

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: P474830

Luminaire Tested: **22CZ2-20VHE-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P474830
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-20VHE-UNV-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,RIBBED LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

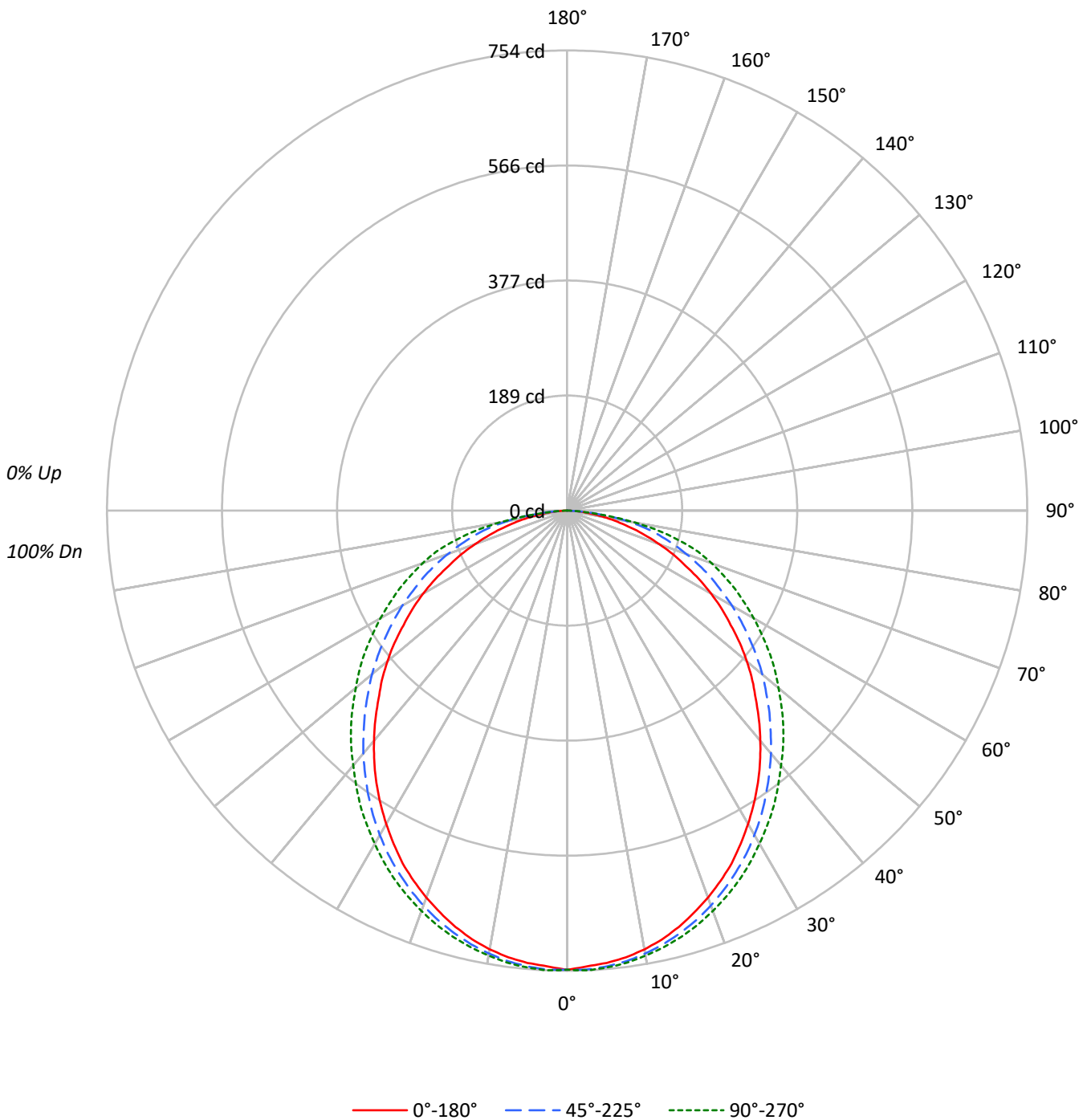
Lumens per Lamp: N/A
Luminaire Lumens: 2074.6 lumens
Efficiency: N/A
Efficacy: 150.3 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 13.8
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: P474830
CATALOG NUMBER: 22CZ2-20VHE-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474830

