

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: P475474

Luminaire Tested: **14CZ2-48HE-HRP-UNV-L840-CD1-U**

Issue Date: 02/10/2021

**Test Information**

Test Method: LM-79-08  
Report Number: P475474  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 02/10/2021  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 14CZ2-48HE-HRP-UNV-L840-CD1-U  
Description: 1'X4' 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: 4027.6 lumens  
Efficiency: N/A  
Efficacy: 112.8 lumens/watt  
Spacing Criteria (0/90/45): 1.25 / 1.29 / 1.4  
Luminous Opening: Rectangular (W 1' x L: 4' x H: 0')  
CIE Type: Direct

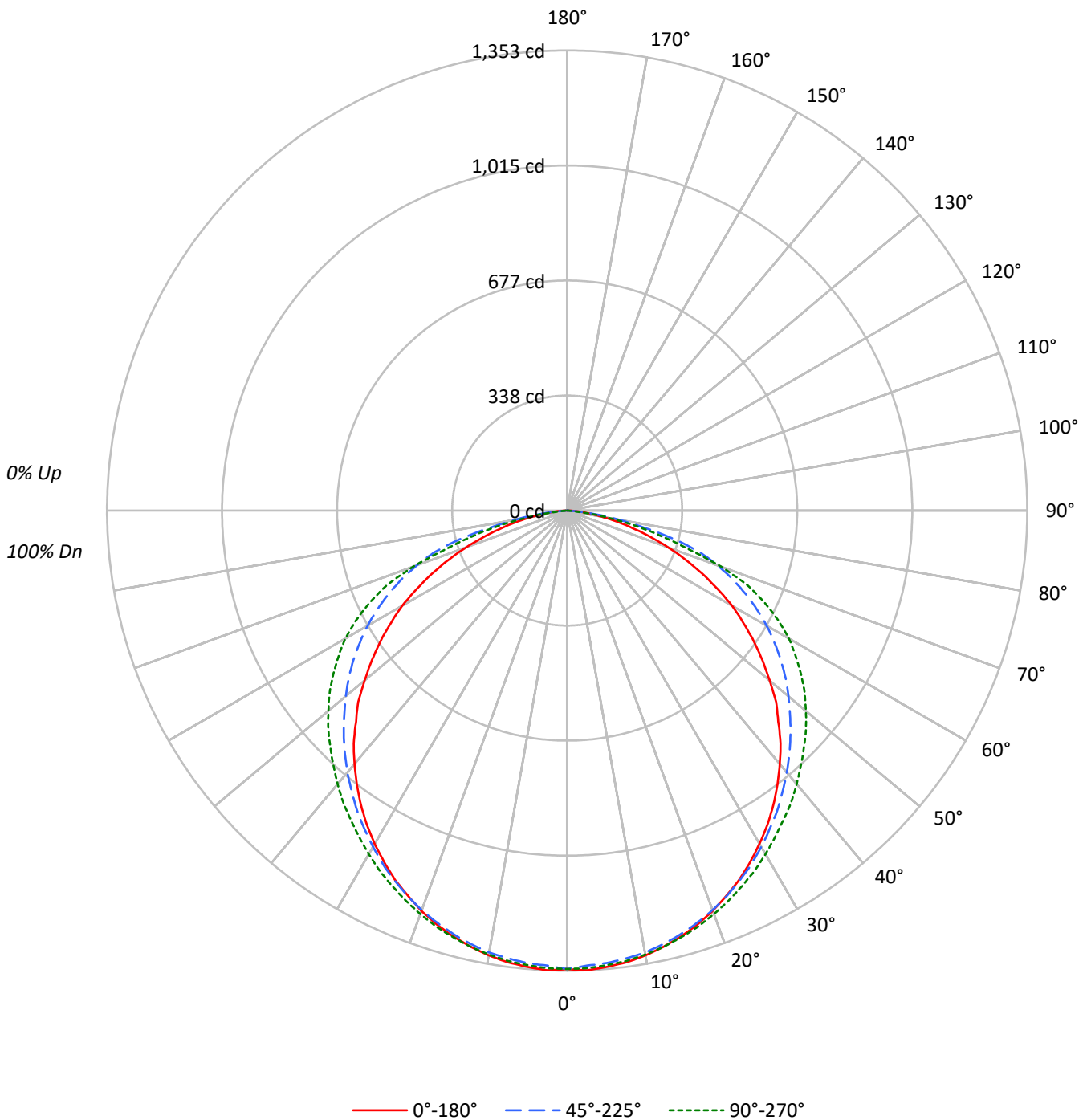
Input Watts (W): 35.7  
Input Voltage (V): 120  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	109	104	100	96	106	102	98	94	97	94	91	93	91	88	90	88	86	84
2	99	90	83	77	96	88	82	76	85	79	75	81	77	73	78	75	71	69
3	90	79	70	64	87	77	69	63	74	68	62	71	66	61	69	64	60	58
4	82	70	61	54	79	68	60	53	66	58	53	63	57	52	61	56	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	39	51	44	39	50	43	39	37
7	64	50	41	35	62	50	41	35	48	40	35	47	40	35	45	39	34	32
8	60	46	37	31	58	45	37	31	44	36	31	43	36	31	41	35	31	29
9	56	42	34	28	54	41	33	28	40	33	28	39	33	28	38	32	28	26
10	52	39	31	25	51	38	31	25	37	30	25	36	30	25	35	29	25	23

