

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: P474953

Luminaire Tested: **22CZ2-60VHE-S-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P474953  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-60VHE-S-UNV-L840-CD1-U  
Description: 2'X2' 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: 6279.3 lumens  
Efficiency: N/A  
Efficacy: 149.2 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

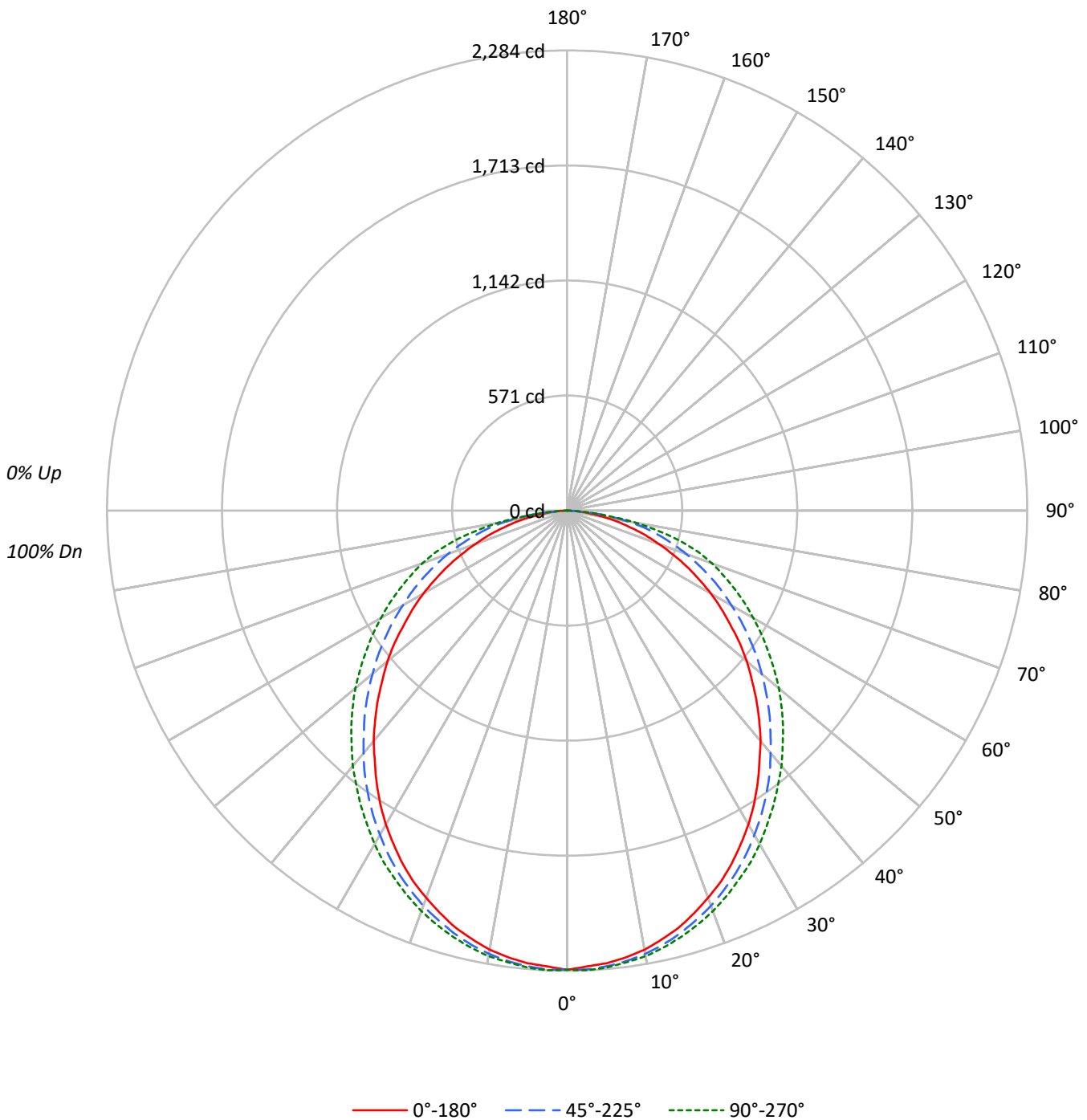
Input Watts (W): 42.1  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	88	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	74	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	32	26	38	31	26	37	31	26	36	30	26	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	6134	6134	6134
5°	6092	6132	6149
10°	6046	6104	6137
15°	5969	6050	6100
20°	5857	5979	6058
25°	5739	5888	5996
30°	5591	5775	5940
35°	5416	5656	5866
40°	5247	5519	5813
45°	5054	5401	5766
50°	4873	5280	5745
55°	4641	5176	5718
60°	4433	5070	5741
65°	4160	5012	5825
70°	3802	4950	6013
75°	3412	4914	6020
80°	2873	4640	5345
85°	2158	3143	2908



