

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: P272191

Luminaire Tested: **24CZ2-70HE-S-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: P272191  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-1)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 24CZ2-70HE-S-UNV-L940-CD1-U  
Description: 2'x4' TROFFER LED MODULE,SMOOTH LENS, 90CRI  
Light Source: (392) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

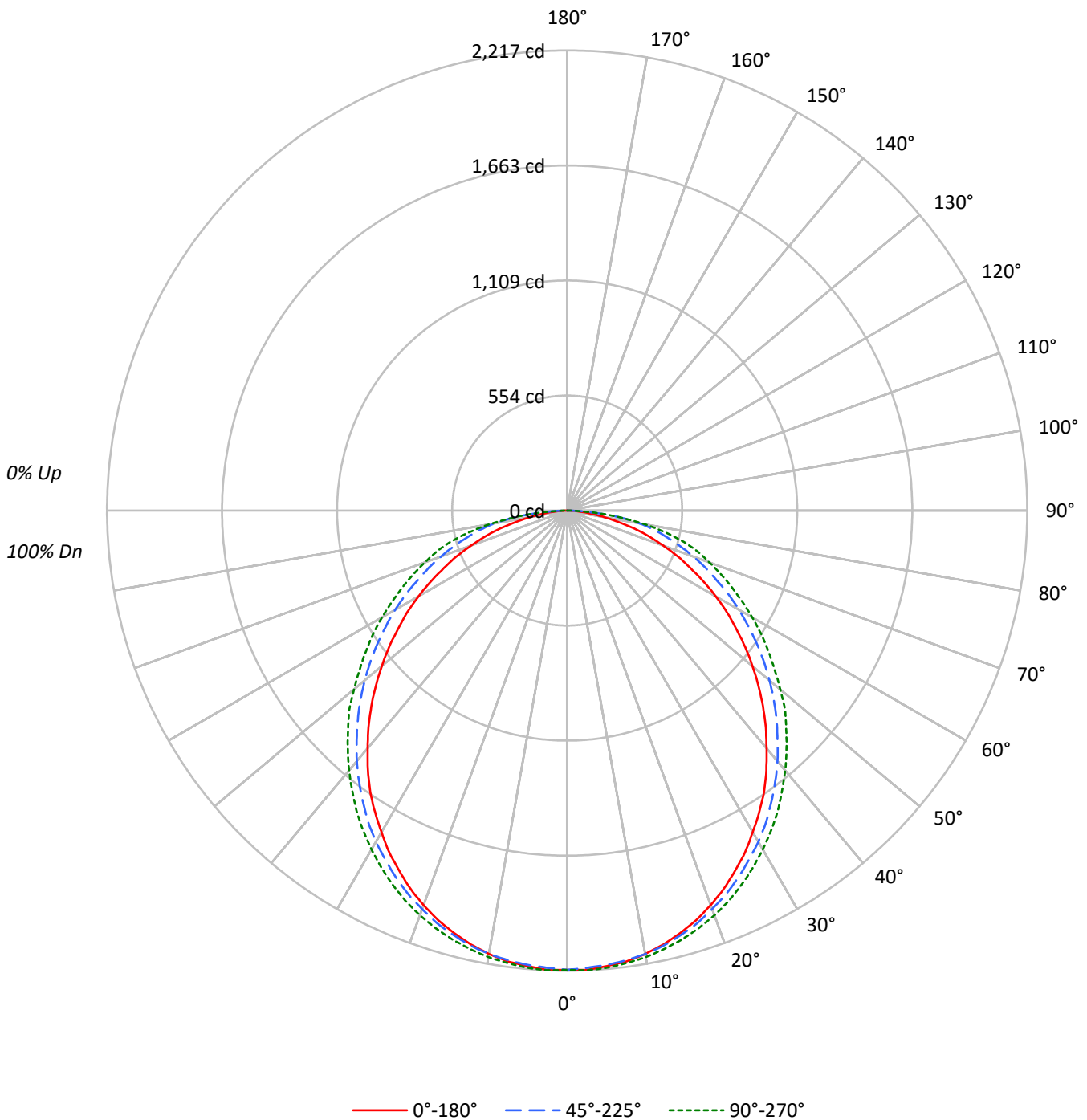
Lumens per Lamp: N/A  
Luminaire Lumens: 6299.0 lumens  
Efficiency: N/A  
Efficacy: 123.5 lumens/watt  
Spacing Criteria (0/90/45): 1.2 / 1.26 / 1.35  
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')  
CIE Type: Direct

