

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: P475301

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

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475301
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-60VHE-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: 5848.2 lumens
Efficiency: N/A
Efficacy: 138.9 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

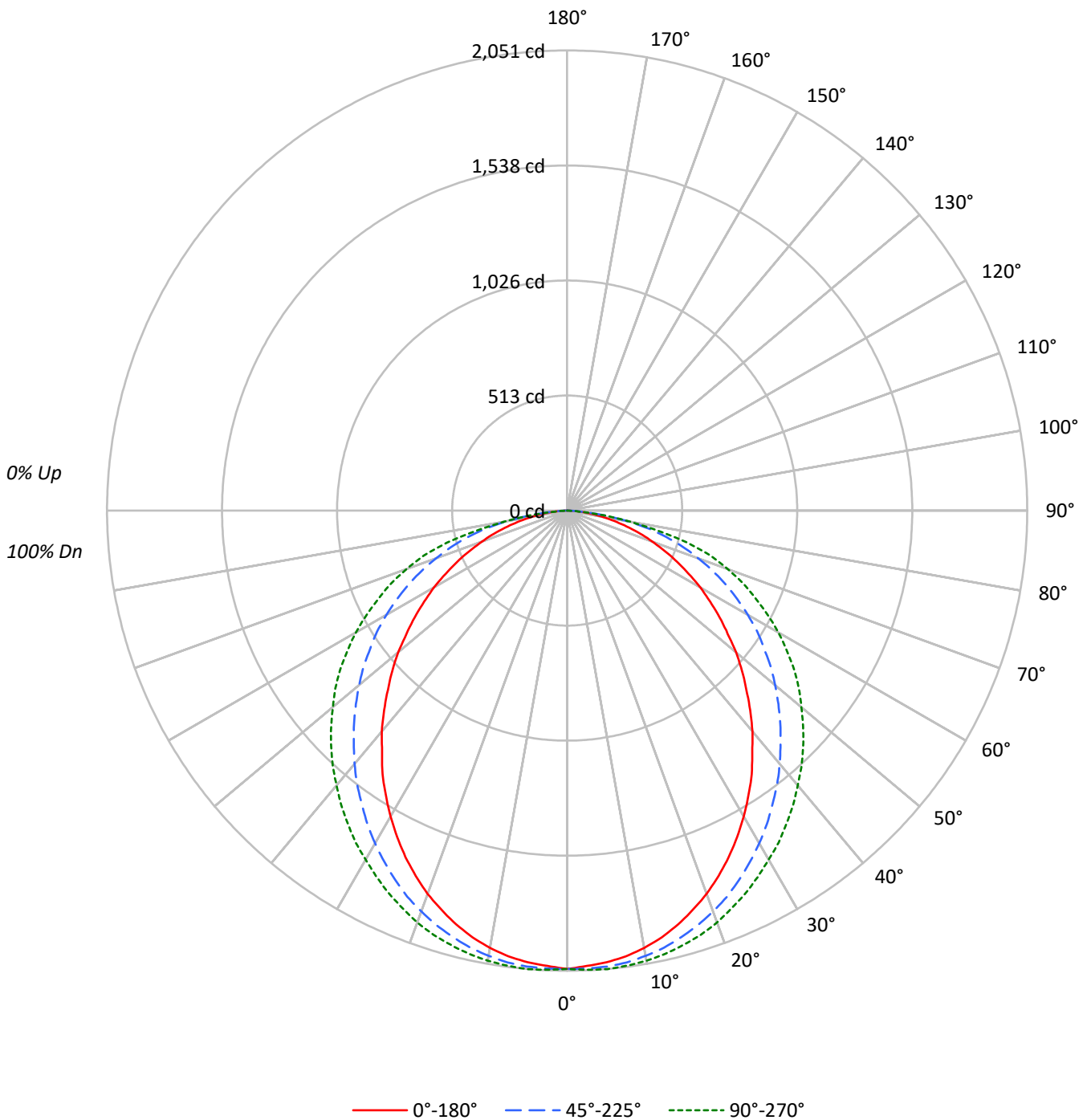
Input Watts (W): 42.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	5497	5497	5497
5°	5458	5511	5541
10°	5408	5507	5567
15°	5321	5482	5583
20°	5206	5445	5596
25°	5060	5390	5588
30°	4890	5322	5580
35°	4714	5243	5599
40°	4514	5178	5617
45°	4299	5112	5662
50°	4113	5066	5705
55°	3894	5026	5796
60°	3689	5005	5857
65°	3446	4965	5903
70°	3166	4891	5984
75°	2858	4761	5770
80°	2452	4217	4345
85°	1973	2485	1973



