

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: P474911

Luminaire Tested: **22CZ2-20HE-S-UNV-L835-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P474911
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-20HE-S-UNV-L835-CD1-U
Description: 2'X2' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

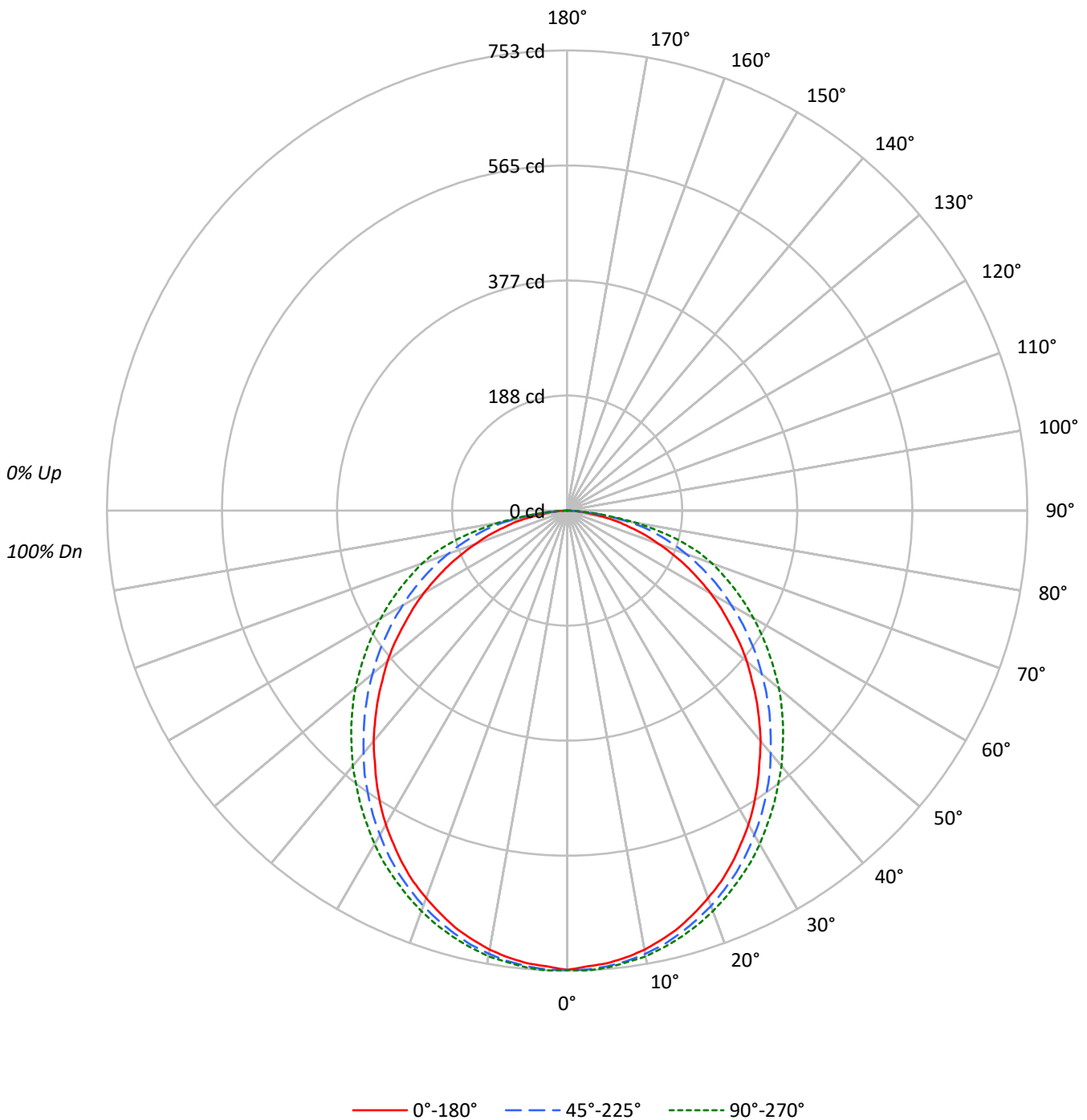
Lumens per Lamp: N/A
Luminaire Lumens: 2070.7 lumens
Efficiency: N/A
Efficacy: 138.0 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.25 / 1.33
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 15
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: P474911
CATALOG NUMBER: 22CZ2-20HE-S-UNV-L835-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474911

