

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: P475509

Luminaire Tested: **14CZ2-39HE-SQR-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475509  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ2-39HE-SQR-UNV-L840-CD1-U  
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SQUARE LENS  
Light Source: 4000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3790.5 lumens  
Efficiency: N/A  
Efficacy: 133.5 lumens/watt  
Spacing Criteria (0/90/45): 1.22 / 1.34 / 1.43  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

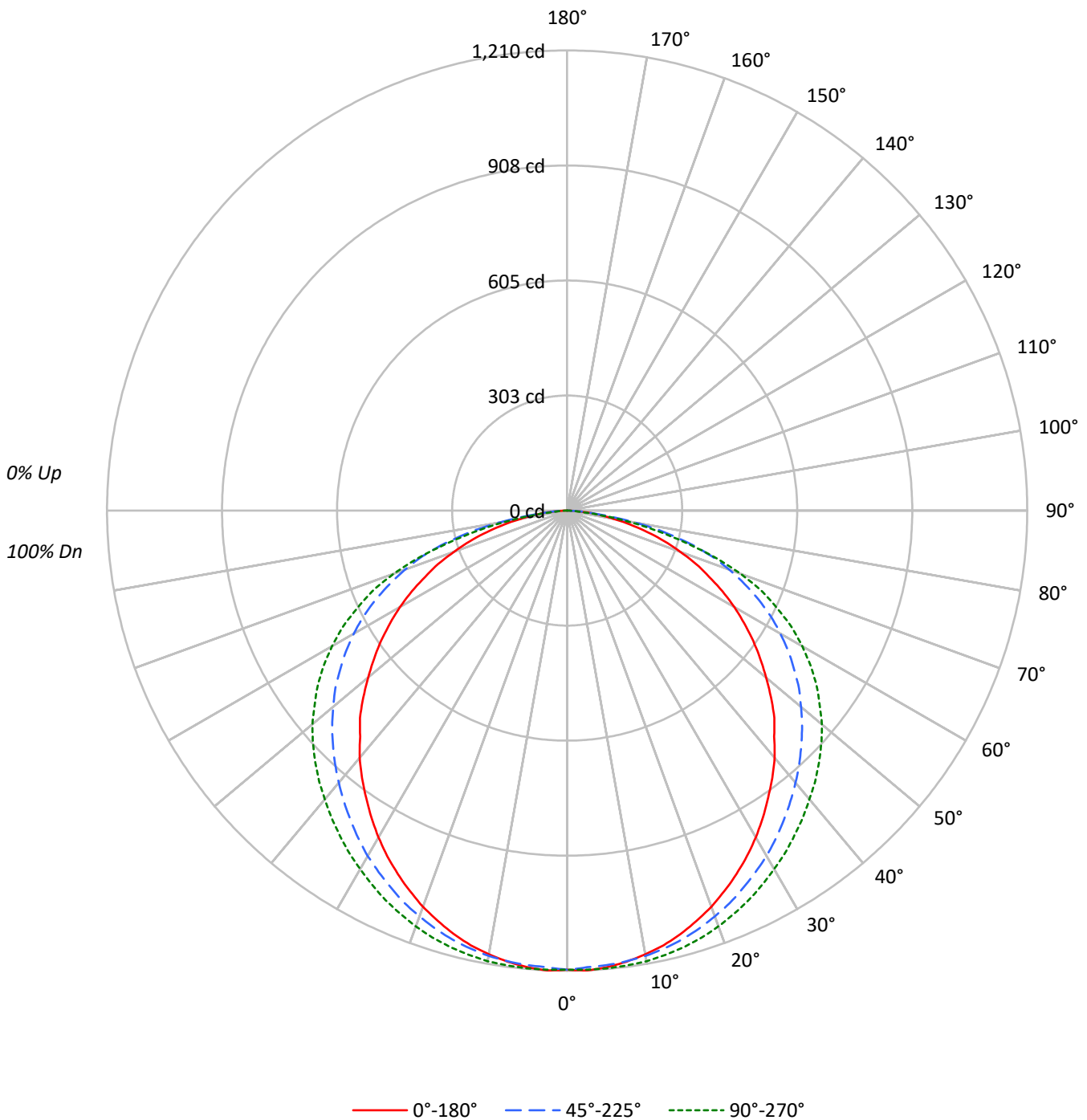
Input Watts (W): 28.4  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	99	95	106	101	97	93	97	93	90		93	90	88		89	87	85	83
2	98	89	82	76	95	87	81	75	84	78	74		81	76	72		77	74	70	68
3	89	78	69	63	86	76	68	62	73	67	61		70	65	60		68	63	59	57
4	81	69	60	53	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	38		50	43	38		49	43	38	36
7	63	50	41	34	62	49	40	34	47	39	34		46	39	34		44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30		42	35	30		41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27		39	32	27		37	31	27	25
10	52	38	30	25	50	38	30	25	37	29	24		36	29	24		35	29	24	22

