

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: P475121

Luminaire Tested: **22CZ2-24VHE-HRP-UNV-L830-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475121
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-24VHE-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: 1890.1 lumens
Efficiency: N/A
Efficacy: 114.6 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

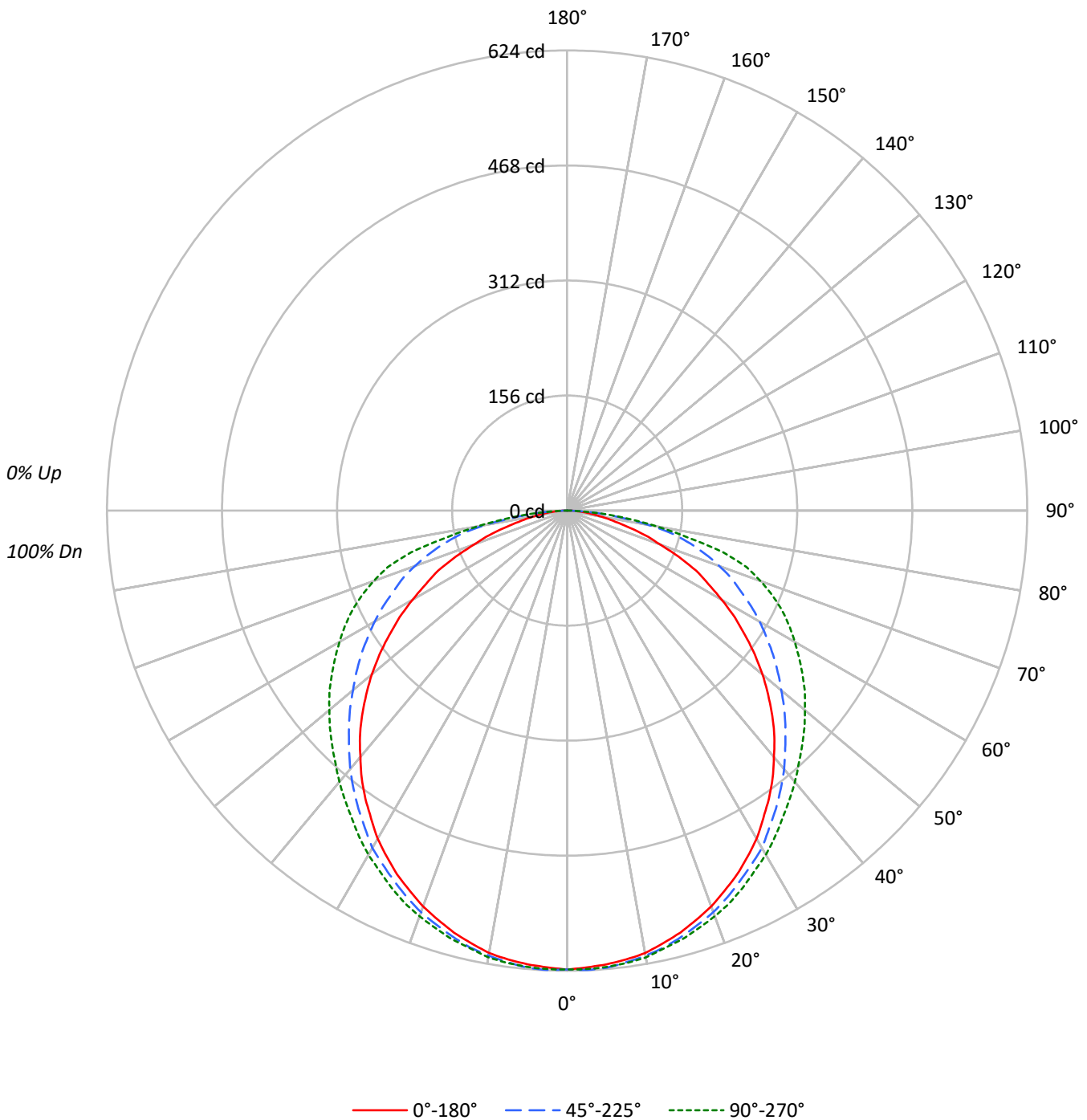
Input Watts (W): 16.5
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1675	1675	1675
5°	1668	1681	1678
10°	1665	1675	1681
15°	1651	1667	1677
20°	1636	1660	1676
25°	1618	1646	1675
30°	1597	1641	1675
35°	1567	1622	1672
40°	1533	1608	1688
45°	1498	1593	1715
50°	1448	1587	1762
55°	1382	1600	1829
60°	1302	1623	1919
65°	1230	1655	2050
70°	1050	1726	2195
75°	881	1798	2281
80°	722	1737	1903
85°	624	1288	1399



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	59.0	3.1
10°-20°	168.7	8.9
20°-30°	255.7	13.5
30°-40°	308.8	16.3
40°-50°	324.5	17.2
50°-60°	305.3	16.2
60°-70°	254.5	13.5
70°-80°	168.7	8.9
80°-90°	44.9	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°	483.4	25.6
0°-40°	792.2	41.9
0°-60°	1421.9	75.2
0°-90°	1890.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1890.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	622	622	622	622	622	
5°	618	619	622	622	621	59
15°	592	595	598	601	602	167
25°	545	548	554	562	564	251
35°	477	482	494	504	509	298
45°	394	399	419	440	451	303
55°	294	308	341	376	390	263
65°	193	210	260	303	322	188
75°	85	118	173	209	219	92
85°	20	31	42	45	45	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	622.3	622.3	622.3	622.3	622.3
2.5°	620.0	621.2	623.6	623.6	622.3
5°	617.6	618.8	622.3	622.3	621.2
7.5°	614.0	615.3	617.6	620.0	618.8
10°	609.3	610.4	612.9	615.3	615.3
12.5°	601.0	602.1	606.9	608.1	608.1
15°	592.5	595.0	598.5	601.0	602.1
17.5°	581.9	584.2	589.0	593.8	593.8
20°	571.2	573.5	579.5	584.2	585.4
22.5°	558.0	561.6	567.6	573.5	575.9
25°	544.9	548.5	554.4	561.6	564.0
27.5°	529.3	532.9	541.4	549.7	550.8
30°	513.9	517.4	528.2	535.4	538.9
32.5°	494.8	499.5	510.3	521.0	524.6
35°	476.9	481.7	493.6	504.4	509.1
37.5°	457.8	462.6	475.7	488.9	494.8
40°	436.3	442.4	457.8	472.2	480.5
42.5°	416.1	422.1	437.6	456.7	465.0
45°	393.5	399.4	418.6	439.9	450.7
47.5°	369.6	376.7	399.4	425.7	436.3
50°	345.8	354.1	379.2	409.0	420.9
52.5°	320.7	331.4	360.1	392.3	406.5
55°	294.5	307.6	341.0	375.6	389.9
57.5°	269.4	281.4	320.7	357.7	373.2
60°	242.0	257.5	301.6	339.8	356.5
62.5°	215.8	232.6	281.4	322.0	339.8
65°	193.2	209.8	259.9	302.8	322.0
67.5°	163.4	186.0	242.0	282.6	301.6
70°	133.5	164.5	219.4	261.1	279.0
72.5°	110.9	140.7	196.7	238.4	255.2
75°	84.7	118.1	172.9	208.6	219.4
77.5°	63.2	97.7	147.9	165.8	166.9
80°	46.6	75.1	112.1	118.1	122.8
82.5°	32.2	52.4	72.8	79.8	82.3
85°	20.2	31.0	41.7	45.3	45.3
87.5°	10.7	11.9	14.3	14.3	14.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)