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	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					100			
1	108	103	99	95	106	101	97	93	97	93	90	93	90	88	89	87	85	83					83			
2	98	90	83	77	96	88	81	76	84	79	74	81	76	72	78	74	71	69					69			
3	89	79	70	64	87	77	69	63	74	67	62	71	66	61	69	64	60	58					58			
4	82	70	61	54	80	68	60	54	66	59	53	63	57	52	61	56	51	49					49			
5	75	62	53	46	73	61	53	46	59	51	46	57	50	45	55	49	45	42					42			
6	70	56	47	40	68	55	47	40	53	46	40	52	45	40	50	44	39	37					37			
7	64	51	42	36	63	50	42	36	48	41	35	47	40	35	46	39	35	33					33			
8	60	46	38	32	58	46	37	32	44	37	32	43	36	31	42	36	31	29					29			
9	56	43	34	29	55	42	34	29	41	34	28	40	33	28	39	33	28	26					26			
10	53	39	31	26	51	39	31	26	38	31	26	37	30	26	36	30	26	24					24			

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

	0°	45°	90°
0°	2977	2977	2977
5°	2975	2967	2986
10°	2963	2963	2985
15°	2935	2949	2979
20°	2896	2925	2971
25°	2843	2896	2953
30°	2779	2863	2928
35°	2718	2816	2905
40°	2625	2769	2871
45°	2539	2715	2840
50°	2442	2664	2806
55°	2333	2614	2779
60°	2224	2574	2773
65°	2083	2529	2790
70°	1928	2543	2865
75°	1726	2590	3027
80°	1395	2744	2961
85°	1050	2410	2348



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	209.5	3.3
10°-20°	598.6	9.5
20°-30°	899.8	14.3
30°-40°	1071.8	17.0
40°-50°	1097.0	17.4
50°-60°	987.6	15.7
60°-70°	775.6	12.3
70°-80°	503.4	8.0
80°-90°	155.7	2.5
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°	1707.9	27.1
0°-40°	2779.8	44.1
0°-60°	4864.4	77.2
0°-90°	6299.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6299.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	2213	2213	2213	2213	2213	
5°	2203	2207	2197	2209	2211	209
15°	2107	2113	2117	2135	2139	594
25°	1915	1931	1951	1983	1989	882
35°	1655	1675	1715	1757	1769	1032
45°	1334	1366	1427	1481	1493	1029
55°	994	1038	1114	1172	1184	891
65°	654	704	794	860	876	651
75°	332	396	498	566	582	351
85°	68	126	156	152	152	82
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	2212.9	2212.9	2212.9	2212.9	2212.9
2.5°	2214.9	2214.9	2204.9	2214.9	2216.9
5°	2202.9	2206.9	2196.9	2208.9	2210.9
7.5°	2190.9	2190.9	2184.9	2196.9	2198.9
10°	2168.9	2170.9	2168.9	2182.9	2184.9
12.5°	2140.9	2144.9	2146.9	2160.9	2162.9
15°	2106.8	2112.8	2116.8	2134.8	2138.9
17.5°	2068.8	2074.8	2084.8	2104.8	2108.8
20°	2022.8	2030.8	2042.8	2068.8	2074.8
22.5°	1972.8	1980.8	2000.8	2024.8	2034.8
25°	1914.8	1930.8	1950.8	1982.8	1988.8
27.5°	1856.7	1870.7	1896.8	1930.8	1938.8
30°	1788.7	1810.7	1842.7	1876.7	1884.7
32.5°	1722.7	1744.7	1782.7	1818.7	1828.7
35°	1654.7	1674.7	1714.7	1756.7	1768.7
37.5°	1576.6	1602.6	1646.7	1688.7	1700.7
40°	1494.6	1526.6	1576.6	1620.6	1634.6
42.5°	1416.6	1450.6	1500.6	1548.6	1564.6
45°	1334.5	1366.5	1426.6	1480.6	1492.6
47.5°	1250.5	1286.5	1350.5	1404.6	1424.6
50°	1166.5	1204.5	1272.5	1328.5	1340.5
52.5°	1082.4	1122.4	1194.5	1254.5	1260.5
55°	994.4	1038.4	1114.4	1172.5	1184.5
57.5°	914.4	952.4	1034.4	1094.4	1108.4
60°	826.3	868.3	956.4	1012.4	1030.4
62.5°	742.3	786.3	878.3	934.4	950.4
65°	654.3	704.3	794.3	860.3	876.3
67.5°	578.2	626.2	722.3	786.3	802.3
70°	490.2	544.2	646.3	712.3	728.3
72.5°	414.2	470.2	572.2	636.3	660.3
75°	332.1	396.2	498.2	566.2	582.2
77.5°	252.1	326.1	430.2	482.2	482.2
80°	180.1	258.1	354.1	378.2	382.2
82.5°	118.0	194.1	262.1	260.1	260.1
85°	68.0	126.1	156.1	152.1	152.1
87.5°	26.0	52.0	56.0	56.0	54.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)