

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: P274841

Luminaire Tested: **24CZ2-70HE-RDP-UNV-L940-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: P274841  
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: 24CZ2-70HE-RDP-UNV-L940-CD1-U  
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS WITH INSERT, 90CRI  
Light Source: (392) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

Lumens per Lamp: N/A  
Luminaire Lumens: 4032.1 lumens  
Efficiency: N/A  
Efficacy: 79.1 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

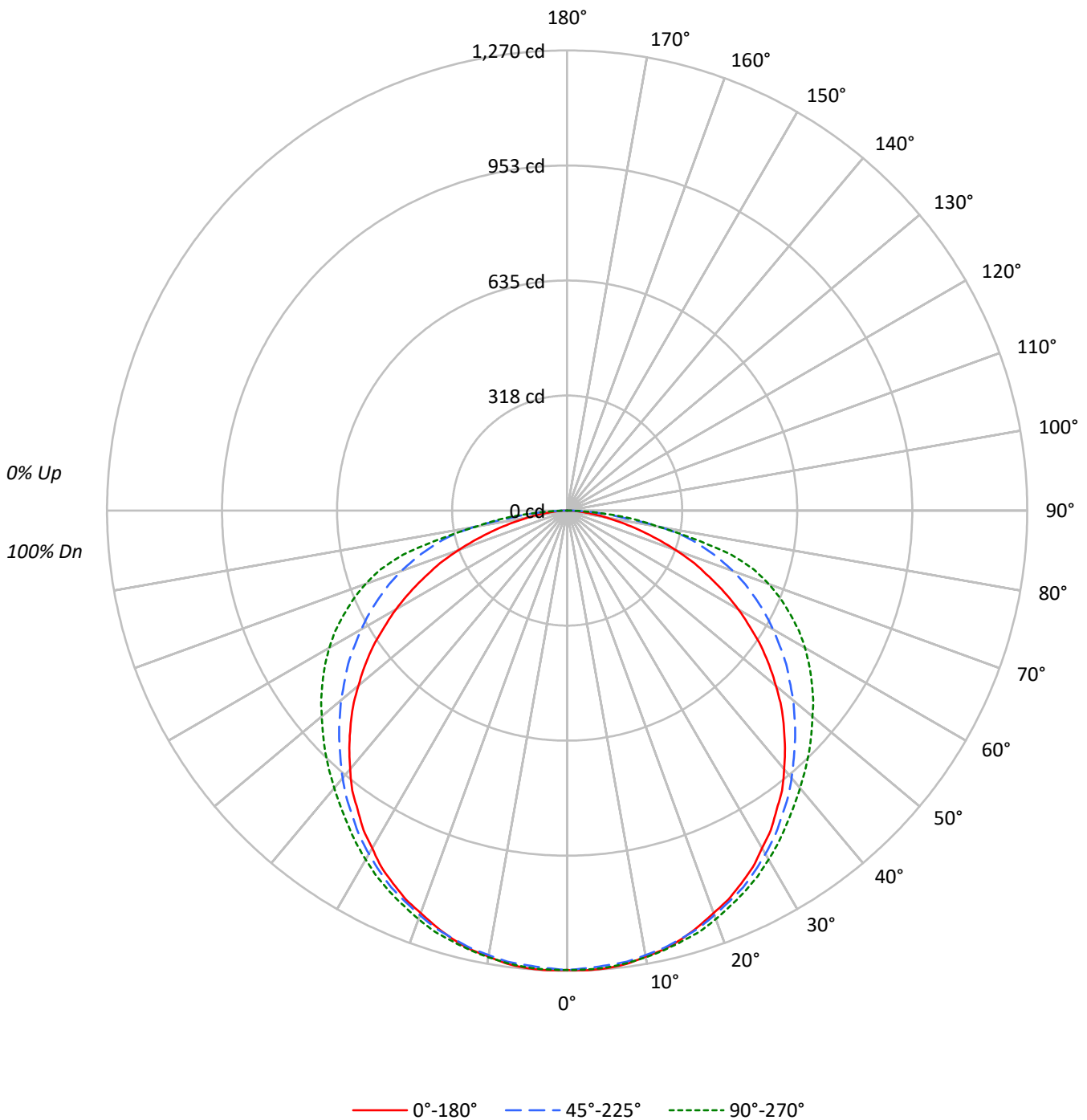
Input Watts (W): 51  
Input Voltage (V): NR  
Input Current (Ain): NR  
Voltage Rise (V): NR  
Power Factor: NR  
Total Harmonic Distortion (THDi): NR  
Frequency (hertz): 60  
Stabilization Time: NR  
Operation Time: NR  
Ambient Temperature (°C): NR  
Test Distance: 25 FT



