

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: P272019

Luminaire Tested: **22CZ2-24HE-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: P272019  
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)  
Test Lab: INNOVATION CENTER(G3)  
Issue Date: 3/3/2020  
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)  
Product Line: METALUX  
Catalog Number: 22CZ2-24HE-S-UNV-L940-CD1-U  
Description: 2'X2' TROFFER LED MODULE,SMOOTH LENS, 90CRI  
Light Source: (112) 4000K CCT, 90 CRI LEDS  
Ballast/Driver: ELECTRONIC DRIVER  
Luminaire Equipment: Sample No.   Condition   Description

**Summary**

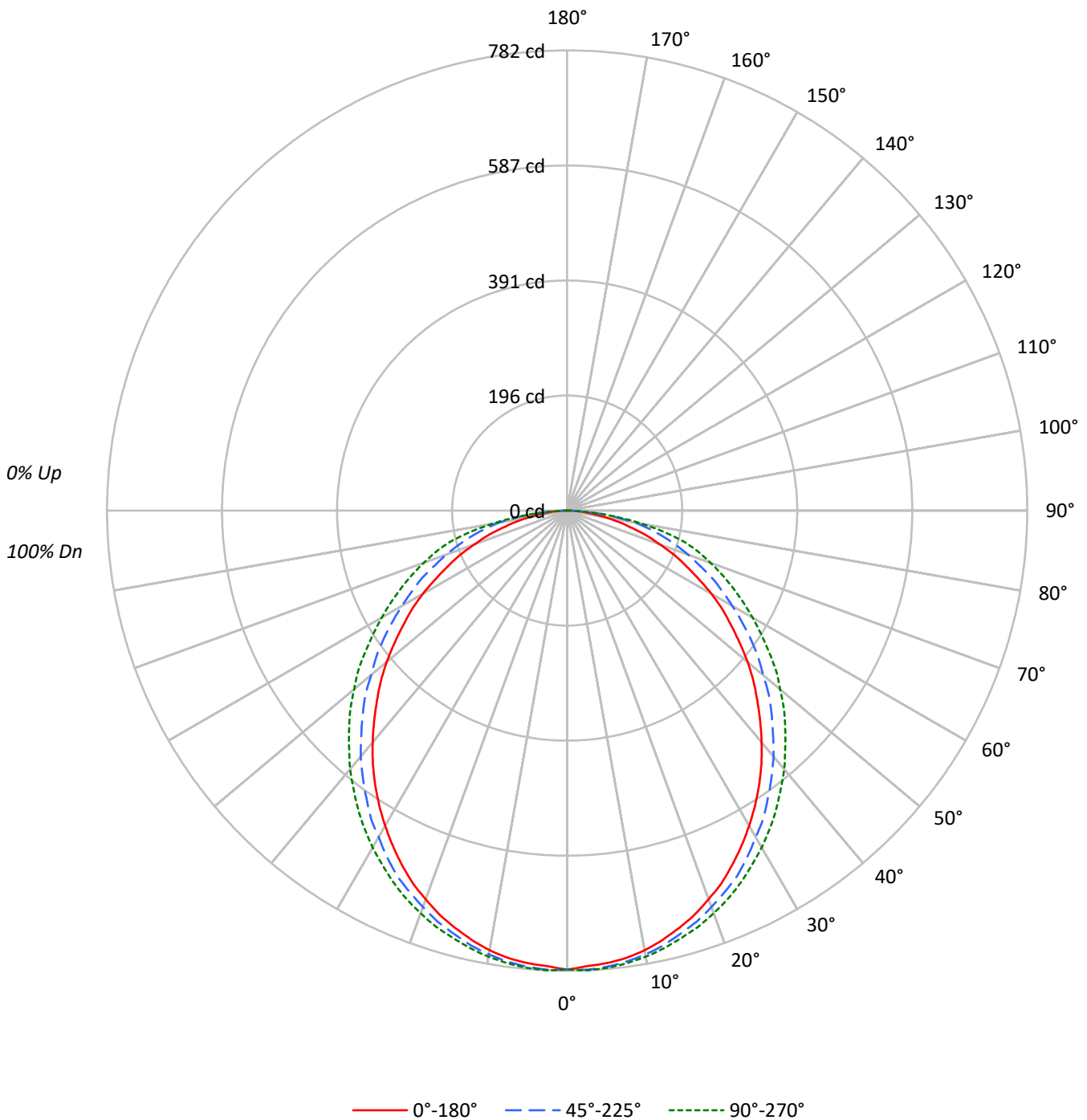
Lumens per Lamp: N/A  
Luminaire Lumens: 2177.0 lumens  
Efficiency: N/A  
Efficacy: 113.4 lumens/watt  
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34  
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')  
CIE Type: Direct

