

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: P475167

Luminaire Tested: **22CZ2-20-HRP-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475167
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-20-HRP-UNV-L840-CD1-U
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

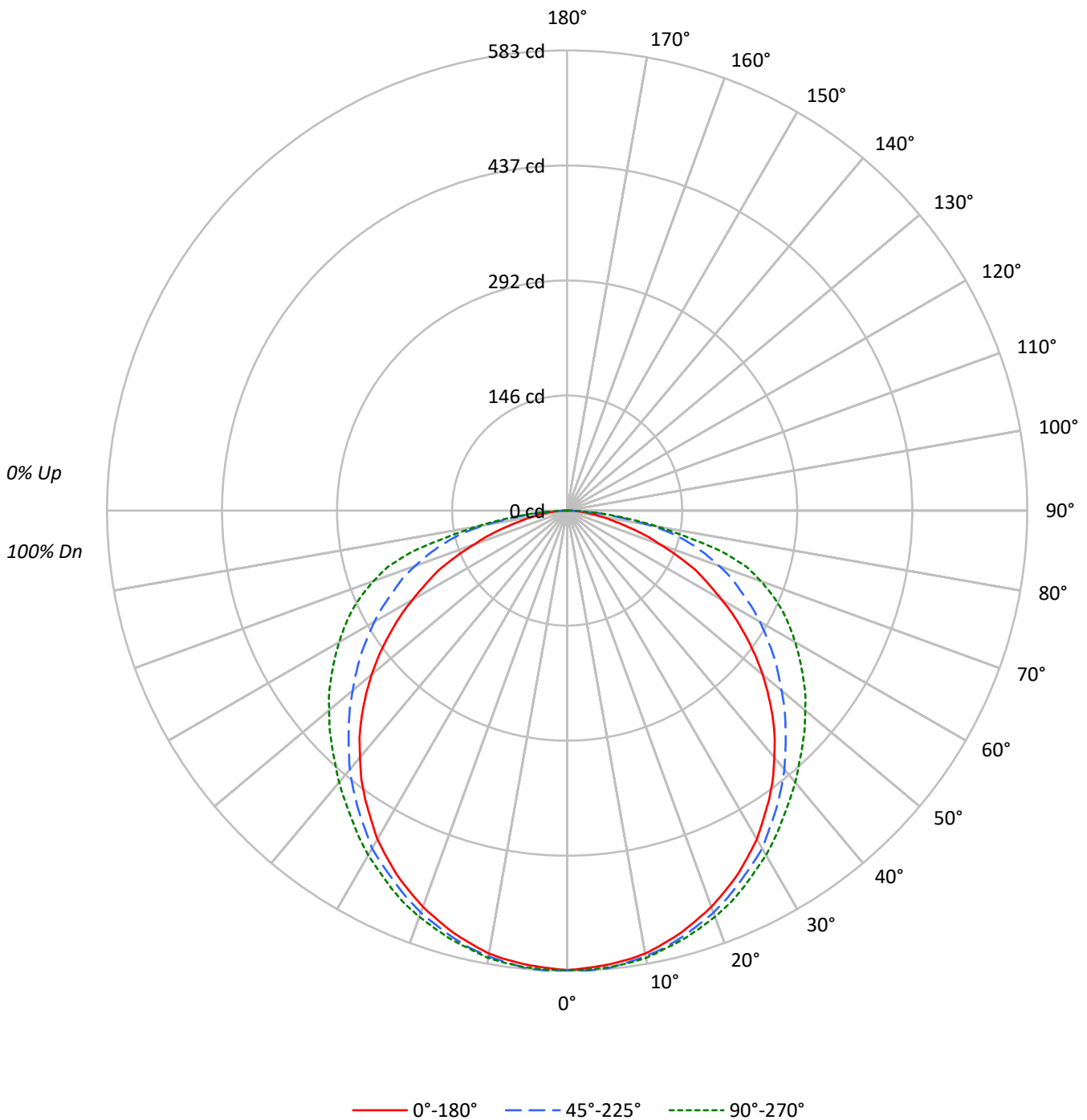
Lumens per Lamp: N/A
Luminaire Lumens: 1768.1 lumens
Efficiency: N/A
Efficacy: 109.1 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

