

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: P475176

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

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475176  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-39HE-HRP-UNV-L840-CD1-U  
Description: 2'X2' TROFFER LED MODULE, 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: 3299.2 lumens  
Efficiency: N/A  
Efficacy: 115.8 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

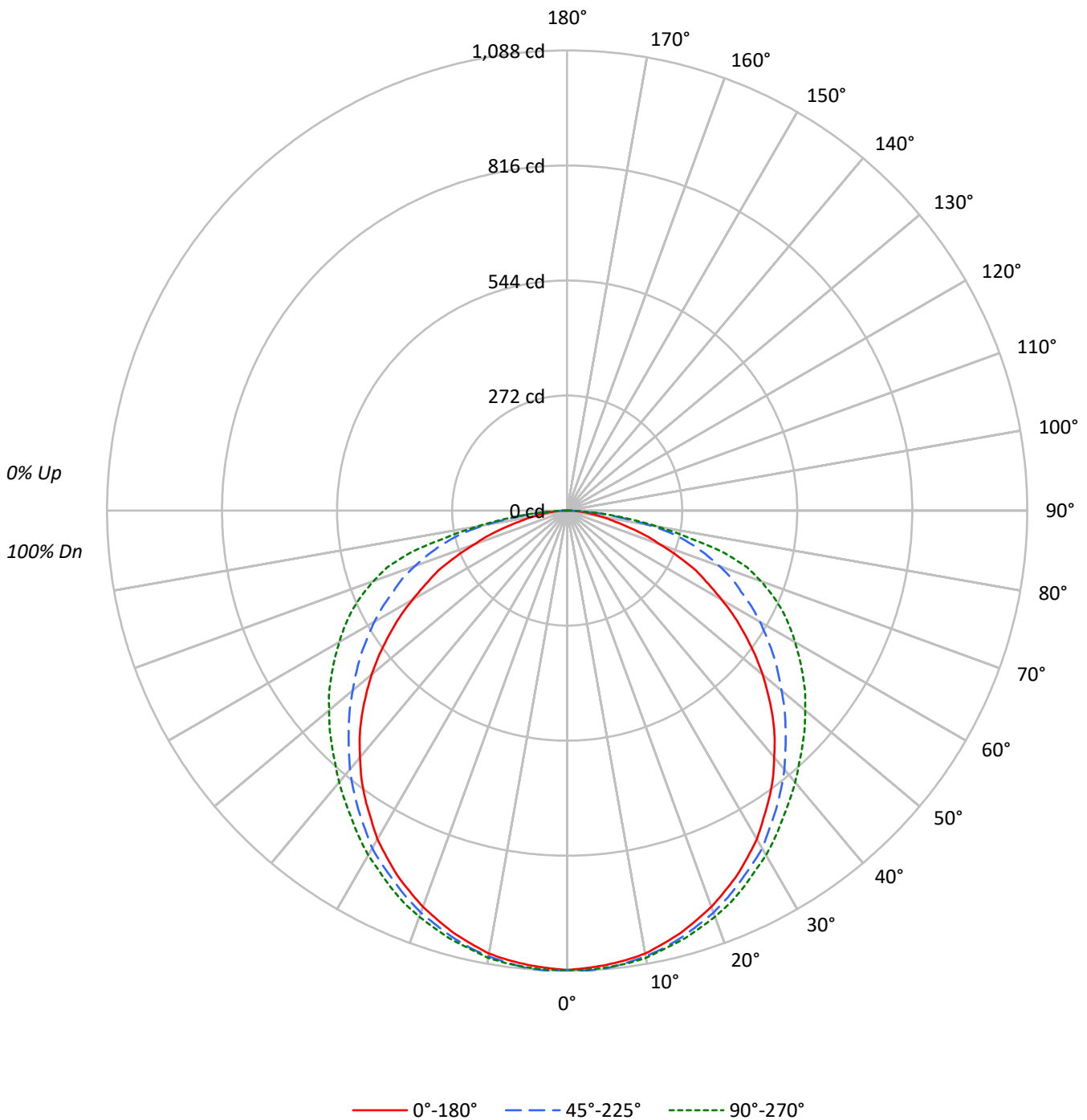
Input Watts (W): 28.5  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102
1	108	103	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24

