

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: P475181

Luminaire Tested: **22CZ2-39VHE-HRP-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475181
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-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 3235.7 lumens
Efficiency: N/A
Efficacy: 121.2 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

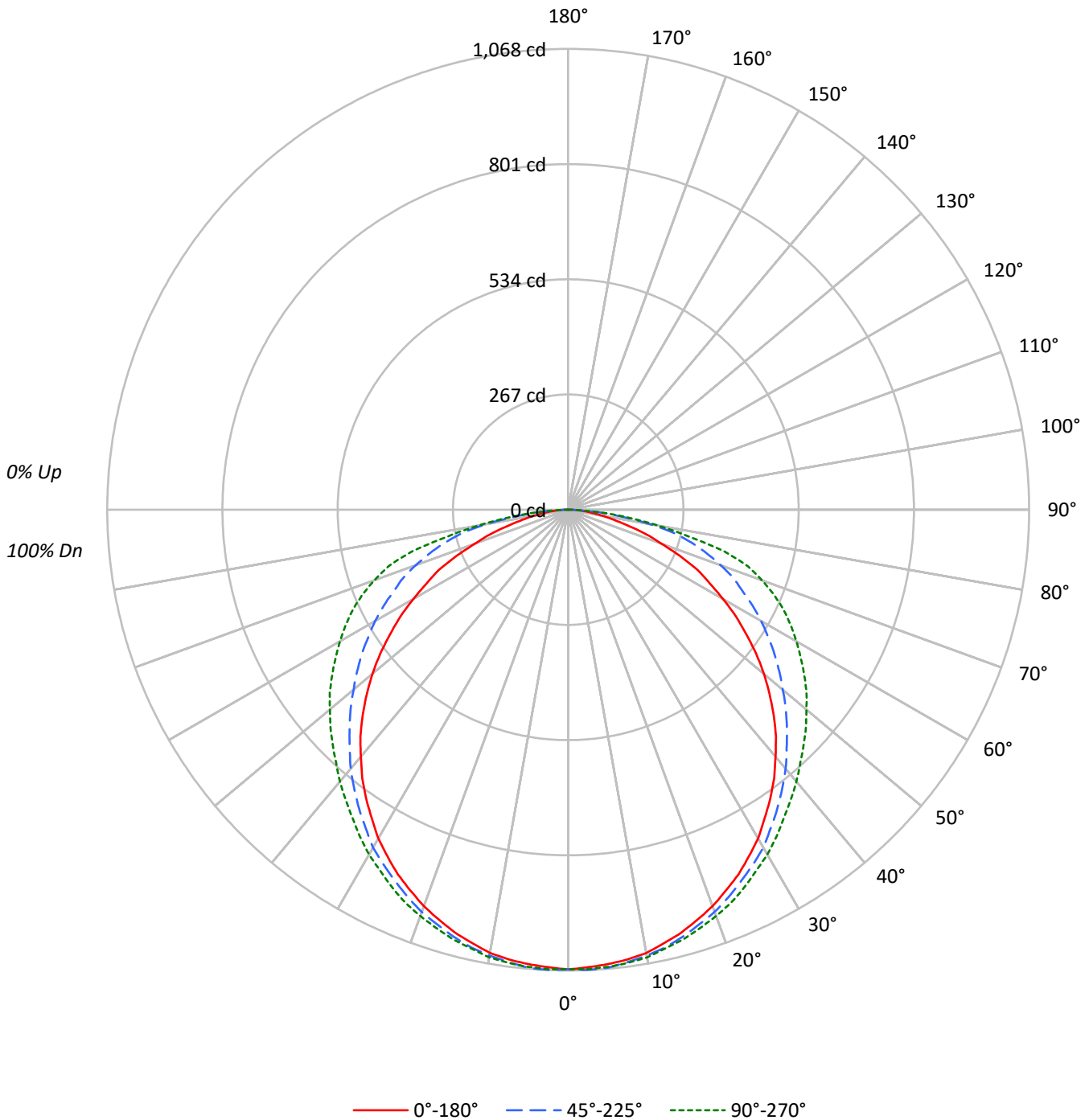
Input Watts (W): 26.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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					100			
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82					82			
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68					68			
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56					56			
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48					48			
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41					41			
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36					36			
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31					31			
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28					28			
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25					25			
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23					23			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2867	2867	2867
5°	2856	2878	2873
10°	2850	2867	2878
15°	2826	2855	2872
20°	2800	2841	2870
25°	2770	2818	2867
30°	2733	2810	2867
35°	2682	2776	2863
40°	2624	2753	2889
45°	2563	2727	2936
50°	2478	2717	3016
55°	2365	2739	3132
60°	2230	2779	3285
65°	2106	2833	3510
70°	1799	2955	3758
75°	1508	3079	3905
80°	1235	2972	3257
85°	1068	2205	2393