CATALOG NUMBER: 22CZ2-20VHE-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	99	95	106	101	97	94	97	94	91	93	91	88	90	87	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	73	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	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2025	2025	2025
5°	2010	2025	2030
10°	1995	2014	2023
15°	1968	1996	2014
20°	1932	1973	1999
25°	1894	1942	1983
30°	1842	1907	1959
35°	1790	1867	1940
40°	1730	1825	1916
45°	1663	1784	1907
50°	1610	1747	1892
55°	1535	1709	1896
60°	1466	1680	1902
65°	1363	1658	1932
70°	1259	1635	1980
75°	1126	1627	1992
80°	944	1542	1739
85°	732	1056	988



TEST NUMBER: P474830

CATALOG NUMBER: 22CZ2-20VHE-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.1	3.4
10°-20°	201.8	9.7
20°-30°	300.9	14.5
30°-40°	355.2	17.1
40°-50°	362.0	17.4
50°-60°	326.4	15.7
60°-70°	256.6	12.4
70°-80°	160.6	7.7
80°-90°	40.1	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°	573.7	27.7
0°-40°	928.9	44.8
0°-60°	1617.3	78.0
0°-90°	2074.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2074.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	744	746	750	752	752	71
15°	706	709	716	722	723	199
25°	638	643	654	664	668	293
35°	545	552	568	584	591	341
45°	437	447	469	492	501	338
55°	327	337	364	392	404	294
65°	214	227	260	289	303	213
75°	108	124	156	185	192	115
85°	24	30	34	34	32	29
90°	0	0	0	0	0	



TEST NUMBER: P474830

CATALOG NUMBER: 22CZ2-20VHE-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	752.4	752.4	752.4	752.4	752.4
2.5°	747.5	749.3	752.8	754.1	754.1
5°	744.0	745.8	749.7	751.5	751.5
7.5°	738.3	740.1	744.9	747.1	747.5
10°	730.0	732.2	737.0	740.5	740.5
12.5°	719.5	721.7	727.8	732.2	732.6
15°	706.3	709.4	716.4	721.7	723.0
17.5°	691.0	695.8	703.7	710.3	711.6
20°	674.8	679.6	688.8	696.2	698.0
22.5°	656.8	661.2	672.1	681.3	683.5
25°	637.9	642.7	654.1	664.2	667.7
27.5°	615.6	621.3	634.9	646.3	649.8
30°	592.8	599.8	613.8	626.5	630.5
32.5°	569.5	576.1	591.9	605.5	610.7
35°	545.0	552.0	568.2	584.0	590.6
37.5°	519.1	526.1	543.7	561.6	567.8
40°	492.4	500.7	519.5	538.8	545.4
42.5°	465.2	474.0	493.7	515.2	523.9
45°	437.1	446.8	468.7	491.5	501.1
47.5°	411.7	419.6	442.4	467.4	476.6
50°	384.5	392.0	417.4	442.4	452.0
52.5°	356.9	363.9	391.1	417.4	429.2
55°	327.1	337.2	364.3	392.4	404.2
57.5°	300.8	310.0	338.0	366.5	377.9
60°	272.3	281.9	312.2	341.1	353.4
62.5°	243.8	254.3	285.0	316.1	327.5
65°	214.0	227.1	260.4	289.4	303.4
67.5°	188.5	201.2	234.1	264.4	276.7
70°	160.0	174.9	207.8	238.5	251.7
72.5°	133.3	148.2	182.0	212.6	225.8
75°	108.3	124.5	156.5	184.6	191.6
77.5°	84.2	99.5	131.5	147.8	155.2
80°	60.9	75.8	99.5	110.5	112.2
82.5°	41.2	53.9	67.5	70.6	68.8
85°	23.7	30.3	34.2	34.2	32.0
87.5°	9.6	9.6	8.3	5.3	3.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)