

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: P475503

Luminaire Tested: **14CZ2-20-SQR-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475503
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ2-20-SQR-UNV-L840-CD1-U
Description: 1'X4' TROFFER LED MODULE, SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

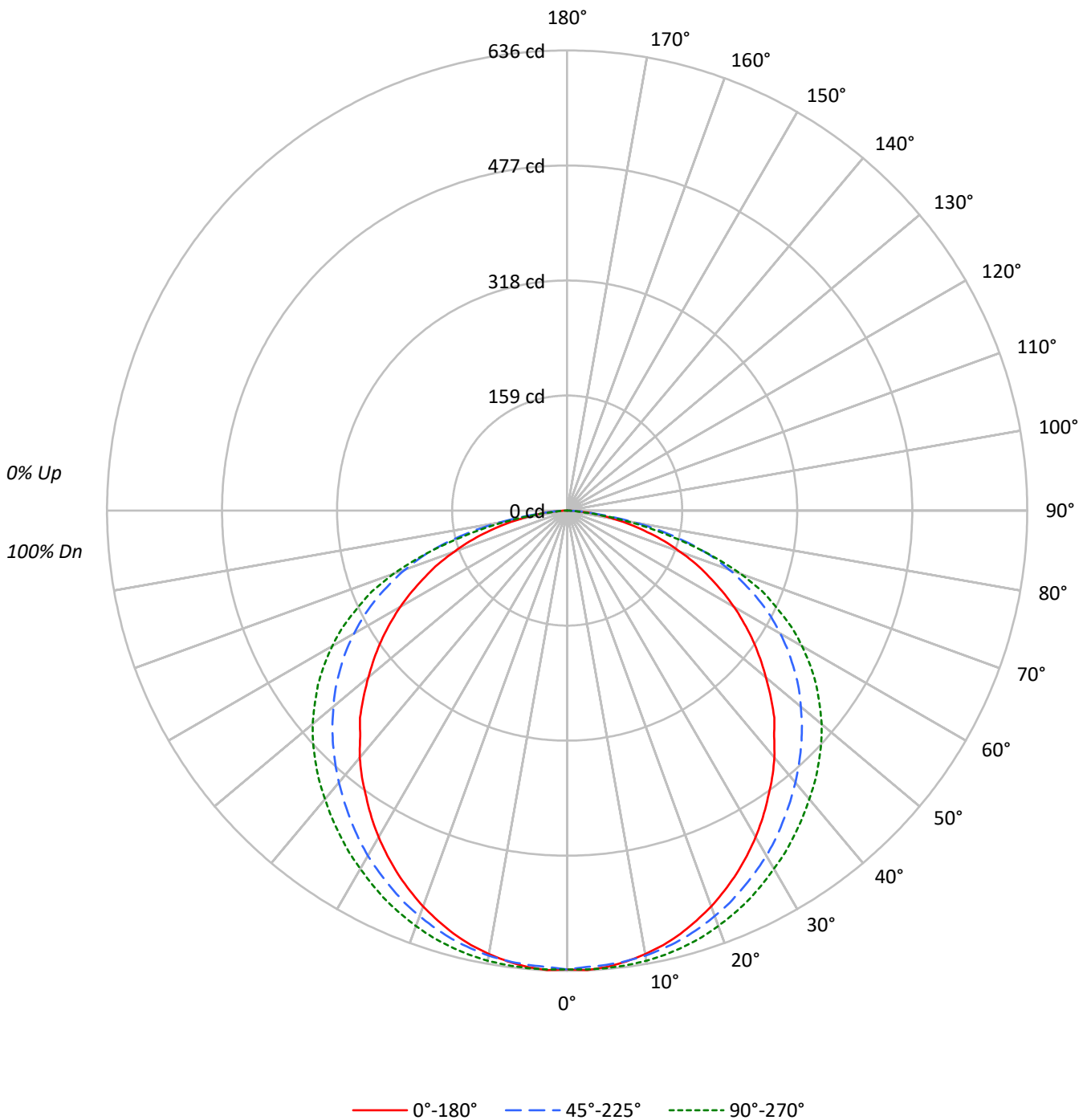
Lumens per Lamp: N/A
Luminaire Lumens: 1991.1 lumens
Efficiency: N/A
Efficacy: 127.6 lumens/watt
Spacing Criteria (0/90/45): 1.22 / 1.34 / 1.43
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 15.6
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: P475503
CATALOG NUMBER: 14CZ2-20-SQR-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P475503