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	193.7	3.3
10°-20°	553.7	9.5
20°-30°	831.7	14.2
30°-40°	991.9	17.0
40°-50°	1025.5	17.5
50°-60°	942.8	16.1
60°-70°	750.6	12.8
70°-80°	458.6	7.8
80°-90°	99.6	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°	1579.1	27.0
0°-40°	2571.0	44.0
0°-60°	4539.4	77.6
0°-90°	5848.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	5848.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2043	2043	2043	2043	2043	
5°	2021	2026	2040	2049	2051	192
15°	1910	1932	1968	1996	2004	538
25°	1704	1746	1815	1865	1882	784
35°	1435	1496	1596	1680	1704	895
45°	1130	1210	1343	1452	1488	874
55°	830	921	1071	1194	1235	742
65°	541	633	780	888	927	536
75°	275	355	458	538	555	293
85°	64	78	80	69	64	74
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2042.8	2042.8	2042.8	2042.8	2042.8
2.5°	2031.7	2034.5	2042.8	2048.6	2048.6
5°	2020.7	2026.2	2040.0	2048.6	2051.4
7.5°	2004.1	2012.4	2031.7	2042.8	2045.9
10°	1979.2	1990.3	2015.2	2031.7	2037.3
12.5°	1948.5	1965.1	1995.8	2017.9	2023.5
15°	1909.8	1931.9	1967.9	1995.8	2004.1
17.5°	1865.3	1892.9	1937.5	1970.9	1982.0
20°	1818.0	1845.9	1901.5	1940.2	1954.0
22.5°	1762.7	1798.6	1862.5	1907.0	1918.1
25°	1704.3	1745.8	1815.2	1865.3	1881.9
27.5°	1640.4	1690.5	1765.5	1826.6	1840.4
30°	1573.8	1626.6	1712.6	1779.3	1795.9
32.5°	1504.4	1565.5	1657.0	1732.0	1754.4
35°	1435.0	1496.1	1595.9	1679.5	1704.3
37.5°	1354.5	1426.7	1537.9	1623.9	1654.3
40°	1285.1	1354.5	1474.0	1568.3	1599.0
42.5°	1207.4	1282.3	1407.3	1509.9	1546.2
45°	1129.7	1210.1	1343.4	1451.9	1487.8
47.5°	1057.5	1138.0	1276.8	1390.7	1426.7
50°	982.5	1065.8	1210.1	1326.9	1362.8
52.5°	902.1	993.6	1143.5	1260.2	1302.0
55°	829.9	921.4	1071.3	1193.6	1235.3
57.5°	755.0	849.2	1005.0	1121.4	1160.4
60°	685.5	777.1	930.0	1043.7	1088.2
62.5°	610.6	704.9	854.8	966.0	1007.7
65°	541.2	633.0	779.8	888.3	927.0
67.5°	471.8	563.6	702.1	805.0	849.2
70°	402.4	494.2	621.7	721.8	760.5
72.5°	341.5	422.0	543.9	635.8	671.7
75°	274.9	355.4	457.9	538.4	555.0
77.5°	213.8	285.9	371.9	407.9	413.7
80°	158.2	213.8	272.1	280.4	280.4
82.5°	105.3	147.1	169.2	172.0	169.2
85°	63.9	77.7	80.5	69.4	63.9
87.5°	22.1	22.1	13.8	8.3	2.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)