Input Watts (W): 16.2
Input Voltage (V): 120
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	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1567	1567	1567
5°	1561	1573	1570
10°	1557	1567	1573
15°	1544	1560	1569
20°	1530	1552	1568
25°	1514	1540	1567
30°	1494	1535	1566
35°	1465	1517	1565
40°	1434	1505	1579
45°	1401	1490	1604
50°	1354	1485	1648
55°	1293	1497	1711
60°	1218	1519	1795
65°	1151	1549	1918
70°	983	1614	2054
75°	823	1682	2133
80°	676	1624	1781
85°	584	1204	1309



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	55.2	3.1
10°-20°	157.8	8.9
20°-30°	239.2	13.5
30°-40°	288.8	16.3
40°-50°	303.5	17.2
50°-60°	285.6	16.2
60°-70°	238.1	13.5
70°-80°	157.8	8.9
80°-90°	42.0	2.4
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°	452.2	25.6
0°-40°	741.1	41.9
0°-60°	1330.1	75.2
0°-90°	1768.1	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1768.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	582	582	582	582	582	
5°	578	579	582	582	581	55
15°	554	556	560	562	563	156
25°	510	513	519	525	528	235
35°	446	451	462	472	476	279
45°	368	374	392	412	422	283
55°	276	288	319	351	365	246
65°	181	196	243	283	301	176
75°	79	110	162	195	205	86
85°	19	29	39	42	42	22
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	582.2	582.2	582.2	582.2	582.2
2.5°	580.0	581.1	583.3	583.3	582.2
5°	577.7	578.8	582.2	582.2	581.1
7.5°	574.4	575.6	577.7	580.0	578.8
10°	569.9	571.0	573.3	575.6	575.6
12.5°	562.2	563.2	567.7	568.9	568.9
15°	554.3	556.5	559.9	562.2	563.2
17.5°	544.3	546.5	550.9	555.5	555.5
20°	534.3	536.4	542.1	546.5	547.6
22.5°	522.0	525.3	530.9	536.4	538.7
25°	509.8	513.1	518.6	525.3	527.6
27.5°	495.2	498.5	506.4	514.2	515.3
30°	480.7	484.0	494.1	500.8	504.1
32.5°	462.9	467.3	477.3	487.4	490.7
35°	446.1	450.6	461.8	471.8	476.3
37.5°	428.3	432.7	445.0	457.3	462.9
40°	408.2	413.8	428.3	441.7	449.5
42.5°	389.3	394.9	409.4	427.2	435.0
45°	368.1	373.6	391.5	411.5	421.6
47.5°	345.7	352.4	373.6	398.2	408.2
50°	323.4	331.2	354.7	382.6	393.7
52.5°	300.0	310.0	336.8	367.0	380.3
55°	275.5	287.8	319.0	351.3	364.7
57.5°	252.0	263.3	300.0	334.6	349.1
60°	226.4	240.9	282.2	317.8	333.5
62.5°	201.9	217.5	263.3	301.2	317.8
65°	180.7	196.3	243.2	283.2	301.2
67.5°	152.8	174.0	226.4	264.3	282.2
70°	124.9	153.9	205.2	244.2	261.0
72.5°	103.7	131.6	184.0	223.1	238.7
75°	79.2	110.4	161.8	195.2	205.2
77.5°	59.1	91.4	138.3	155.1	156.2
80°	43.6	70.2	104.8	110.4	114.9
82.5°	30.2	49.1	68.1	74.7	76.9
85°	18.9	29.0	39.0	42.4	42.4
87.5°	10.1	11.1	13.4	13.4	13.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)