

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: P272011

Luminaire Tested: **22CZ2-20HE-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: P272011
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: 22CZ2-20HE-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

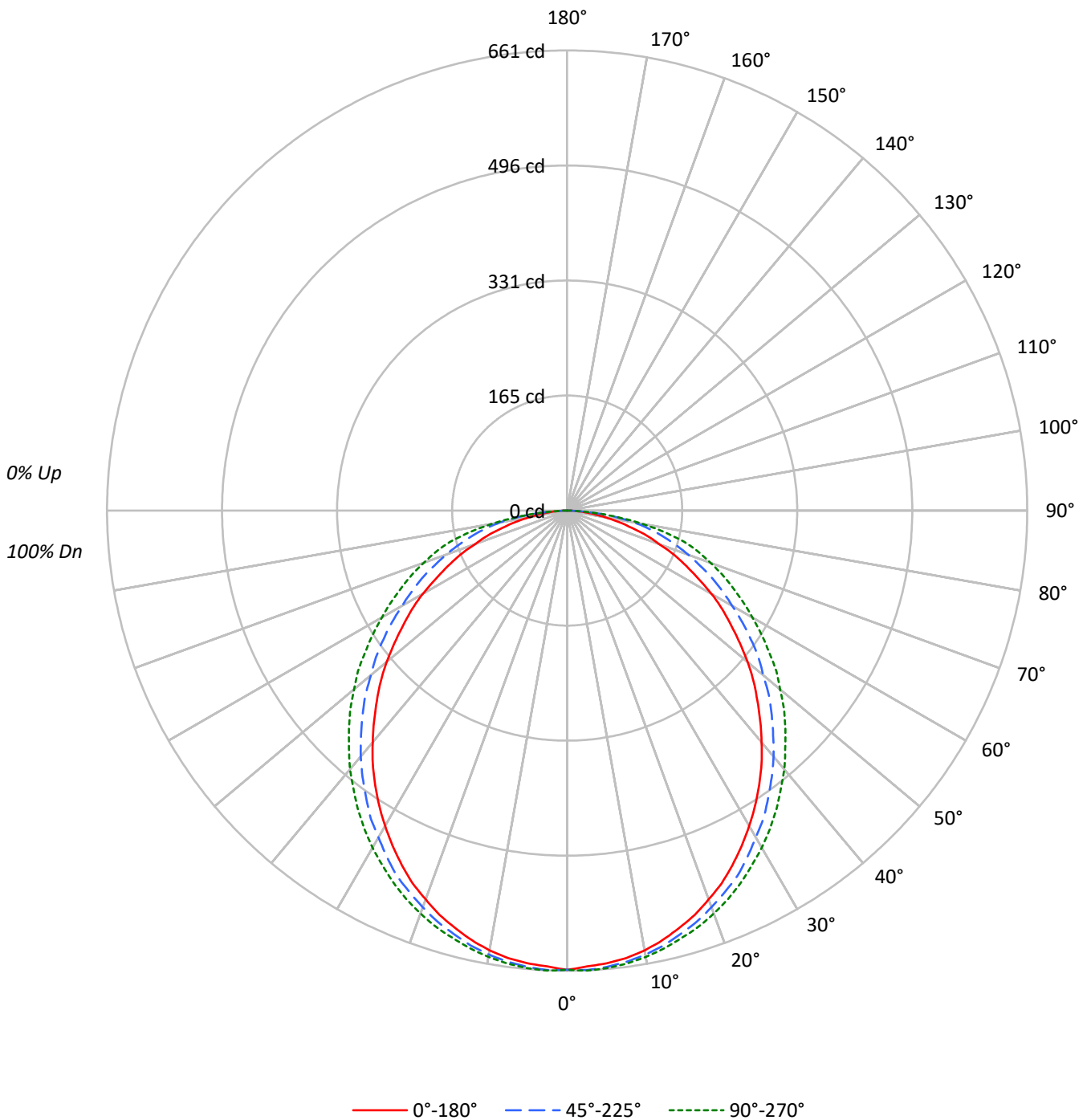
Lumens per Lamp: N/A
Luminaire Lumens: 1841.0 lumens
Efficiency: N/A
Efficacy: 115.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16
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



