

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: P475120

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

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475120
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-20VHE-HRP-UNV-L830-CD1-U
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1591.5 lumens
Efficiency: N/A
Efficacy: 115.3 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

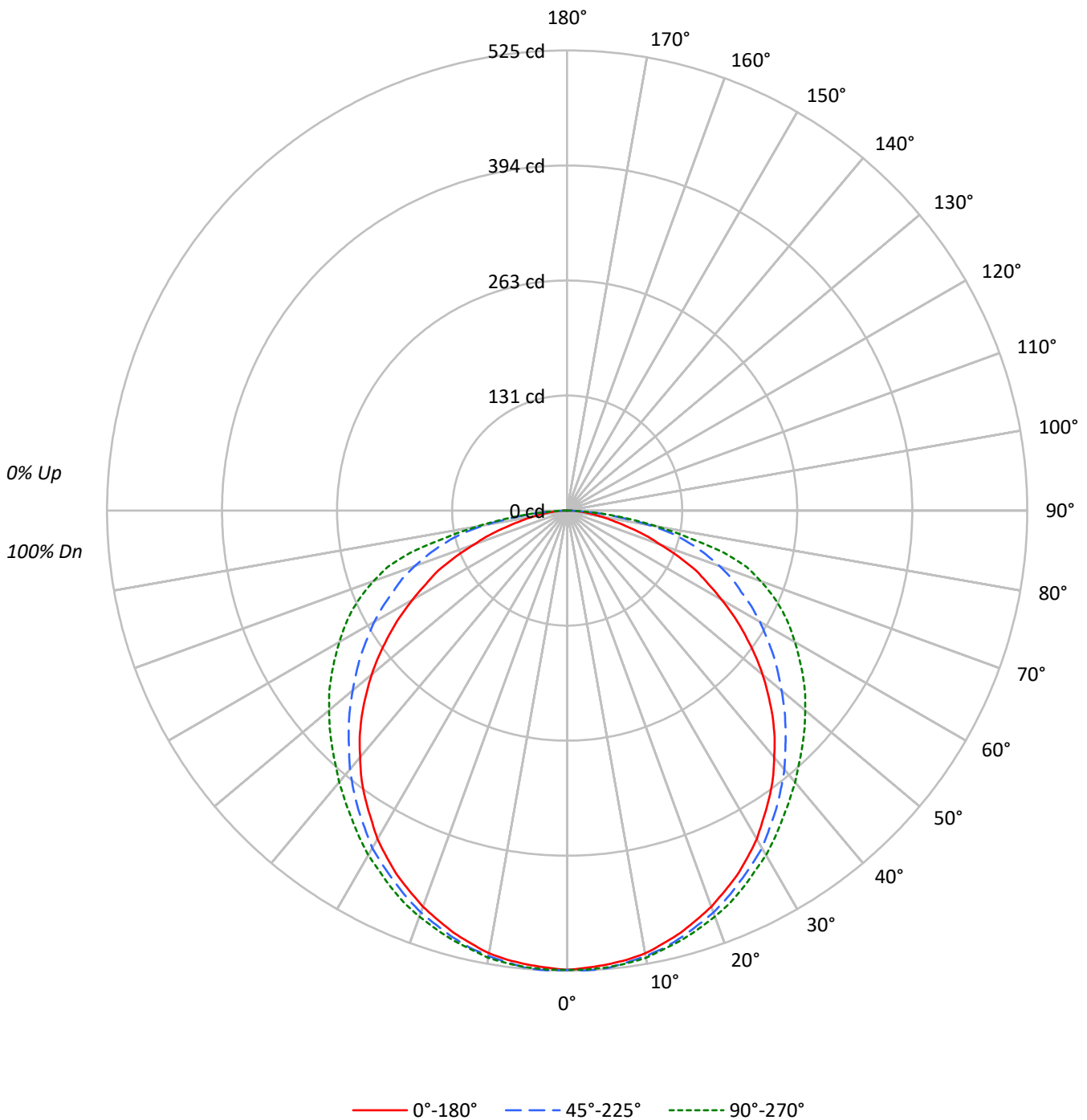
Input Watts (W): 13.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1410	1410	1410
5°	1405	1415	1413
10°	1402	1410	1416
15°	1390	1404	1412
20°	1377	1397	1412
25°	1363	1386	1410
30°	1345	1382	1410
35°	1319	1366	1408
40°	1291	1354	1421
45°	1261	1341	1444
50°	1219	1337	1484
55°	1164	1347	1540
60°	1097	1367	1616
65°	1035	1394	1726
70°	885	1453	1848
75°	741	1514	1920
80°	607	1463	1602
85°	525	1084	1176



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	49.7	3.1
10°-20°	142.1	8.9
20°-30°	215.3	13.5
30°-40°	260.0	16.3
40°-50°	273.2	17.2
50°-60°	257.1	16.2
60°-70°	214.3	13.5
70°-80°	142.0	8.9
80°-90°	37.8	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°	407.1	25.6
0°-40°	667.1	41.9
0°-60°	1197.3	75.2
0°-90°	1591.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1591.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	524	524	524	524	524	
5°	520	521	524	524	523	49
15°	499	501	504	506	507	141
25°	459	462	467	473	475	211
35°	402	406	416	425	429	251
45°	331	336	352	370	380	255
55°	248	259	287	316	328	222
65°	163	177	219	255	271	158
75°	71	99	146	176	185	77
85°	17	26	35	38	38	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	524.0	524.0	524.0	524.0	524.0
2.5°	522.1	523.1	525.1	525.1	524.0
5°	520.0	521.0	524.0	524.0	523.1
7.5°	517.0	518.1	520.0	522.1	521.0
10°	513.0	514.0	516.1	518.1	518.1
12.5°	506.0	507.0	511.0	512.1	512.1
15°	498.9	501.0	504.0	506.0	507.0
17.5°	490.0	491.9	495.9	500.0	500.0
20°	480.9	482.9	487.9	491.9	492.9
22.5°	469.8	472.9	477.9	482.9	484.9
25°	458.9	461.9	466.8	472.9	474.9
27.5°	445.7	448.7	455.8	462.8	463.8
30°	432.7	435.7	444.7	450.8	453.8
32.5°	416.6	420.6	429.7	438.7	441.7
35°	401.6	405.6	415.7	424.7	428.7
37.5°	385.5	389.5	400.6	411.7	416.6
40°	367.4	372.5	385.5	397.6	404.6
42.5°	350.4	355.4	368.5	384.5	391.5
45°	331.3	336.3	352.4	370.4	379.5
47.5°	311.2	317.2	336.3	358.5	367.4
50°	291.1	298.2	319.3	344.4	354.4
52.5°	270.0	279.1	303.2	330.4	342.3
55°	248.0	259.0	287.2	316.2	328.3
57.5°	226.8	237.0	270.0	301.2	314.2
60°	203.8	216.8	254.0	286.1	300.2
62.5°	181.7	195.8	237.0	271.1	286.1
65°	162.6	176.7	218.9	255.0	271.1
67.5°	137.5	156.6	203.8	237.9	254.0
70°	112.5	138.5	184.7	219.8	234.9
72.5°	93.4	118.5	165.7	200.8	214.9
75°	71.3	99.4	145.6	175.7	184.7
77.5°	53.2	82.3	124.5	139.6	140.6
80°	39.2	63.2	94.4	99.4	103.4
82.5°	27.1	44.2	61.3	67.2	69.3
85°	17.0	26.1	35.1	38.1	38.1
87.5°	9.0	10.0	12.1	12.1	12.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)