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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°	1706	1706	1706
5°	1712	1702	1710
10°	1708	1702	1710
15°	1705	1702	1713
20°	1692	1701	1718
25°	1686	1704	1722
30°	1672	1700	1728
35°	1656	1695	1735
40°	1637	1693	1756
45°	1610	1694	1796
50°	1574	1704	1850
55°	1534	1731	1933
60°	1469	1765	2040
65°	1375	1827	2165
70°	1251	1912	2329
75°	1061	2017	2433
80°	837	2030	1968
85°	618	1544	1729



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	120.3	3.0
10°-20°	346.2	8.6
20°-30°	529.4	13.1
30°-40°	647.1	16.0
40°-50°	689.7	17.1
50°-60°	659.5	16.4
60°-70°	558.6	13.9
70°-80°	375.5	9.3
80°-90°	105.9	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°	995.8	24.7
0°-40°	1642.9	40.7
0°-60°	2992.1	74.2
0°-90°	4032.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4032.1	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	1268	1268	1268	1268	1268	
5°	1268	1266	1260	1266	1266	120
15°	1224	1224	1222	1232	1230	345
25°	1136	1140	1148	1158	1160	524
35°	1008	1016	1032	1052	1056	631
45°	846	860	890	928	944	653
55°	654	678	738	796	824	582
65°	432	476	574	650	680	429
75°	204	278	388	454	468	218
85°	40	82	100	108	112	50
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	1267.9	1267.9	1267.9	1267.9	1267.9
2.5°	1269.9	1269.9	1263.9	1267.9	1267.9
5°	1267.9	1265.9	1259.9	1265.9	1265.9
7.5°	1261.9	1259.9	1255.9	1261.9	1259.9
10°	1249.9	1249.9	1245.9	1251.9	1251.9
12.5°	1239.9	1238.0	1236.0	1243.9	1241.9
15°	1224.0	1224.0	1222.0	1232.0	1230.0
17.5°	1204.0	1206.0	1208.0	1216.0	1218.0
20°	1182.0	1186.0	1188.0	1200.0	1200.0
22.5°	1162.0	1164.0	1168.0	1180.0	1180.0
25°	1136.0	1140.0	1148.0	1158.0	1160.0
27.5°	1110.0	1112.0	1122.0	1136.0	1138.0
30°	1076.0	1082.0	1094.0	1110.0	1112.0
32.5°	1046.0	1052.0	1066.0	1082.0	1086.0
35°	1008.0	1016.0	1032.0	1052.0	1056.0
37.5°	974.0	980.0	1000.0	1022.0	1028.0
40°	932.0	944.0	964.0	990.0	1000.0
42.5°	890.0	902.0	926.0	960.0	972.0
45°	846.0	860.0	890.0	928.0	944.0
47.5°	802.0	818.0	852.0	896.0	914.0
50°	752.0	772.0	814.0	864.0	884.0
52.5°	704.0	728.0	774.0	830.0	856.0
55°	654.0	678.0	738.0	796.0	824.0
57.5°	598.0	630.0	696.0	762.0	792.0
60°	546.0	576.0	656.0	728.0	758.0
62.5°	490.0	530.0	616.0	692.0	722.0
65°	432.0	476.0	574.0	650.0	680.0
67.5°	380.0	428.0	532.0	608.0	638.0
70°	318.0	378.0	486.0	562.0	592.0
72.5°	260.0	326.0	438.0	512.0	540.0
75°	204.0	278.0	388.0	454.0	468.0
77.5°	152.0	230.0	336.0	364.0	354.0
80°	108.0	184.0	262.0	248.0	254.0
82.5°	70.0	140.0	162.0	184.0	190.0
85°	40.0	82.0	100.0	108.0	112.0
87.5°	18.0	30.0	40.0	40.0	38.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)