TEST NUMBER: P272011
CATALOG NUMBER: 22CZ2-20HE-S-UNV-L940-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P272011

CATALOG NUMBER: 22CZ2-20HE-S-UNV-L940-CD1-U

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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1775	1775	1775
5°	1763	1777	1782
10°	1753	1770	1779
15°	1730	1754	1771
20°	1702	1737	1764
25°	1668	1719	1752
30°	1625	1684	1738
35°	1580	1654	1721
40°	1527	1620	1705
45°	1471	1582	1687
50°	1417	1539	1672
55°	1350	1511	1660
60°	1290	1475	1655
65°	1203	1466	1673
70°	1109	1453	1723
75°	1000	1473	1813
80°	865	1517	1703
85°	716	1272	1272



TEST NUMBER: P272011

CATALOG NUMBER: 22CZ2-20HE-S-UNV-L940-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.4	3.4
10°-20°	177.5	9.6
20°-30°	265.6	14.4
30°-40°	314.6	17.1
40°-50°	320.6	17.4
50°-60°	287.4	15.6
60°-70°	225.0	12.2
70°-80°	145.1	7.9
80°-90°	42.8	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°	505.6	27.5
0°-40°	820.1	44.5
0°-60°	1428.1	77.6
0°-90°	1841.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1841.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	660	660	660	660	660	
5°	653	654	658	659	660	62
15°	621	624	630	635	636	175
25°	562	567	579	587	590	259
35°	481	487	503	519	524	301
45°	386	395	416	437	443	298
55°	288	297	322	344	354	258
65°	189	200	230	252	263	188
75°	96	111	142	166	174	103
85°	23	32	41	41	41	27
90°	0	0	0	0	0	



TEST NUMBER: P272011

CATALOG NUMBER: 22CZ2-20HE-S-UNV-L940-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	659.7	659.7	659.7	659.7	659.7
2.5°	655.4	657.1	660.5	661.4	661.4
5°	652.8	654.5	658.0	658.8	659.7
7.5°	648.5	649.4	653.7	655.4	656.3
10°	641.6	643.4	647.7	650.2	651.1
12.5°	632.2	634.8	639.9	643.4	644.2
15°	621.0	624.5	629.6	634.8	635.6
17.5°	609.0	612.4	619.3	625.3	627.0
20°	594.4	598.7	606.4	613.3	615.9
22.5°	579.8	583.2	592.7	601.3	603.9
25°	561.8	566.9	578.9	586.7	590.1
27.5°	542.9	548.9	560.9	571.2	574.6
30°	523.1	529.1	542.0	554.9	559.2
32.5°	502.5	509.4	524.8	537.7	542.0
35°	481.0	487.0	503.4	518.8	524.0
37.5°	458.7	463.8	482.7	499.1	504.2
40°	434.6	441.5	461.3	480.2	485.3
42.5°	410.6	418.3	438.1	458.7	463.8
45°	386.5	395.1	415.7	437.2	443.2
47.5°	363.3	370.2	393.4	414.0	422.6
50°	338.4	345.3	367.6	390.8	399.4
52.5°	312.7	322.1	346.2	368.5	378.8
55°	287.8	297.2	322.1	344.4	353.9
57.5°	264.6	272.3	298.1	321.3	330.7
60°	239.7	246.5	274.0	298.9	307.5
62.5°	213.0	223.3	251.7	274.9	285.2
65°	189.0	200.1	230.2	252.5	262.8
67.5°	166.6	176.9	206.2	230.2	241.4
70°	140.9	154.6	184.7	208.7	219.0
72.5°	120.3	132.3	163.2	187.3	198.4
75°	96.2	110.8	141.7	165.8	174.4
77.5°	76.4	91.1	120.3	139.2	143.4
80°	55.8	70.4	97.9	107.4	109.9
82.5°	37.8	51.5	70.4	73.0	73.9
85°	23.2	31.8	41.2	41.2	41.2
87.5°	11.2	12.9	14.6	13.7	13.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)