

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: P274823

Luminaire Tested: **24CZ2-60HE-RDP-UNV-L930-CD1-U**

Issue Date: 3/3/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

**Test Information**

Test Method: LM-79-08  
Report Number: P274823  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-60HE-RDP-UNV-L930-CD1-U  
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS WITH INSERT, 90CRI  
Light Source: (392) 3000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 3336.0 lumens  
Efficiency: N/A  
Efficacy: 75.6 lumens/watt  
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

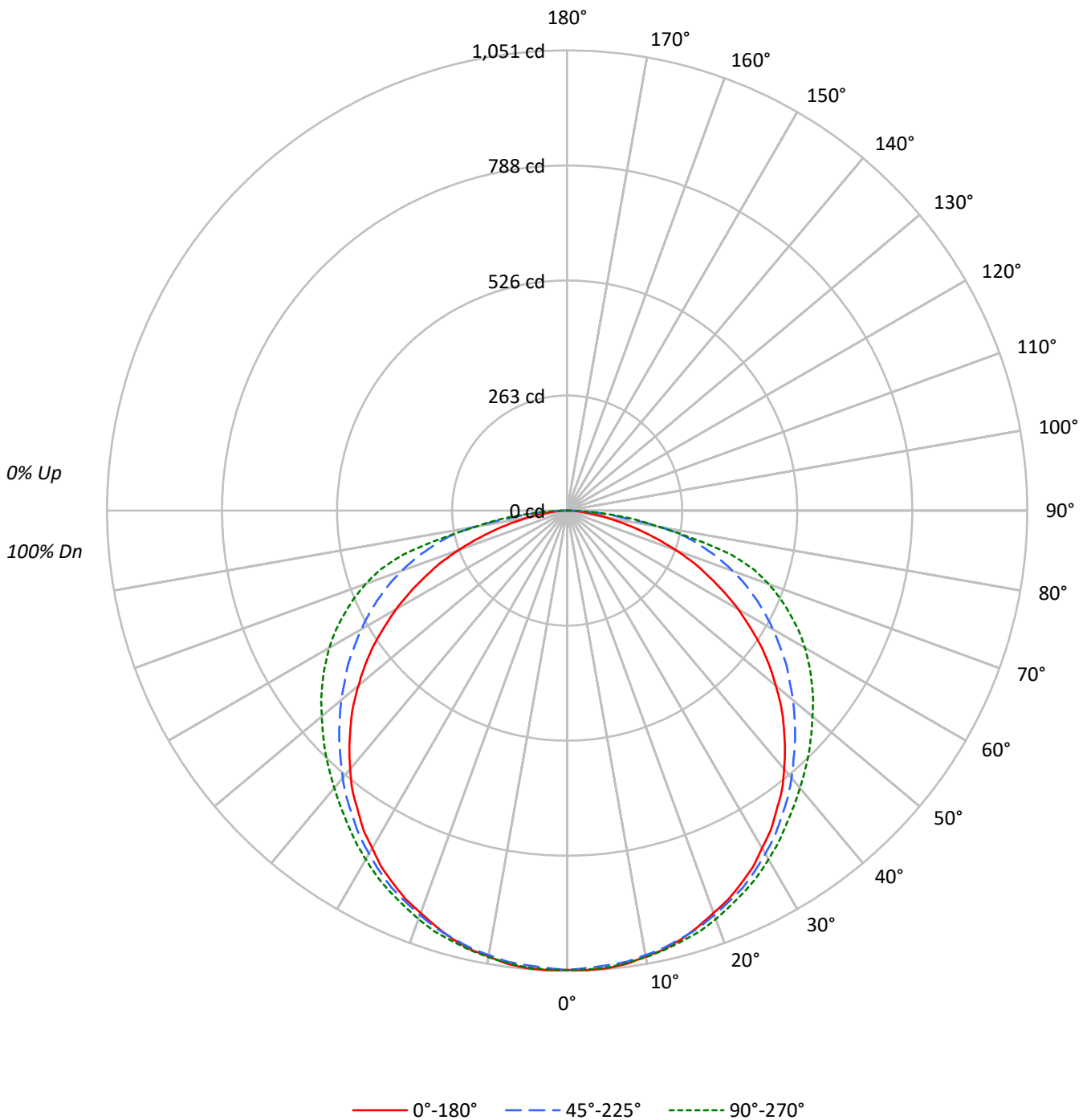
Input Watts (W): 44.1  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	89		92	89	87		88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		77	73	69	67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		34	28	24	22