**AVERAGE LUMINANCE (cd/sqm):**

	0°	45°	90°
0°	2923	2923	2923
5°	2912	2934	2929
10°	2906	2923	2935
15°	2881	2911	2928
20°	2855	2897	2926
25°	2824	2873	2923
30°	2787	2865	2923
35°	2734	2831	2919
40°	2676	2807	2946
45°	2614	2780	2994
50°	2527	2771	3075
55°	2411	2793	3193
60°	2274	2834	3349
65°	2147	2889	3578
70°	1834	3013	3832
75°	1537	3139	3981
80°	1260	3031	3322
85°	1090	2248	2439



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	103.0	3.1
10°-20°	294.5	8.9
20°-30°	446.4	13.5
30°-40°	539.0	16.3
40°-50°	566.3	17.2
50°-60°	532.9	16.2
60°-70°	444.3	13.5
70°-80°	294.4	8.9
80°-90°	78.4	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°	843.9	25.6
0°-40°	1382.8	41.9
0°-60°	2482.1	75.2
0°-90°	3299.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3299.2	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1086	1086	1086	1086	1086	
5°	1078	1080	1086	1086	1084	102
15°	1034	1038	1045	1049	1051	292
25°	951	958	968	980	984	438
35°	832	841	862	880	889	521
45°	687	697	731	768	787	529
55°	514	537	595	656	681	460
65°	337	366	454	528	562	328
75°	148	206	302	364	383	160
85°	35	54	73	79	79	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1086.3	1086.3	1086.3	1086.3	1086.3
2.5°	1082.3	1084.3	1088.5	1088.5	1086.3
5°	1078.1	1080.1	1086.3	1086.3	1084.3
7.5°	1071.8	1074.0	1078.1	1082.3	1080.1
10°	1063.5	1065.5	1069.8	1074.0	1074.0
12.5°	1049.0	1051.0	1059.3	1061.5	1061.5
15°	1034.3	1038.5	1044.8	1049.0	1051.0
17.5°	1015.7	1019.8	1028.0	1036.5	1036.5
20°	997.0	1001.0	1011.5	1019.8	1021.8
22.5°	974.0	980.2	990.7	1001.0	1005.3
25°	951.2	957.5	967.7	980.2	984.5
27.5°	924.0	930.2	945.0	959.5	961.5
30°	897.0	903.2	922.0	934.5	940.7
32.5°	863.7	872.0	890.7	909.5	915.7
35°	832.4	840.9	861.7	880.4	888.7
37.5°	799.2	807.4	830.4	853.4	863.7
40°	761.7	772.1	799.2	824.2	838.7
42.5°	726.4	736.8	763.9	797.1	811.7
45°	686.8	697.1	730.6	767.9	786.7
47.5°	645.1	657.6	697.1	743.1	761.7
50°	603.6	618.1	661.8	713.9	734.6
52.5°	559.8	578.5	628.6	684.8	709.6
55°	514.0	537.0	595.3	655.6	680.6
57.5°	470.3	491.2	559.8	624.3	651.3
60°	422.5	449.5	526.5	593.1	622.3
62.5°	376.7	405.9	491.2	562.0	593.1
65°	337.2	366.2	453.7	528.5	562.0
67.5°	285.1	324.7	422.5	493.2	526.5
70°	233.1	287.2	382.9	455.7	487.0
72.5°	193.6	245.6	343.4	416.2	445.5
75°	147.8	206.1	301.9	364.2	382.9
77.5°	110.3	170.6	258.1	289.4	291.4
80°	81.3	131.1	195.6	206.1	214.4
82.5°	56.3	91.6	127.0	139.3	143.6
85°	35.3	54.0	72.8	79.0	79.0
87.5°	18.8	20.8	25.0	25.0	25.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)