

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: P475123

Luminaire Tested: **22CZ2-39VHE-HRP-UNV-L830-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475123
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-39VHE-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: 3064.2 lumens
Efficiency: N/A
Efficacy: 114.8 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

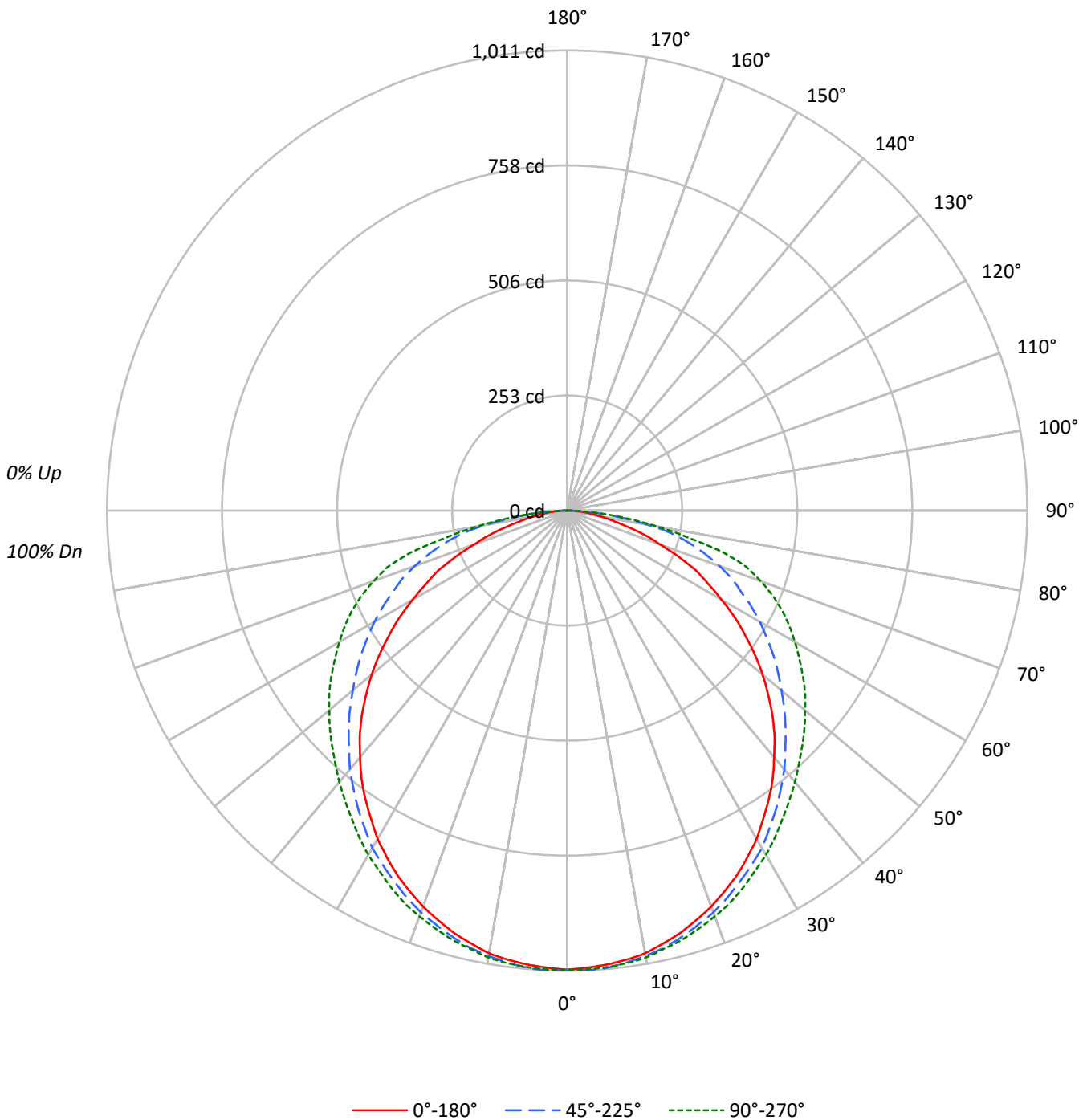
Input Watts (W): 26.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2715	2715	2715
5°	2705	2725	2720
10°	2699	2715	2726
15°	2676	2703	2720
20°	2652	2690	2718
25°	2623	2669	2715
30°	2589	2661	2715
35°	2540	2629	2712
40°	2485	2607	2736
45°	2428	2582	2780
50°	2347	2573	2856
55°	2240	2594	2966
60°	2112	2632	3111
65°	1994	2683	3324
70°	1703	2799	3559
75°	1428	2915	3698
80°	1170	2816	3085
85°	1013	2087	2266