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	215.3	3.4
10°-20°	611.4	9.7
20°-30°	911.6	14.5
30°-40°	1075.6	17.1
40°-50°	1095.9	17.5
50°-60°	988.3	15.7
60°-70°	776.2	12.4
70°-80°	485.3	7.7
80°-90°	119.6	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°	1738.3	27.7
0°-40°	2813.9	44.8
0°-60°	4898.2	78.0
0°-90°	6279.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6279.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2279	2279	2279	2279	2279	
5°	2255	2260	2270	2275	2276	214
15°	2143	2150	2172	2187	2190	603
25°	1933	1944	1983	2012	2020	889
35°	1649	1672	1722	1769	1786	1031
45°	1328	1351	1419	1488	1515	1025
55°	989	1021	1103	1188	1219	887
65°	653	688	787	875	915	645
75°	328	374	473	553	579	351
85°	70	90	102	100	94	85
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2279.4	2279.4	2279.4	2279.4	2279.4
2.5°	2264.2	2268.7	2279.4	2283.9	2283.9
5°	2255.1	2259.6	2270.2	2274.8	2276.3
7.5°	2236.8	2242.9	2255.1	2261.1	2261.1
10°	2212.5	2220.1	2233.8	2242.9	2245.9
12.5°	2179.1	2188.2	2206.4	2217.1	2220.1
15°	2142.6	2150.2	2171.5	2186.7	2189.7
17.5°	2095.5	2107.7	2130.4	2150.2	2154.8
20°	2045.4	2059.0	2087.9	2110.7	2115.3
22.5°	1993.7	2004.3	2036.2	2063.6	2069.7
25°	1932.9	1943.5	1983.0	2011.9	2019.5
27.5°	1866.0	1884.3	1923.8	1957.2	1969.4
30°	1799.2	1817.4	1858.4	1898.0	1911.6
32.5°	1726.2	1746.0	1793.1	1834.1	1847.8
35°	1648.7	1671.5	1721.7	1768.8	1785.5
37.5°	1568.2	1594.0	1650.3	1700.4	1718.6
40°	1493.7	1512.0	1571.2	1629.0	1654.8
42.5°	1410.2	1434.5	1493.7	1559.1	1583.4
45°	1328.1	1350.9	1419.3	1487.7	1515.0
47.5°	1243.0	1271.9	1340.3	1416.2	1443.6
50°	1164.0	1188.3	1261.2	1341.8	1372.2
52.5°	1078.9	1104.7	1183.8	1267.3	1294.7
55°	989.2	1021.2	1103.2	1188.3	1218.7
57.5°	907.2	937.6	1024.2	1112.3	1144.2
60°	823.6	854.0	942.1	1031.8	1066.7
62.5°	735.5	770.4	866.2	952.8	992.3
65°	653.4	688.4	787.1	875.3	914.8
67.5°	566.8	607.8	706.6	799.3	838.8
70°	483.2	531.9	629.1	720.3	764.3
72.5°	408.8	448.3	550.1	645.8	682.3
75°	328.2	373.8	472.6	553.1	579.0
77.5°	259.8	299.4	393.6	446.8	463.5
80°	185.4	229.5	299.4	331.3	344.9
82.5°	123.1	159.6	203.6	209.7	206.7
85°	69.9	89.7	101.8	100.3	94.2
87.5°	27.4	30.4	22.8	13.7	10.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)