

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: P475109

Luminaire Tested: **22CZ2-20-HRP-UNV-L830-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475109
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-20-HRP-UNV-L830-CD1-U
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

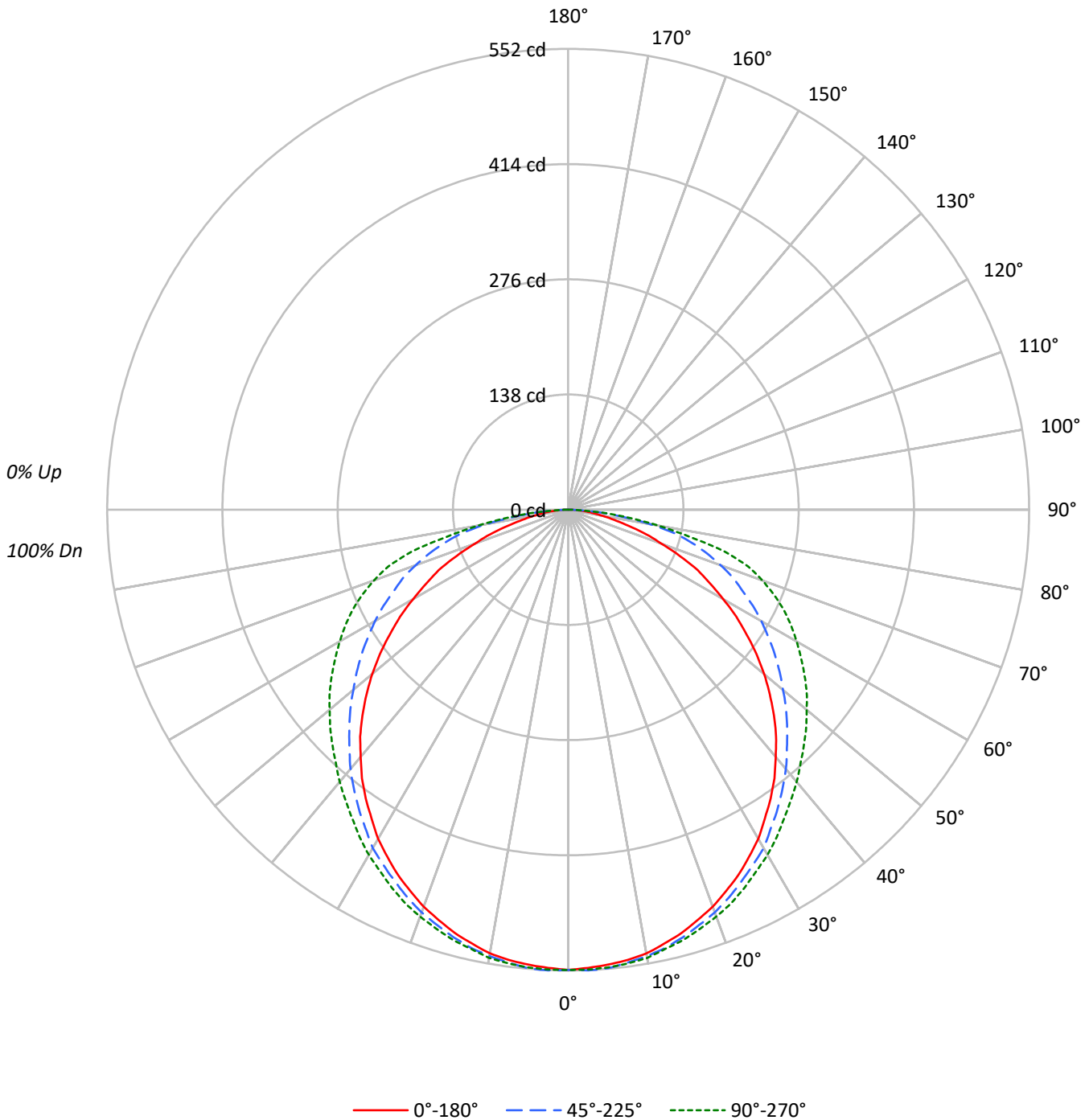
Lumens per Lamp: N/A
Luminaire Lumens: 1674.4 lumens
Efficiency: N/A
Efficacy: 103.4 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.2
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