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	95.6	3.1
10°-20°	273.6	8.9
20°-30°	414.6	13.5
30°-40°	500.6	16.3
40°-50°	526.0	17.2
50°-60°	494.9	16.2
60°-70°	412.6	13.5
70°-80°	273.4	8.9
80°-90°	72.9	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°	783.7	25.6
0°-40°	1284.3	41.9
0°-60°	2305.3	75.2
0°-90°	3064.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3064.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1009	1009	1009	1009	1009	
5°	1001	1003	1009	1009	1007	95
15°	961	964	970	974	976	271
25°	883	889	899	910	914	407
35°	773	781	800	818	825	483
45°	638	648	679	713	731	491
55°	477	499	553	609	632	427
65°	313	340	421	491	522	305
75°	137	191	280	338	356	149
85°	33	50	68	73	73	38
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1008.9	1008.9	1008.9	1008.9	1008.9
2.5°	1005.2	1007.1	1011.0	1011.0	1008.9
5°	1001.3	1003.1	1008.9	1008.9	1007.1
7.5°	995.4	997.5	1001.3	1005.2	1003.1
10°	987.8	989.6	993.6	997.5	997.5
12.5°	974.3	976.2	983.8	985.9	985.9
15°	960.6	964.5	970.4	974.3	976.2
17.5°	943.4	947.1	954.8	962.7	962.7
20°	926.0	929.7	939.4	947.1	949.0
22.5°	904.6	910.4	920.2	929.7	933.6
25°	883.4	889.3	898.8	910.4	914.4
27.5°	858.2	864.0	877.6	891.1	893.0
30°	833.1	838.9	856.3	867.9	873.7
32.5°	802.2	809.8	827.3	844.7	850.5
35°	773.1	781.0	800.3	817.7	825.4
37.5°	742.2	749.9	771.3	792.6	802.2
40°	707.4	717.1	742.2	765.5	778.9
42.5°	674.6	684.4	709.5	740.4	753.8
45°	637.9	647.5	678.6	713.2	730.6
47.5°	599.1	610.8	647.5	690.2	707.4
50°	560.6	574.0	614.7	663.0	682.3
52.5°	519.9	537.3	583.8	636.0	659.1
55°	477.4	498.8	552.9	608.9	632.1
57.5°	436.8	456.2	519.9	579.9	604.9
60°	392.4	417.5	489.0	550.8	578.0
62.5°	349.9	377.0	456.2	522.0	550.8
65°	313.1	340.1	421.4	490.9	522.0
67.5°	264.8	301.5	392.4	458.1	489.0
70°	216.5	266.7	355.7	423.3	452.3
72.5°	179.8	228.1	319.0	386.6	413.7
75°	137.3	191.4	280.4	338.2	355.7
77.5°	102.4	158.4	239.7	268.8	270.6
80°	75.5	121.7	181.7	191.4	199.1
82.5°	52.3	85.0	118.0	129.4	133.4
85°	32.8	50.2	67.6	73.4	73.4
87.5°	17.4	19.3	23.2	23.2	23.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)