CATALOG NUMBER: 22CZ2-20HE-S-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	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	88	86	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	74	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	32	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2023	2023	2023
5°	2009	2022	2028
10°	1994	2013	2024
15°	1969	1995	2012
20°	1932	1972	1997
25°	1893	1942	1977
30°	1844	1904	1959
35°	1786	1865	1934
40°	1730	1820	1917
45°	1667	1781	1901
50°	1607	1741	1894
55°	1530	1707	1886
60°	1462	1672	1893
65°	1372	1653	1921
70°	1254	1633	1983
75°	1125	1620	1985
80°	947	1530	1764
85°	713	1037	960



TEST NUMBER: P474911

CATALOG NUMBER: 22CZ2-20HE-S-UNV-L835-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.0	3.4
10°-20°	201.6	9.7
20°-30°	300.6	14.5
30°-40°	354.7	17.1
40°-50°	361.4	17.5
50°-60°	325.9	15.7
60°-70°	256.0	12.4
70°-80°	160.0	7.7
80°-90°	39.5	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°	573.2	27.7
0°-40°	928.0	44.8
0°-60°	1615.3	78.0
0°-90°	2070.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2070.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	752	752	752	752	752	
5°	744	745	749	750	751	71
15°	707	709	716	721	722	199
25°	637	641	654	664	666	293
35°	544	551	568	583	589	340
45°	438	446	468	491	500	338
55°	326	337	364	392	402	293
65°	216	227	260	289	302	213
75°	108	123	156	182	191	116
85°	23	30	34	33	31	28
90°	0	0	0	0	0	



TEST NUMBER: P474911

CATALOG NUMBER: 22CZ2-20HE-S-UNV-L835-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	751.7	751.7	751.7	751.7	751.7
2.5°	746.7	748.2	751.7	753.2	753.2
5°	743.7	745.2	748.7	750.2	750.7
7.5°	737.6	739.6	743.7	745.7	745.7
10°	729.6	732.1	736.6	739.6	740.6
12.5°	718.6	721.6	727.6	731.1	732.1
15°	706.6	709.1	716.1	721.1	722.1
17.5°	691.0	695.0	702.6	709.1	710.6
20°	674.5	679.0	688.5	696.0	697.5
22.5°	657.5	661.0	671.5	680.5	682.5
25°	637.4	640.9	654.0	663.5	666.0
27.5°	615.4	621.4	634.4	645.4	649.4
30°	593.3	599.3	612.9	625.9	630.4
32.5°	569.3	575.8	591.3	604.8	609.4
35°	543.7	551.2	567.8	583.3	588.8
37.5°	517.1	525.7	544.2	560.7	566.8
40°	492.6	498.6	518.2	537.2	545.7
42.5°	465.0	473.1	492.6	514.1	522.2
45°	438.0	445.5	468.0	490.6	499.6
47.5°	409.9	419.4	442.0	467.0	476.1
50°	383.9	391.9	415.9	442.5	452.5
52.5°	355.8	364.3	390.4	417.9	426.9
55°	326.2	336.7	363.8	391.9	401.9
57.5°	299.2	309.2	337.8	366.8	377.3
60°	271.6	281.6	310.7	340.3	351.8
62.5°	242.5	254.1	285.6	314.2	327.2
65°	215.5	227.0	259.6	288.6	301.7
67.5°	186.9	200.4	233.0	263.6	276.6
70°	159.4	175.4	207.5	237.5	252.1
72.5°	134.8	147.8	181.4	213.0	225.0
75°	108.2	123.3	155.8	182.4	190.9
77.5°	85.7	98.7	129.8	147.3	152.8
80°	61.1	75.7	98.7	109.2	113.8
82.5°	40.6	52.6	67.1	69.2	68.2
85°	23.1	29.6	33.6	33.1	31.1
87.5°	9.0	10.0	7.5	4.5	3.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)