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Luminous Intensity Polar Plot





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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1484	1484	1484
5°	1478	1489	1487
10°	1475	1483	1489
15°	1462	1477	1486
20°	1449	1470	1485
25°	1433	1458	1483
30°	1414	1454	1483
35°	1388	1437	1482
40°	1358	1425	1495
45°	1327	1411	1519
50°	1282	1406	1561
55°	1224	1417	1620
60°	1154	1438	1700
65°	1089	1466	1816
70°	931	1529	1945
75°	780	1593	2020
80°	638	1539	1686
85°	553	1139	1238



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	52.3	3.1
10°-20°	149.5	8.9
20°-30°	226.5	13.5
30°-40°	273.5	16.3
40°-50°	287.4	17.2
50°-60°	270.4	16.2
60°-70°	225.5	13.5
70°-80°	149.4	8.9
80°-90°	39.8	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°	428.3	25.6
0°-40°	701.8	41.9
0°-60°	1259.6	75.2
0°-90°	1674.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1674.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	551	551	551	551	551	
5°	547	548	551	551	550	52
15°	525	527	530	532	533	148
25°	483	486	491	498	500	222
35°	422	427	437	447	451	264
45°	349	354	371	390	399	268
55°	261	272	302	333	345	233
65°	171	186	230	268	285	166
75°	75	105	153	185	194	81
85°	18	27	37	40	40	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	551.3	551.3	551.3	551.3	551.3
2.5°	549.3	550.3	552.4	552.4	551.3
5°	547.1	548.1	551.3	551.3	550.3
7.5°	543.9	545.1	547.1	549.3	548.1
10°	539.7	540.8	542.9	545.1	545.1
12.5°	532.4	533.4	537.6	538.7	538.7
15°	524.9	527.1	530.2	532.4	533.4
17.5°	515.5	517.5	521.7	526.0	526.0
20°	506.0	508.0	513.3	517.5	518.6
22.5°	494.3	497.5	502.8	508.0	510.2
25°	482.7	485.9	491.1	497.5	499.6
27.5°	468.9	472.1	479.6	486.9	488.0
30°	455.2	458.4	467.9	474.2	477.4
32.5°	438.3	442.5	452.0	461.6	464.7
35°	422.5	426.8	437.3	446.8	451.0
37.5°	405.6	409.8	421.4	433.1	438.3
40°	386.5	391.9	405.6	418.3	425.6
42.5°	368.6	374.0	387.7	404.6	411.9
45°	348.6	353.8	370.8	389.7	399.2
47.5°	327.4	333.7	353.8	377.1	386.5
50°	306.3	313.7	335.9	362.3	372.8
52.5°	284.1	293.6	319.0	347.5	360.1
55°	260.9	272.5	302.1	332.7	345.4
57.5°	238.7	249.3	284.1	316.8	330.6
60°	214.4	228.1	267.2	301.0	315.8
62.5°	191.2	206.0	249.3	285.2	301.0
65°	171.1	185.9	230.3	268.2	285.2
67.5°	144.7	164.8	214.4	250.3	267.2
70°	118.3	145.7	194.3	231.3	247.2
72.5°	98.2	124.7	174.3	211.2	226.1
75°	75.0	104.6	153.2	184.8	194.3
77.5°	56.0	86.6	131.0	146.9	147.9
80°	41.2	66.5	99.3	104.6	108.8
82.5°	28.6	46.5	64.5	70.7	72.9
85°	17.9	27.4	36.9	40.1	40.1
87.5°	9.5	10.5	12.7	12.7	12.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)