Input Watts (W): 19.2  
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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

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

	0°	45°	90°
0°	2099	2099	2099
5°	2085	2102	2107
10°	2073	2093	2104
15°	2046	2074	2094
20°	2013	2054	2086
25°	1972	2033	2072
30°	1922	1991	2055
35°	1869	1955	2035
40°	1806	1916	2016
45°	1740	1871	1995
50°	1675	1820	1977
55°	1597	1787	1963
60°	1525	1744	1957
65°	1423	1733	1979
70°	1311	1718	2038
75°	1183	1743	2144
80°	1023	1795	2015
85°	846	1507	1507



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**ZONAL LUMENS:**

Zone	Lumens	% Fixture
0°-10°	73.8	3.4
10°-20°	209.9	9.6
20°-30°	314.1	14.4
30°-40°	372.0	17.1
40°-50°	379.1	17.4
50°-60°	339.8	15.6
60°-70°	266.0	12.2
70°-80°	171.5	7.9
80°-90°	50.7	2.3
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°	597.8	27.5
0°-40°	969.8	44.5
0°-60°	1688.7	77.6
0°-90°	2177.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2177.0	100.0

**CANDELA DISTRIBUTION:**

	0°	22.5°	45°	67.5°	90°	Flux
0°	780	780	780	780	780	
5°	772	774	778	779	780	73
15°	734	738	744	751	752	207
25°	664	670	685	694	698	306
35°	569	576	595	614	620	355
45°	457	467	492	517	524	353
55°	340	351	381	407	418	305
65°	224	237	272	299	311	222
75°	114	131	168	196	206	122
85°	27	38	49	49	49	32
90°	0	0	0	0	0	



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**CANDELA DISTRIBUTION (FULL):**

	0°	22.5°	45°	67.5°	90°
0°	780.1	780.1	780.1	780.1	780.1
2.5°	775.0	777.0	781.1	782.1	782.1
5°	772.0	774.0	778.1	779.1	780.1
7.5°	766.9	767.9	773.0	775.0	776.0
10°	758.8	760.8	765.9	768.9	769.9
12.5°	747.6	750.6	756.7	760.8	761.8
15°	734.4	738.4	744.5	750.6	751.6
17.5°	720.2	724.2	732.3	739.5	741.5
20°	702.9	708.0	717.1	725.2	728.3
22.5°	685.6	689.7	700.9	711.0	714.1
25°	664.3	670.4	684.6	693.7	697.8
27.5°	641.9	649.1	663.3	675.5	679.5
30°	618.6	625.7	640.9	656.2	661.2
32.5°	594.2	602.3	620.6	635.9	640.9
35°	568.8	575.9	595.2	613.5	619.6
37.5°	542.4	548.5	570.8	590.1	596.2
40°	514.0	522.1	545.5	567.8	573.9
42.5°	485.5	494.7	518.0	542.4	548.5
45°	457.1	467.2	491.6	517.0	524.1
47.5°	429.7	437.8	465.2	489.6	499.7
50°	400.2	408.3	434.7	462.2	472.3
52.5°	369.7	380.9	409.3	435.8	447.9
55°	340.3	351.4	380.9	407.3	418.5
57.5°	312.8	322.0	352.5	379.9	391.1
60°	283.4	291.5	324.0	353.5	363.6
62.5°	251.9	264.1	297.6	325.0	337.2
65°	223.5	236.7	272.2	298.6	310.8
67.5°	197.1	209.2	243.8	272.2	285.4
70°	166.6	182.8	218.4	246.8	259.0
72.5°	142.2	156.4	193.0	221.4	234.6
75°	113.8	131.0	167.6	196.0	206.2
77.5°	90.4	107.7	142.2	164.5	169.6
80°	66.0	83.3	115.8	127.0	130.0
82.5°	44.7	60.9	83.3	86.3	87.4
85°	27.4	37.6	48.8	48.8	48.8
87.5°	13.2	15.2	17.3	16.3	16.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)