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

	0°	45°	90°
0°	1412	1412	1412
5°	1417	1408	1415
10°	1413	1408	1415
15°	1411	1408	1417
20°	1400	1407	1422
25°	1395	1410	1425
30°	1383	1406	1429
35°	1370	1402	1435
40°	1354	1401	1453
45°	1332	1401	1486
50°	1302	1410	1531
55°	1269	1432	1599
60°	1216	1460	1688
65°	1138	1512	1791
70°	1035	1582	1927
75°	878	1669	2013
80°	693	1680	1628
85°	511	1277	1431



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	99.5	3.0
10°-20°	286.4	8.6
20°-30°	438.0	13.1
30°-40°	535.4	16.0
40°-50°	570.6	17.1
50°-60°	545.6	16.4
60°-70°	462.2	13.9
70°-80°	310.6	9.3
80°-90°	87.6	2.6
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°	823.9	24.7
0°-40°	1359.3	40.7
0°-60°	2475.5	74.2
0°-90°	3336.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3336.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1049	1049	1049	1049	1049	
5°	1049	1047	1042	1047	1047	100
15°	1013	1013	1011	1019	1018	286
25°	940	943	950	958	960	433
35°	834	841	854	870	874	522
45°	700	712	736	768	781	540
55°	541	561	611	659	682	482
65°	357	394	475	538	563	355
75°	169	230	321	376	387	181
85°	33	68	83	89	93	41
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1049.1	1049.1	1049.1	1049.1	1049.1
2.5°	1050.7	1050.7	1045.8	1049.1	1049.1
5°	1049.1	1047.4	1042.5	1047.4	1047.4
7.5°	1044.1	1042.5	1039.1	1044.1	1042.5
10°	1034.2	1034.2	1030.9	1035.8	1035.8
12.5°	1025.9	1024.3	1022.6	1029.2	1027.6
15°	1012.7	1012.7	1011.0	1019.3	1017.6
17.5°	996.1	997.8	999.4	1006.1	1007.7
20°	977.9	981.2	982.9	992.8	992.8
22.5°	961.4	963.0	966.3	976.3	976.3
25°	939.9	943.2	949.8	958.1	959.7
27.5°	918.4	920.0	928.3	939.9	941.5
30°	890.2	895.2	905.1	918.4	920.0
32.5°	865.4	870.4	882.0	895.2	898.5
35°	834.0	840.6	853.8	870.4	873.7
37.5°	805.8	810.8	827.3	845.5	850.5
40°	771.1	781.0	797.6	819.1	827.3
42.5°	736.3	746.3	766.1	794.3	804.2
45°	699.9	711.5	736.3	767.8	781.0
47.5°	663.5	676.8	704.9	741.3	756.2
50°	622.2	638.7	673.5	714.8	731.4
52.5°	582.5	602.3	640.4	686.7	708.2
55°	541.1	560.9	610.6	658.6	681.7
57.5°	494.8	521.2	575.8	630.4	655.3
60°	451.7	476.6	542.7	602.3	627.1
62.5°	405.4	438.5	509.6	572.5	597.3
65°	357.4	393.8	474.9	537.8	562.6
67.5°	314.4	354.1	440.1	503.0	527.8
70°	263.1	312.7	402.1	465.0	489.8
72.5°	215.1	269.7	362.4	423.6	446.8
75°	168.8	230.0	321.0	375.6	387.2
77.5°	125.8	190.3	278.0	301.2	292.9
80°	89.4	152.2	216.8	205.2	210.1
82.5°	57.9	115.8	134.0	152.2	157.2
85°	33.1	67.8	82.7	89.4	92.7
87.5°	14.9	24.8	33.1	33.1	31.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)