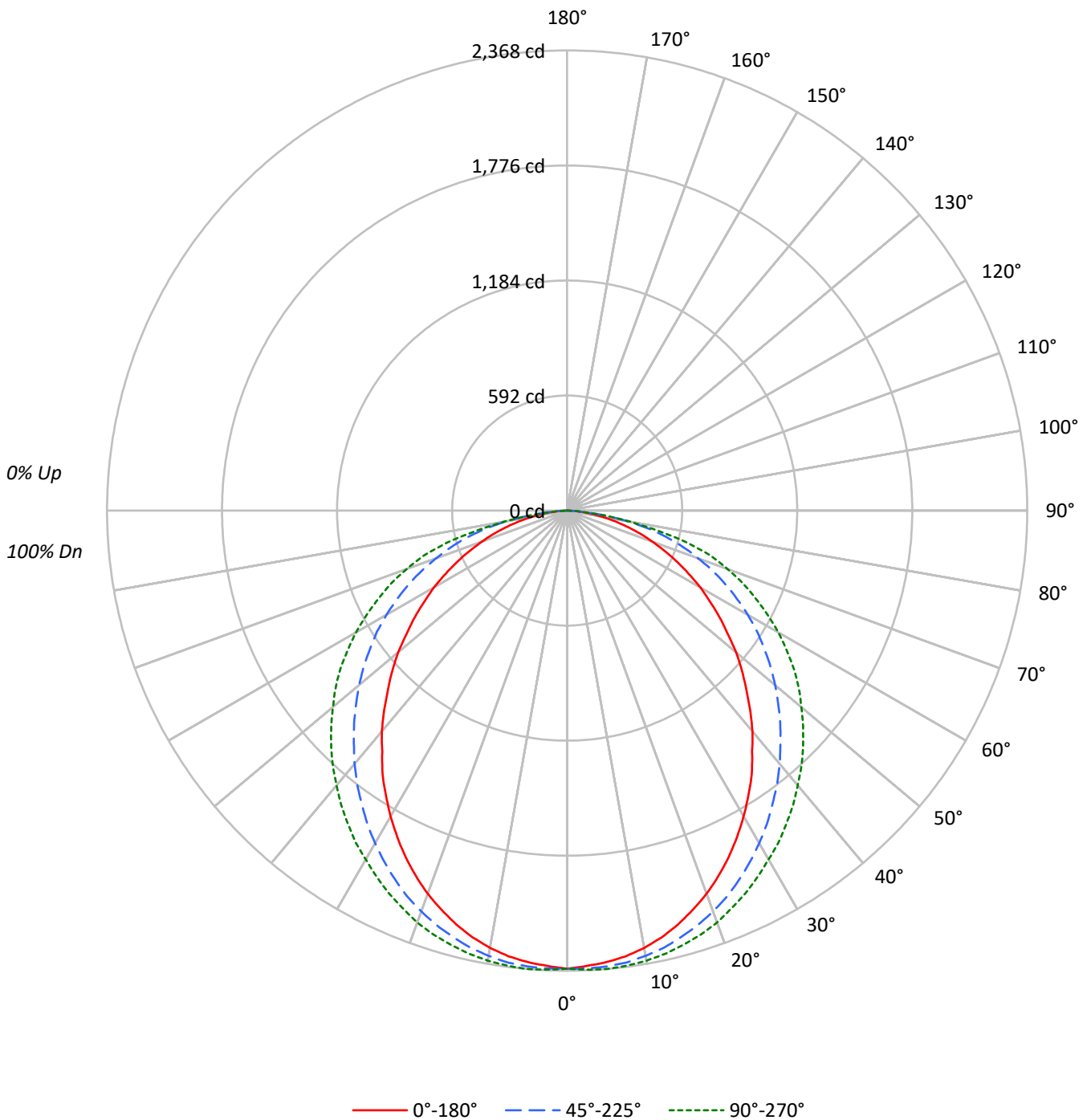
Input Watts (W): 49.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	109	104	99	95	106	101	97	94	97	94	91	93	91	88	90	87	85	83					83			
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69					69			
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	64	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	43					43			
6	70	56	47	41	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	6345	6345	6345
5°	6300	6361	6396
10°	6243	6356	6426
15°	6142	6328	6445
20°	6009	6285	6459
25°	5841	6221	6450
30°	5645	6142	6441
35°	5441	6051	6463
40°	5211	5977	6484
45°	4963	5901	6535
50°	4748	5848	6585
55°	4494	5802	6690
60°	4259	5778	6760
65°	3978	5731	6813
70°	3654	5646	6906
75°	3299	5496	6660
80°	2830	4868	5016
85°	2276	2868	2276



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	223.6	3.3
10°-20°	639.2	9.5
20°-30°	960.0	14.2
30°-40°	1144.9	17.0
40°-50°	1183.7	17.5
50°-60°	1088.3	16.1
60°-70°	866.4	12.8
70°-80°	529.4	7.8
80°-90°	115.0	1.7
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°	1822.7	27.0
0°-40°	2967.7	44.0
0°-60°	5239.7	77.6
0°-90°	6750.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6750.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2358	2358	2358	2358	2358	
5°	2332	2339	2355	2365	2368	221
15°	2204	2230	2272	2304	2313	621
25°	1967	2015	2095	2153	2172	905
35°	1656	1727	1842	1939	1967	1033
45°	1304	1397	1551	1676	1717	1008
55°	958	1064	1237	1378	1426	857
65°	625	731	900	1025	1070	619
75°	317	410	529	622	641	338