CATALOG NUMBER: 14CZ2-20-SQR-UNV-L840-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	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	106	101	97	93	97	93	90	93	90	88	89	87	85	83
2	98	89	82	76	95	87	81	75	84	78	74	81	76	72	77	74	70	68
3	89	78	69	63	86	76	68	62	73	67	61	70	65	60	68	63	59	57
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	43	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	37	31	27	25
10	52	38	30	25	50	38	30	25	37	29	24	36	29	24	35	29	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1707	1707	1707
5°	1710	1702	1714
10°	1700	1707	1727
15°	1687	1709	1738
20°	1668	1708	1750
25°	1644	1708	1763
30°	1620	1712	1776
35°	1590	1714	1799
40°	1566	1724	1829
45°	1541	1741	1872
50°	1502	1765	1923
55°	1472	1796	1973
60°	1434	1830	2018
65°	1378	1861	2040
70°	1304	1876	2004
75°	1193	1812	1730
80°	1003	1481	1289
85°	729	747	485



TEST NUMBER: P475503

CATALOG NUMBER: 14CZ2-20-SQR-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	60.2	3.0
10°-20°	173.6	8.7
20°-30°	265.4	13.3
30°-40°	325.7	16.4
40°-50°	350.3	17.6
50°-60°	336.3	16.9
60°-70°	278.6	14.0
70°-80°	166.9	8.4
80°-90°	34.2	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°	499.2	25.1
0°-40°	824.9	41.4
0°-60°	1511.4	75.9
0°-90°	1991.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1991.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	634	634	634	634	634	
5°	633	632	630	635	635	60
15°	606	608	613	623	624	171
25°	554	563	575	590	594	255
35°	484	500	522	542	548	303
45°	405	426	458	483	492	311
55°	314	344	383	411	420	280
65°	216	252	292	315	320	215
75°	115	150	174	170	166	121
85°	24	34	24	16	16	30
90°	0	0	0	0	0	



TEST NUMBER: P475503

CATALOG NUMBER: 14CZ2-20-SQR-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	634.2	634.2	634.2	634.2	634.2
2.5°	635.8	634.2	631.3	635.8	634.7
5°	633.0	631.9	630.2	635.3	634.7
7.5°	628.5	628.5	628.0	634.2	633.6
10°	622.3	623.5	624.6	631.9	631.9
12.5°	615.0	616.2	619.5	628.0	628.5
15°	605.5	608.3	613.3	622.9	624.0
17.5°	594.2	598.7	605.5	616.7	618.4
20°	582.4	587.5	596.5	608.9	611.1
22.5°	568.4	575.7	586.9	599.9	602.7
25°	553.8	562.8	575.1	590.3	593.7
27.5°	538.0	548.7	563.3	579.1	583.0
30°	521.2	533.5	550.9	567.8	571.7
32.5°	503.2	517.8	536.9	555.4	560.5
35°	484.0	500.3	521.7	542.0	547.6
37.5°	465.5	482.9	506.5	528.5	534.6
40°	445.8	464.4	490.8	513.8	520.6
42.5°	423.3	445.8	474.5	499.2	507.1
45°	404.8	426.1	457.6	482.9	491.9
47.5°	381.7	406.5	440.2	467.2	476.2
50°	358.7	386.8	421.6	449.8	459.3
52.5°	336.2	364.9	403.7	431.2	439.6
55°	313.7	343.5	382.9	411.0	420.5
57.5°	290.1	322.7	362.6	390.7	398.6
60°	266.5	299.1	340.1	367.1	375.0
62.5°	241.7	276.6	317.6	342.4	350.2
65°	216.4	251.9	292.3	315.4	320.4
67.5°	192.8	228.8	265.4	286.7	291.8
70°	165.8	204.1	238.4	254.1	254.7
72.5°	141.1	176.5	209.1	213.6	212.5
75°	114.7	149.5	174.3	170.3	166.4
77.5°	88.8	124.2	137.2	125.9	123.1
80°	64.7	96.7	95.6	84.9	83.2
82.5°	44.4	66.9	55.1	45.0	41.6
85°	23.6	34.3	24.2	16.3	15.7
87.5°	9.0	8.4	5.1	3.4	3.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)