

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: P475395

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

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475395
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 14CZ2-20-S-UNV-L840-CD1-U
Description: 1'X4' TROFFER LED MODULE, SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

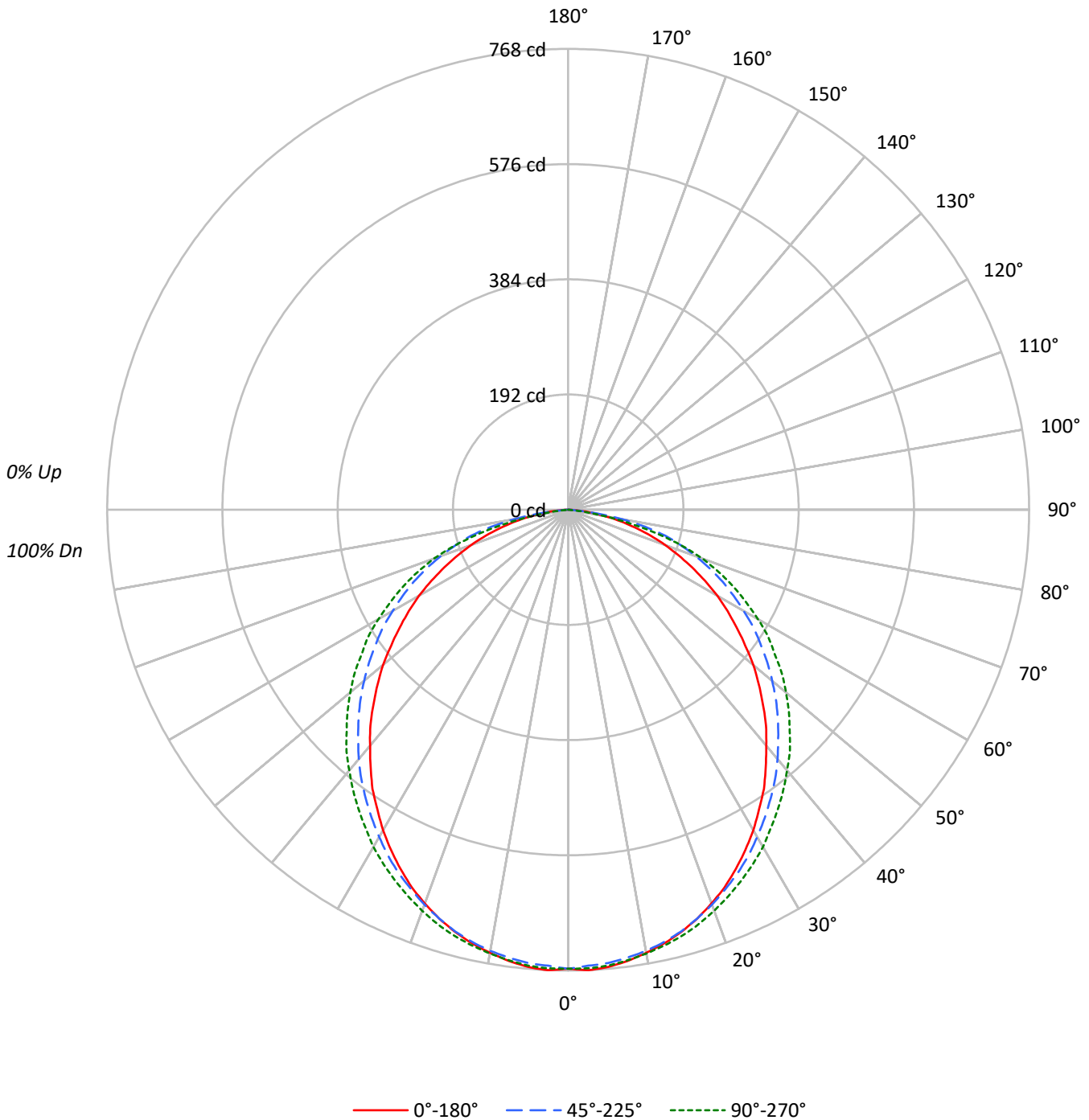
Lumens per Lamp: N/A
Luminaire Lumens: 2138.3 lumens
Efficiency: N/A
Efficacy: 137.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.36
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')
CIE Type: Direct