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

	0°	45°	90°
0°	3627	3627	3627
5°	3638	3608	3625
10°	3629	3605	3622
15°	3610	3593	3617
20°	3586	3579	3615
25°	3556	3563	3615
30°	3516	3547	3625
35°	3472	3538	3644
40°	3416	3530	3687
45°	3341	3535	3748
50°	3254	3556	3837
55°	3145	3600	3938
60°	3018	3647	4056
65°	2787	3682	4078
70°	2485	3699	3777
75°	2082	3426	2935
80°	1581	2408	1928
85°	1115	846	269



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	127.6	3.2
10°-20°	365.6	9.1
20°-30°	555.7	13.8
30°-40°	676.6	16.8
40°-50°	718.8	17.8
50°-60°	679.9	16.9
60°-70°	550.9	13.7
70°-80°	302.0	7.5
80°-90°	50.5	1.3
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°	1048.9	26.0
0°-40°	1725.5	42.8
0°-60°	3124.2	77.6
0°-90°	4027.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4027.6	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1348	1348	1348	1348	1348	
5°	1347	1344	1336	1344	1342	128
15°	1296	1293	1290	1300	1298	366
25°	1198	1198	1200	1216	1217	551
35°	1057	1061	1077	1103	1109	661
45°	878	892	929	971	985	678
55°	670	700	767	823	839	599
65°	438	488	578	629	640	433
75°	200	276	330	291	282	214
85°	36	47	27	14	9	45
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1348.0	1348.0	1348.0	1348.0	1348.0
2.5°	1353.0	1348.0	1339.3	1348.0	1346.8
5°	1346.8	1344.3	1335.6	1344.3	1341.8
7.5°	1339.3	1336.8	1328.1	1338.1	1335.6
10°	1328.1	1325.6	1319.4	1328.1	1325.6
12.5°	1313.2	1312.0	1305.7	1315.7	1313.2
15°	1295.8	1293.3	1289.6	1299.5	1298.3
17.5°	1275.9	1273.4	1270.9	1283.4	1282.1
20°	1252.3	1251.0	1249.8	1263.5	1262.2
22.5°	1224.9	1224.9	1226.2	1241.1	1241.1
25°	1197.6	1197.6	1200.0	1216.2	1217.4
27.5°	1165.2	1167.7	1172.7	1190.1	1193.8
30°	1131.6	1134.1	1141.6	1161.5	1166.5
32.5°	1095.6	1099.3	1109.3	1132.9	1137.9
35°	1057.0	1060.8	1076.9	1103.0	1109.3
37.5°	1016.0	1022.2	1040.9	1070.7	1081.9
40°	972.5	982.4	1004.8	1037.1	1049.6
42.5°	928.9	937.6	967.5	1004.8	1017.2
45°	878.0	891.6	928.9	971.2	984.9
47.5°	833.2	845.6	889.1	936.4	952.6
50°	777.2	795.9	849.4	901.6	916.5
52.5°	723.8	748.6	809.6	863.0	880.4
55°	670.3	700.1	767.3	823.2	839.4
57.5°	614.3	646.7	722.5	779.7	797.1
60°	560.8	595.7	677.7	736.2	753.6
62.5°	497.4	541.0	629.2	685.2	700.1
65°	437.7	487.5	578.3	629.2	640.4
67.5°	376.8	435.2	526.0	570.8	574.5
70°	315.9	381.8	470.1	497.4	480.0
72.5°	256.2	329.5	410.4	388.0	368.1
75°	200.2	276.1	329.5	291.0	282.3
77.5°	148.0	226.3	230.1	211.4	205.2
80°	102.0	175.3	155.4	134.3	124.4
82.5°	65.9	108.2	85.8	63.4	57.2
85°	36.1	47.3	27.4	13.7	8.7
87.5°	13.7	8.7	3.7	3.7	2.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)