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.0	3.1
10°-20°	288.9	8.9
20°-30°	437.8	13.5
30°-40°	528.6	16.3
40°-50°	555.4	17.2
50°-60°	522.6	16.2
60°-70°	435.7	13.5
70°-80°	288.7	8.9
80°-90°	76.9	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°	827.6	25.6
0°-40°	1356.2	41.9
0°-60°	2434.3	75.2
0°-90°	3235.7	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3235.7	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1065	1065	1065	1065	1065	
5°	1057	1059	1065	1065	1063	100
15°	1014	1018	1025	1029	1031	286
25°	933	939	949	961	966	429
35°	816	825	845	864	872	510
45°	674	684	716	753	772	519
55°	504	527	584	643	668	451
65°	331	359	445	518	551	322
75°	145	202	296	357	376	157
85°	35	53	71	78	78	40
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1065.4	1065.4	1065.4	1065.4	1065.4
2.5°	1061.4	1063.4	1067.6	1067.6	1065.4
5°	1057.3	1059.3	1065.4	1065.4	1063.4
7.5°	1051.2	1053.3	1057.3	1061.4	1059.3
10°	1043.0	1045.0	1049.2	1053.3	1053.3
12.5°	1028.8	1030.8	1038.9	1041.1	1041.1
15°	1014.4	1018.5	1024.7	1028.8	1030.8
17.5°	996.2	1000.1	1008.2	1016.5	1016.5
20°	977.8	981.7	992.0	1000.1	1002.1
22.5°	955.2	961.4	971.6	981.7	985.9
25°	932.9	939.0	949.1	961.4	965.5
27.5°	906.2	912.3	926.8	941.0	943.0
30°	879.7	885.8	904.2	916.5	922.6
32.5°	847.1	855.2	873.6	891.9	898.1
35°	816.4	824.7	845.1	863.5	871.6
37.5°	783.8	791.9	814.4	837.0	847.1
40°	747.0	757.3	783.8	808.3	822.5
42.5°	712.4	722.7	749.2	781.8	796.0
45°	673.6	683.7	716.5	753.1	771.5
47.5°	632.7	644.9	683.7	728.8	747.0
50°	591.9	606.2	649.1	700.1	720.5
52.5°	549.0	567.4	616.5	671.6	696.0
55°	504.1	526.7	583.8	643.0	667.5
57.5°	461.2	481.8	549.0	612.3	638.8
60°	414.3	440.8	516.4	581.6	610.3
62.5°	369.4	398.1	481.8	551.2	581.6
65°	330.7	359.2	445.0	518.4	551.2
67.5°	279.6	318.4	414.3	483.7	516.4
70°	228.6	281.6	375.6	447.0	477.6
72.5°	189.9	240.9	336.8	408.2	436.9
75°	145.0	202.1	296.1	357.2	375.6
77.5°	108.2	167.3	253.1	283.8	285.8
80°	79.7	128.6	191.8	202.1	210.2
82.5°	55.2	89.8	124.6	136.7	140.8
85°	34.6	53.0	71.4	77.5	77.5
87.5°	18.4	20.4	24.5	24.5	24.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)