85°	74	90	93	80	74	85
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2358.0	2358.0	2358.0	2358.0	2358.0
2.5°	2345.2	2348.4	2358.0	2364.7	2364.7
5°	2332.4	2338.8	2354.8	2364.7	2367.9
7.5°	2313.3	2322.9	2345.2	2358.0	2361.5
10°	2284.6	2297.3	2326.1	2345.2	2351.6
12.5°	2249.1	2268.3	2303.7	2329.2	2335.6
15°	2204.5	2230.0	2271.5	2303.7	2313.3
17.5°	2153.0	2185.0	2236.4	2275.0	2287.8
20°	2098.5	2130.7	2194.9	2239.6	2255.5
22.5°	2034.6	2076.1	2149.9	2201.3	2214.0
25°	1967.3	2015.1	2095.3	2153.0	2172.2
27.5°	1893.5	1951.3	2037.8	2108.4	2124.3
30°	1816.6	1877.6	1976.8	2053.8	2072.9
32.5°	1736.5	1807.0	1912.7	1999.2	2025.1
35°	1656.4	1726.9	1842.1	1938.6	1967.3
37.5°	1563.5	1646.8	1775.1	1874.4	1909.5
40°	1483.3	1563.5	1701.4	1810.2	1845.7
42.5°	1393.6	1480.2	1624.4	1742.9	1784.7
45°	1304.0	1396.8	1550.7	1675.9	1717.3
47.5°	1220.6	1313.5	1473.8	1605.3	1646.8
50°	1134.1	1230.2	1396.8	1531.6	1573.0
52.5°	1041.2	1146.9	1319.9	1454.6	1502.8
55°	957.9	1063.6	1236.6	1377.7	1425.9
57.5°	871.4	980.3	1160.0	1294.4	1339.4
60°	791.3	897.0	1073.5	1204.7	1256.1
62.5°	704.8	813.6	986.7	1115.0	1163.2
65°	624.7	730.7	900.1	1025.3	1070.0
67.5°	544.6	650.6	810.5	929.2	980.3
70°	464.4	570.4	717.6	833.1	877.8
72.5°	394.2	487.1	627.9	733.9	775.4
75°	317.3	410.2	528.6	621.5	640.6
77.5°	246.8	330.1	429.3	470.8	477.5
80°	182.6	246.8	314.1	323.7	323.7
82.5°	121.6	169.8	195.3	198.5	195.3
85°	73.7	89.7	92.9	80.1	73.7
87.5°	25.5	25.5	16.0	9.6	3.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)