

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: P475492

Luminaire Tested: **14CZ2-48HE-SQR-UNV-L830-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475492  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ2-48HE-SQR-UNV-L830-CD1-U  
Description: 1'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SQUARE LENS  
Light Source: 3000K CCT, 80 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4473.3 lumens  
Efficiency: N/A  
Efficacy: 125.3 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

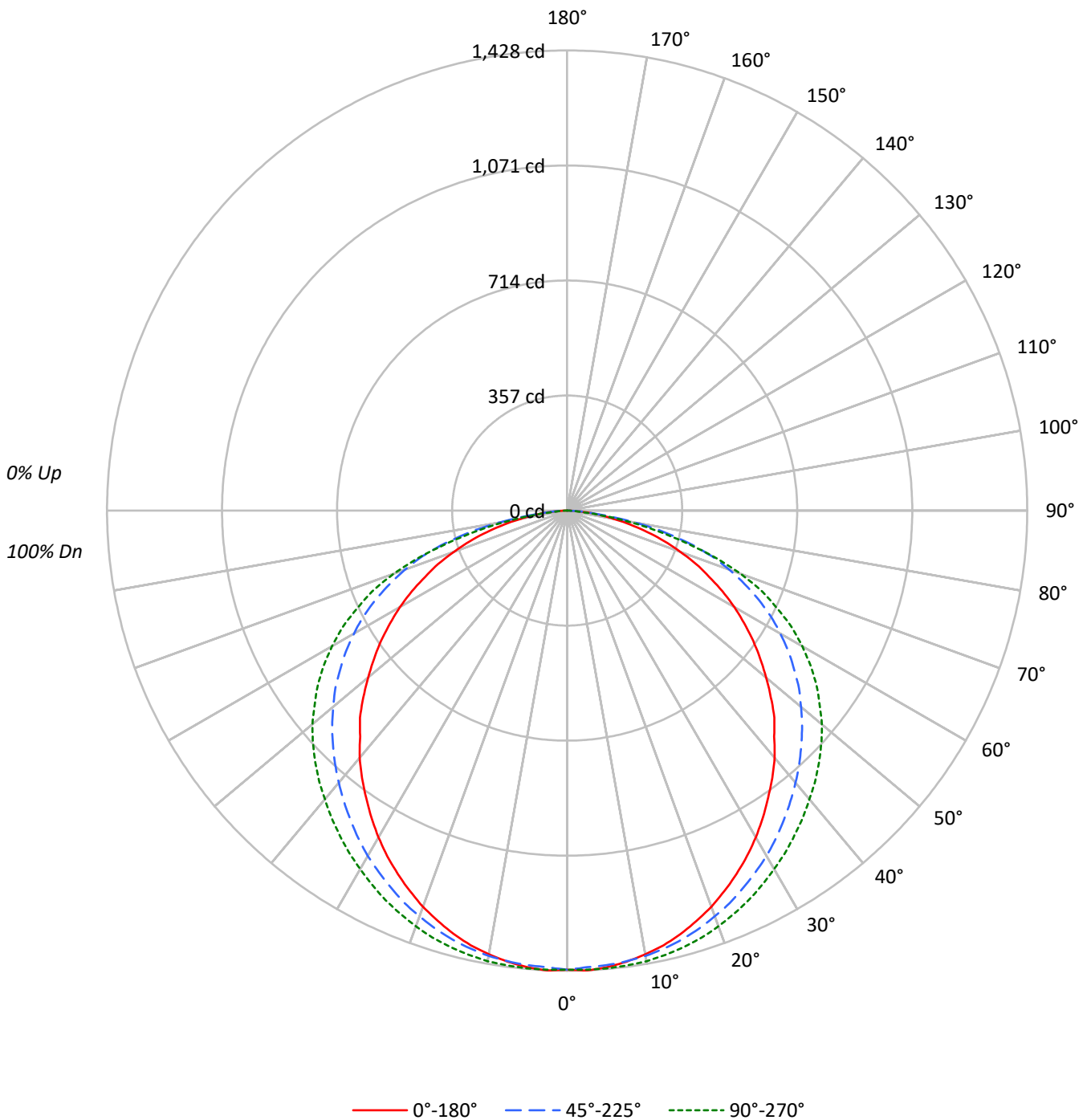
Input Watts (W): 35.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	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°	3834	3834	3834
5°	3842	3825	3852
10°	3821	3835	3879
15°	3790	3839	3906
20°	3747	3838	3932
25°	3694	3836	3960
30°	3638	3846	3991
35°	3573	3850	4041
40°	3518	3873	4109
45°	3461	3913	4206
50°	3373	3966	4320
55°	3307	4035	4433
60°	3222	4112	4534
65°	3096	4182	4584
70°	2932	4213	4502
75°	2679	4070	3887
80°	2252	3327	2896
85°	1636	1677	1093



