

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: P475149

Luminaire Tested: **22CZ2-20VHE-HRP-UNV-L835-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475149
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-L835-CD1-U
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 1649.2 lumens
Efficiency: N/A
Efficacy: 119.5 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

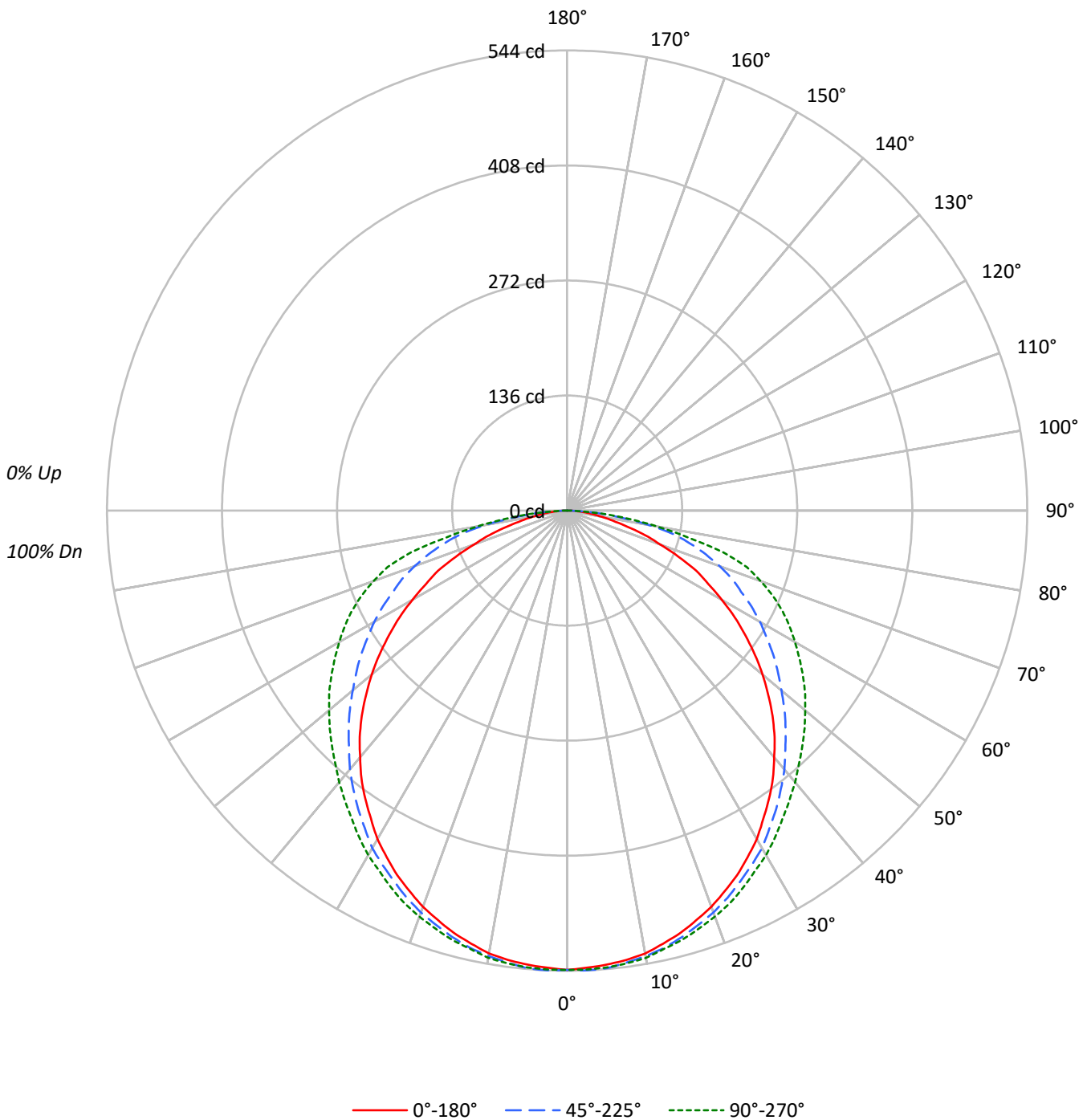
Input Watts (W): 13.8
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1461	1461	1461
5°	1456	1467	1464
10°	1453	1461	1467
15°	1440	1455	1464
20°	1427	1448	1463
25°	1412	1436	1461
30°	1393	1432	1461
35°	1367	1415	1459
40°	1337	1403	1473
45°	1306	1390	1496
50°	1263	1385	1537
55°	1206	1396	1596
60°	1137	1417	1674
65°	1073	1444	1789
70°	917	1506	1915
75°	768	1569	1990
80°	629	1516	1661
85°	543	1124	1220



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.5	3.1
10°-20°	147.2	8.9
20°-30°	223.1	13.5
30°-40°	269.4	16.3
40°-50°	283.1	17.2
50°-60°	266.4	16.2
60°-70°	222.1	13.5
70°-80°	147.2	8.9
80°-90°	39.2	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°	421.8	25.6
0°-40°	691.3	41.9
0°-60°	1240.7	75.2
0°-90°	1649.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1649.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	543	543	543	543	543	
5°	539	540	543	543	542	51
15°	517	519	522	524	525	146
25°	476	479	484	490	492	219
35°	416	420	431	440	444	260
45°	343	348	365	384	393	264
55°	257	268	298	328	340	230
65°	168	183	227	264	281	164
75°	74	103	151	182	191	80
85°	18	27	36	40	40	21
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	543.0	543.0	543.0	543.0	543.0
2.5°	541.0	542.0	544.1	544.1	543.0
5°	538.9	539.9	543.0	543.0	542.0
7.5°	535.8	536.9	538.9	541.0	539.9
10°	531.6	532.7	534.8	536.9	536.9
12.5°	524.4	525.4	529.5	530.6	530.6
15°	517.0	519.1	522.3	524.4	525.4
17.5°	507.8	509.8	513.9	518.1	518.1
20°	498.4	500.4	505.6	509.8	510.8
22.5°	486.9	490.0	495.3	500.4	502.5
25°	475.5	478.6	483.8	490.0	492.1
27.5°	461.9	465.0	472.4	479.6	480.6
30°	448.4	451.5	460.9	467.1	470.3
32.5°	431.7	435.9	445.3	454.6	457.8
35°	416.1	420.4	430.7	440.1	444.2
37.5°	399.5	403.6	415.1	426.6	431.7
40°	380.7	386.0	399.5	412.0	419.2
42.5°	363.1	368.3	381.8	398.5	405.7
45°	343.3	348.5	365.2	383.9	393.2
47.5°	322.5	328.7	348.5	371.5	380.7
50°	301.7	309.0	330.8	356.8	367.2
52.5°	279.8	289.2	314.2	342.3	354.7
55°	257.0	268.4	297.6	327.7	340.2
57.5°	235.1	245.6	279.8	312.1	325.6
60°	211.2	224.7	263.2	296.5	311.1
62.5°	188.3	202.9	245.6	280.9	296.5
65°	168.5	183.1	226.8	264.2	280.9
67.5°	142.5	162.3	211.2	246.6	263.2
70°	116.5	143.5	191.4	227.8	243.4
72.5°	96.8	122.8	171.7	208.1	222.7
75°	73.9	103.0	150.9	182.1	191.4
77.5°	55.1	85.3	129.0	144.7	145.7
80°	40.6	65.5	97.8	103.0	107.2
82.5°	28.1	45.8	63.5	69.7	71.8
85°	17.6	27.0	36.4	39.5	39.5
87.5°	9.4	10.4	12.5	12.5	12.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)