

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: P474638

Luminaire Tested: **24CZ2-70VHE-SQR-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474638
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-70VHE-SQR-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6644.7 lumens
Efficiency: N/A
Efficacy: 139.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

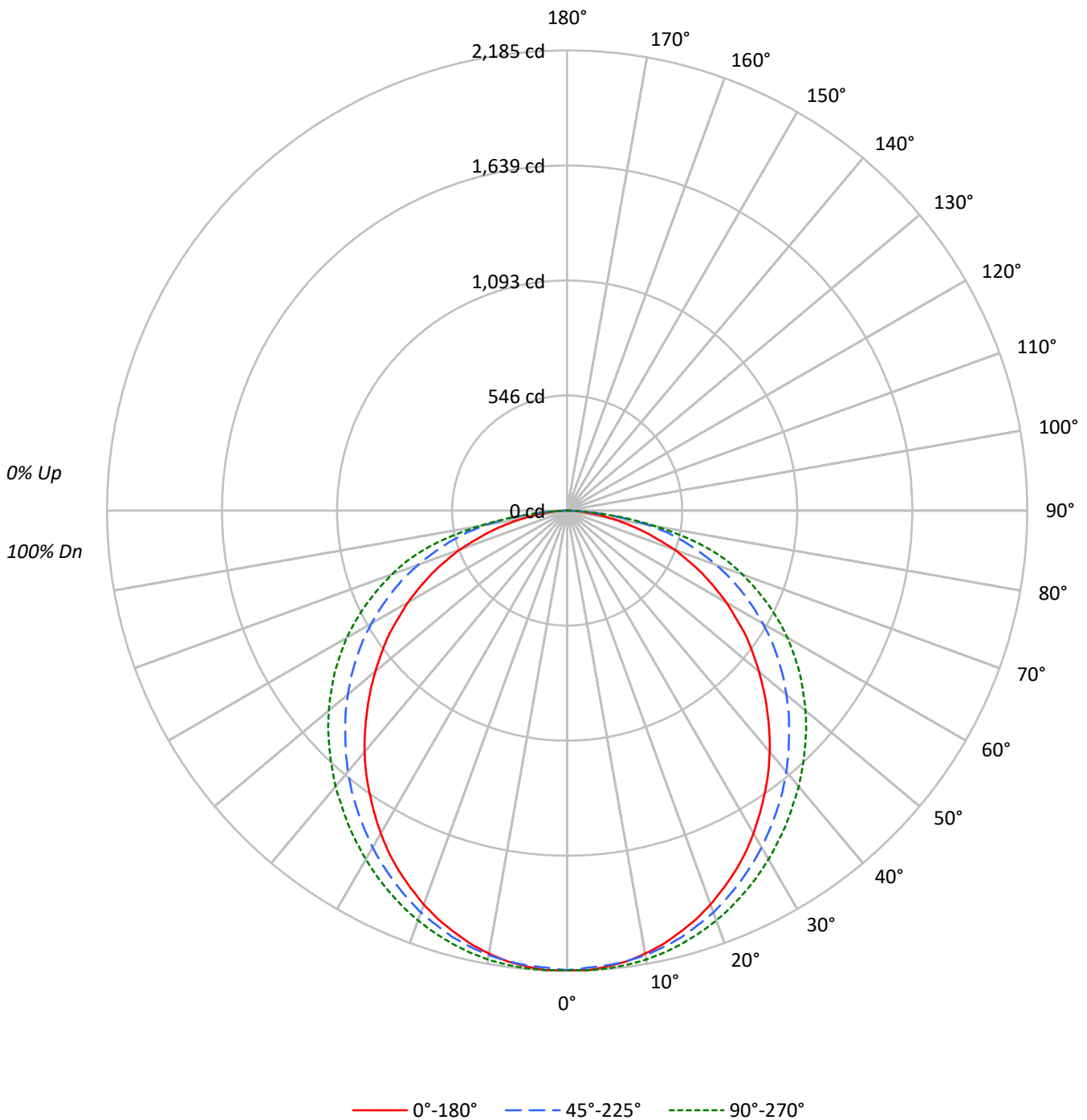
Input Watts (W): 47.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P474638

CATALOG NUMBER: 24CZ2-70VHE-SQR-UNV-L835-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474638