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

	0°	45°	90°
0°	3249	3249	3249
5°	3255	3241	3264
10°	3237	3249	3287
15°	3211	3253	3310
20°	3175	3252	3332
25°	3130	3251	3356
30°	3083	3259	3382
35°	3027	3263	3424
40°	2981	3282	3482
45°	2933	3315	3564
50°	2858	3360	3661
55°	2802	3420	3756
60°	2730	3485	3842
65°	2624	3543	3885
70°	2484	3570	3814
75°	2270	3450	3294
80°	1908	2819	2455
85°	1389	1420	926



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	114.6	3.0
10°-20°	330.4	8.7
20°-30°	505.2	13.3
30°-40°	620.1	16.4
40°-50°	666.8	17.6
50°-60°	640.1	16.9
60°-70°	530.3	14.0
70°-80°	317.8	8.4
80°-90°	65.1	1.7
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°	950.3	25.1
0°-40°	1570.3	41.4
0°-60°	2877.3	75.9
0°-90°	3790.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3790.5	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1207	1207	1207	1207	1207	
5°	1205	1203	1200	1209	1208	114
15°	1153	1158	1168	1186	1188	325
25°	1054	1071	1095	1124	1130	486
35°	922	952	993	1032	1042	577
45°	771	811	871	919	936	592
55°	597	654	729	782	801	533
65°	412	480	556	600	610	408
75°	218	285	332	324	317	231
85°	45	65	46	31	30	57
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1207.3	1207.3	1207.3	1207.3	1207.3
2.5°	1210.5	1207.3	1201.9	1210.5	1208.3
5°	1205.1	1203.0	1199.8	1209.4	1208.3
7.5°	1196.6	1196.6	1195.5	1207.3	1206.2
10°	1184.8	1186.9	1189.1	1203.0	1203.0
12.5°	1170.9	1173.0	1179.4	1195.5	1196.6
15°	1152.7	1158.0	1167.7	1185.9	1188.0
17.5°	1131.3	1139.8	1152.7	1174.1	1177.3
20°	1108.8	1118.4	1135.6	1159.1	1163.4
22.5°	1082.0	1096.0	1117.4	1142.0	1147.3
25°	1054.2	1071.3	1094.9	1123.8	1130.2
27.5°	1024.2	1044.6	1072.4	1102.4	1109.9
30°	992.1	1015.7	1048.9	1081.0	1088.5
32.5°	957.9	985.7	1022.1	1057.4	1067.1
35°	921.5	952.5	993.2	1031.7	1042.4
37.5°	886.2	919.4	964.3	1006.1	1017.8
40°	848.7	884.0	934.3	978.2	991.1
42.5°	805.9	848.7	903.3	950.4	965.4
45°	770.6	811.3	871.2	919.4	936.5
47.5°	726.7	773.8	838.0	889.4	906.5
50°	682.8	736.3	802.7	856.2	874.4
52.5°	640.0	694.6	768.5	820.9	836.9
55°	597.2	653.9	728.9	782.4	800.6
57.5°	552.3	614.3	690.3	743.8	758.8
60°	507.3	569.4	647.5	698.9	713.9
62.5°	460.2	526.6	604.7	651.8	666.8
65°	412.1	479.5	556.5	600.4	610.1
67.5°	367.1	435.6	505.2	545.8	555.5
70°	315.7	388.5	453.8	483.8	484.8
72.5°	268.6	336.1	398.1	406.7	404.6
75°	218.3	284.7	331.8	324.3	316.8
77.5°	169.1	236.5	261.1	239.7	234.4
80°	123.1	184.1	181.9	161.6	158.4
82.5°	84.6	127.4	104.9	85.6	79.2
85°	45.0	65.3	46.0	31.0	30.0
87.5°	17.1	16.1	9.6	6.4	6.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)