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	135.3	3.0
10°-20°	389.9	8.7
20°-30°	596.2	13.3
30°-40°	731.8	16.4
40°-50°	787.0	17.6
50°-60°	755.4	16.9
60°-70°	625.8	14.0
70°-80°	375.1	8.4
80°-90°	76.8	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°	1121.4	25.1
0°-40°	1853.2	41.4
0°-60°	3395.6	75.9
0°-90°	4473.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4473.3	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1425	1425	1425	1425	1425	
5°	1422	1420	1416	1427	1426	135
15°	1360	1367	1378	1400	1402	384
25°	1244	1264	1292	1326	1334	573
35°	1088	1124	1172	1218	1230	681
45°	909	957	1028	1085	1105	699
55°	705	772	860	923	945	629
65°	486	566	657	709	720	482
75°	258	336	392	383	374	272
85°	53	77	54	37	35	67
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1424.7	1424.7	1424.7	1424.7	1424.7
2.5°	1428.5	1424.7	1418.4	1428.5	1426.0
5°	1422.2	1419.7	1415.9	1427.3	1426.0
7.5°	1412.1	1412.1	1410.8	1424.7	1423.5
10°	1398.2	1400.7	1403.3	1419.7	1419.7
12.5°	1381.8	1384.3	1391.9	1410.8	1412.1
15°	1360.3	1366.6	1378.0	1399.5	1402.0
17.5°	1335.0	1345.2	1360.3	1385.6	1389.4
20°	1308.5	1319.9	1340.1	1367.9	1372.9
22.5°	1276.9	1293.4	1318.6	1347.7	1354.0
25°	1244.1	1264.3	1292.1	1326.2	1333.8
27.5°	1208.7	1232.7	1265.6	1300.9	1309.8
30°	1170.9	1198.6	1237.8	1275.7	1284.5
32.5°	1130.4	1163.3	1206.2	1247.9	1259.3
35°	1087.5	1124.1	1172.1	1217.6	1230.2
37.5°	1045.8	1085.0	1138.0	1187.3	1201.2
40°	1001.6	1043.3	1102.6	1154.4	1169.6
42.5°	951.1	1001.6	1066.0	1121.6	1139.3
45°	909.4	957.4	1028.1	1085.0	1105.2
47.5°	857.6	913.2	989.0	1049.6	1069.8
50°	805.8	869.0	947.3	1010.4	1031.9
52.5°	755.3	819.7	906.9	968.8	987.7
55°	704.8	771.7	860.1	923.3	944.8
57.5°	651.7	725.0	814.7	877.8	895.5
60°	598.7	671.9	764.1	824.8	842.5
62.5°	543.1	621.4	713.6	769.2	786.9
65°	486.3	565.8	656.8	708.6	719.9
67.5°	433.2	514.1	596.2	644.2	655.5
70°	372.6	458.5	535.5	570.9	572.2
72.5°	317.0	396.6	469.9	480.0	477.4
75°	257.7	336.0	391.5	382.7	373.9
77.5°	199.6	279.1	308.2	282.9	276.6
80°	145.3	217.2	214.7	190.7	186.9
82.5°	99.8	150.3	123.8	101.0	93.5
85°	53.0	77.0	54.3	36.6	35.4
87.5°	20.2	18.9	11.4	7.6	7.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)