CATALOG NUMBER: 24CZ2-70VHE-SQR-UNV-L835-CD1-U

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	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82					82			
2	98	89	82	76	95	87	81	75	84	78	73	80	76	71	77	73	70	68					68			
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56					56			
4	81	69	59	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48					48			
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36					36			
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31					31			
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28					28			
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25					25			
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23					23			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	5873	5873	5873
5°	5873	5856	5896
10°	5836	5857	5914
15°	5773	5844	5924
20°	5700	5816	5931
25°	5607	5774	5932
30°	5499	5739	5941
35°	5374	5705	5963
40°	5258	5687	6011
45°	5114	5672	6076
50°	4977	5689	6186
55°	4861	5727	6325
60°	4696	5771	6502
65°	4509	5840	6699
70°	4276	5921	6965
75°	3830	6004	7196
80°	3225	6020	6530
85°	2393	4557	4295



TEST NUMBER: P474638

CATALOG NUMBER: 24CZ2-70VHE-SQR-UNV-L835-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	206.8	3.1
10°-20°	592.8	8.9
20°-30°	897.3	13.5
30°-40°	1085.5	16.3
40°-50°	1145.8	17.2
50°-60°	1080.5	16.3
60°-70°	890.8	13.4
70°-80°	584.4	8.8
80°-90°	160.7	2.4
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°	1696.9	25.5
0°-40°	2782.4	41.9
0°-60°	5008.8	75.4
0°-90°	6644.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6644.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2183	2183	2183	2183	2183	
5°	2174	2174	2168	2183	2183	206
15°	2072	2084	2098	2122	2126	585
25°	1888	1912	1945	1985	1998	870
35°	1636	1678	1737	1796	1815	1024
45°	1344	1404	1490	1570	1597	1037
55°	1036	1109	1221	1312	1348	923
65°	708	793	917	1015	1052	699
75°	368	463	578	669	692	389
85°	78	134	148	143	139	96
90°	0	0	0	0	0	



TEST NUMBER: P474638

CATALOG NUMBER: 24CZ2-70VHE-SQR-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2182.6	2182.6	2182.6	2182.6	2182.6
2.5°	2184.7	2182.6	2173.0	2185.8	2184.7
5°	2174.1	2174.1	2167.7	2182.6	2182.6
7.5°	2159.2	2160.3	2158.2	2175.1	2175.1
10°	2135.9	2140.1	2143.3	2162.4	2164.5
12.5°	2108.3	2115.7	2122.1	2145.4	2147.5
15°	2072.2	2083.8	2097.6	2122.1	2126.3
17.5°	2035.0	2048.8	2063.7	2095.5	2100.8
20°	1990.4	2006.3	2030.8	2062.6	2071.1
22.5°	1940.5	1962.8	1988.3	2026.5	2037.1
25°	1888.5	1911.9	1944.8	1985.1	1997.9
27.5°	1832.3	1859.9	1897.0	1943.7	1957.5
30°	1769.6	1801.5	1847.1	1897.0	1911.9
32.5°	1703.8	1741.0	1791.9	1847.1	1864.1
35°	1635.9	1678.3	1736.7	1796.2	1815.3
37.5°	1569.0	1611.4	1680.4	1743.1	1761.1
40°	1496.8	1543.5	1618.9	1685.8	1711.2
42.5°	1420.4	1475.6	1555.2	1629.5	1653.9
45°	1343.9	1404.4	1490.4	1570.0	1596.6
47.5°	1266.4	1333.3	1427.8	1508.5	1539.3
50°	1188.9	1260.1	1358.8	1445.8	1477.7
52.5°	1110.4	1184.7	1291.9	1384.3	1412.9
55°	1036.1	1109.3	1220.8	1312.1	1348.2
57.5°	950.1	1032.9	1150.7	1243.1	1278.1
60°	872.6	953.3	1072.2	1169.8	1208.1
62.5°	788.7	871.5	996.8	1094.5	1131.6
65°	708.1	793.0	917.2	1014.9	1052.0
67.5°	621.0	710.2	837.6	932.0	968.1
70°	543.5	627.4	752.6	849.2	885.3
72.5°	449.0	544.6	664.5	760.1	799.4
75°	368.4	462.8	577.5	668.8	692.1
77.5°	283.4	377.9	491.5	550.9	566.9
80°	208.1	297.2	388.5	420.4	421.4
82.5°	140.1	218.7	270.7	286.6	284.5
85°	77.5	133.8	147.6	143.3	139.1
87.5°	31.8	44.6	36.1	25.5	20.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)