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: P475395
CATALOG NUMBER: 14CZ2-20-S-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P475395

CATALOG NUMBER: 14CZ2-20-S-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	109	104	100	96	106	102	98	94	98	94	91	94	91	89	90	88	86	84
2	99	91	84	78	96	89	82	77	85	80	75	82	77	74	79	75	72	70
3	90	79	71	65	88	78	70	64	75	68	63	72	67	62	70	65	61	59
4	82	70	61	55	80	69	61	54	66	59	54	64	58	53	62	57	52	50
5	76	63	54	47	74	62	53	47	60	52	46	58	51	46	56	50	45	43
6	70	57	48	41	68	56	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	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2059	2059	2059
5°	2066	2049	2061
10°	2049	2040	2052
15°	2029	2026	2047
20°	2000	2006	2037
25°	1962	1984	2026
30°	1916	1956	2016
35°	1867	1931	2001
40°	1804	1906	1993
45°	1746	1881	1987
50°	1687	1858	1984
55°	1608	1835	1971
60°	1544	1816	1966
65°	1450	1806	1936
70°	1352	1775	1868
75°	1196	1743	1575
80°	965	1415	933
85°	698	398	99



TEST NUMBER: P475395

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

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	72.3	3.4
10°-20°	206.0	9.6
20°-30°	309.0	14.5
30°-40°	368.4	17.2
40°-50°	380.4	17.8
50°-60°	346.4	16.2
60°-70°	271.4	12.7
70°-80°	157.0	7.3
80°-90°	27.3	1.3
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°	587.3	27.5
0°-40°	955.7	44.7
0°-60°	1682.5	78.7
0°-90°	2138.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2138.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	765	765	765	765	765	
5°	765	763	758	764	763	73
15°	728	727	727	735	735	205
25°	661	663	668	681	682	304
35°	568	574	588	606	609	355
45°	459	471	494	517	522	354
55°	343	360	391	416	420	307
65°	228	248	284	302	304	226
75°	115	140	168	162	152	123
85°	23	30	13	4	3	28
90°	0	0	0	0	0	



TEST NUMBER: P475395

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

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	765.0	765.0	765.0	765.0	765.0
2.5°	768.2	765.0	760.7	765.0	765.0
5°	765.0	762.8	758.5	763.9	762.8
7.5°	758.5	756.4	753.1	758.5	757.4
10°	749.9	748.8	746.7	753.1	751.0
12.5°	740.2	739.2	738.1	744.5	743.5
15°	728.4	727.4	727.4	734.9	734.9
17.5°	714.5	714.5	714.5	724.1	724.1
20°	698.3	698.3	700.5	711.2	711.2
22.5°	681.2	681.2	684.4	696.2	697.3
25°	660.7	662.9	668.3	681.2	682.2
27.5°	639.3	642.5	650.0	664.0	666.1
30°	616.7	619.9	629.6	645.7	648.9
32.5°	592.0	597.4	609.2	625.3	628.5
35°	568.3	573.7	587.7	605.9	609.2
37.5°	540.4	549.0	566.2	583.4	588.8
40°	513.6	523.2	542.6	563.0	567.3
42.5°	487.8	496.4	517.8	540.4	546.9
45°	458.8	470.6	494.2	516.8	522.1
47.5°	430.8	442.6	469.5	493.1	498.5
50°	402.9	414.7	443.7	467.4	473.8
52.5°	371.7	388.9	417.9	441.6	449.1
55°	342.7	359.9	391.1	415.8	420.1
57.5°	314.8	332.0	366.4	388.9	395.4
60°	286.9	304.0	337.4	359.9	365.3
62.5°	256.8	276.1	310.5	329.8	334.1
65°	227.8	248.2	283.6	301.9	304.0
67.5°	198.8	220.2	254.6	269.7	271.8
70°	171.9	193.4	225.6	239.6	237.4
72.5°	144.0	165.5	196.6	204.1	197.7
75°	115.0	139.7	167.6	162.2	151.5
77.5°	89.2	112.8	131.1	115.0	106.4
80°	62.3	87.0	91.3	70.9	60.2
82.5°	40.8	61.2	49.4	30.1	26.9
85°	22.6	30.1	12.9	4.3	3.2
87.5°	7.5	4.3	2.1	1.1	1.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)