

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: P474461

Luminaire Tested: **24CZ2-30-HRP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474461
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-30-HRP-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

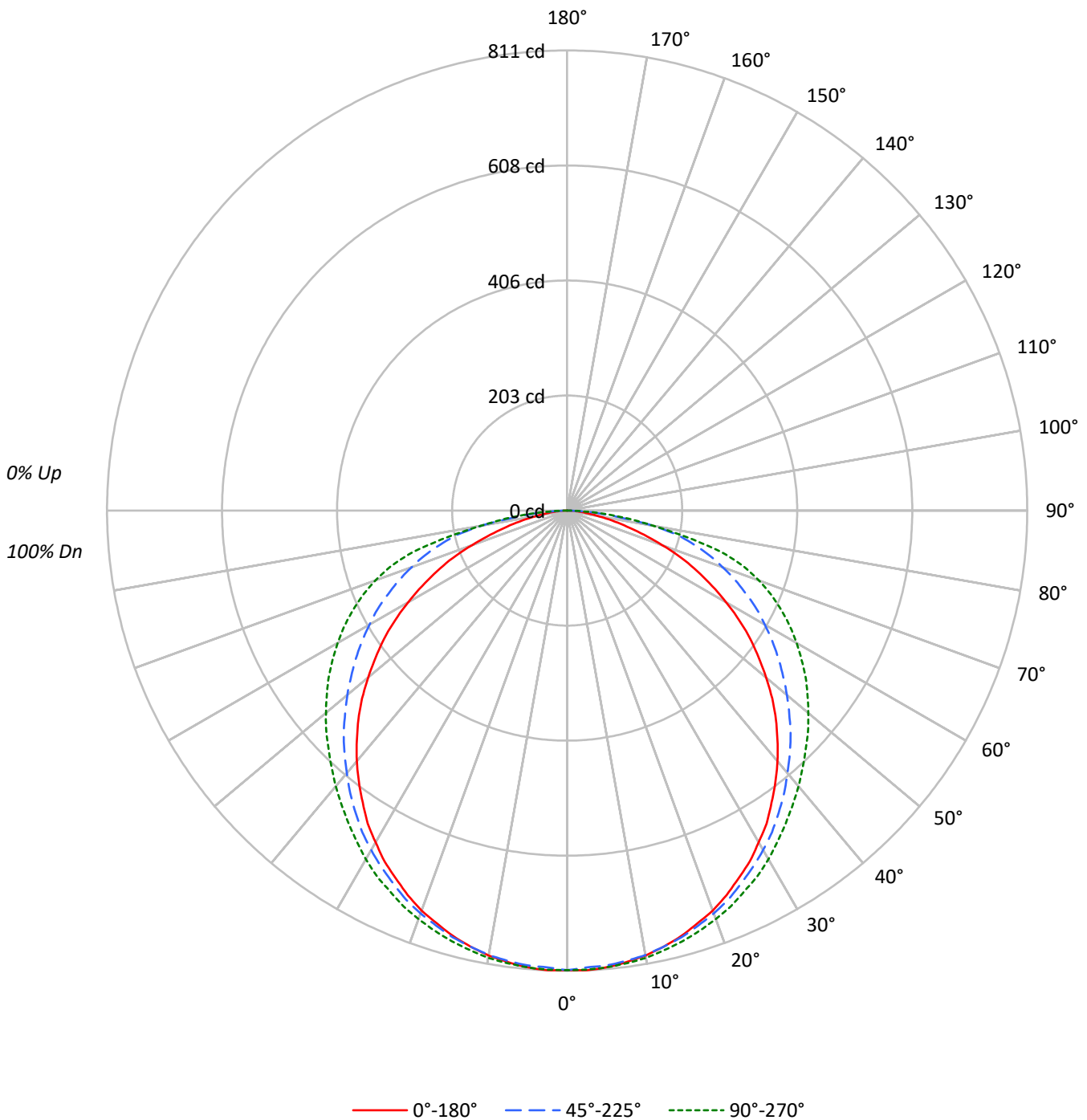
Lumens per Lamp: N/A
Luminaire Lumens: 2496.3 lumens
Efficiency: N/A
Efficacy: 105.8 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 23.6
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	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	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	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1090	1090	1090
5°	1091	1087	1091
10°	1088	1087	1094
15°	1082	1085	1095
20°	1074	1082	1097
25°	1061	1077	1098
30°	1049	1073	1102
35°	1032	1068	1104
40°	1013	1061	1114
45°	990	1060	1132
50°	958	1059	1162
55°	924	1066	1204
60°	872	1083	1257
65°	805	1108	1328
70°	703	1147	1414
75°	570	1206	1461
80°	422	1182	1182
85°	323	871	983



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.7	3.1
10°-20°	220.3	8.8
20°-30°	335.4	13.4
30°-40°	407.3	16.3
40°-50°	430.3	17.2
50°-60°	406.0	16.3
60°-70°	337.6	13.5
70°-80°	222.1	8.9
80°-90°	60.5	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°	632.5	25.3
0°-40°	1039.8	41.7
0°-60°	1876.1	75.2
0°-90°	2496.3	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2496.3	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	810	810	810	810	810	
5°	808	808	805	808	808	77
15°	776	778	779	786	786	219
25°	715	719	725	738	740	330
35°	628	635	650	667	672	393
45°	520	531	557	584	595	401
55°	394	411	455	498	513	351
65°	253	282	348	399	417	250
75°	110	160	232	275	281	118
85°	21	46	56	63	64	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	809.9	809.9	809.9	809.9	809.9
2.5°	811.0	809.9	805.7	809.9	809.9
5°	807.9	807.9	804.7	807.9	807.9
7.5°	802.6	802.6	800.5	804.7	804.7
10°	796.3	796.3	795.3	800.5	800.5
12.5°	787.0	787.9	787.0	793.2	793.2
15°	776.5	777.5	778.6	785.9	785.9
17.5°	763.0	765.0	767.1	775.4	776.5
20°	750.4	751.4	755.6	765.0	766.1
22.5°	733.7	736.8	742.0	751.4	754.6
25°	714.8	719.0	725.3	737.9	739.9
27.5°	697.1	700.2	708.6	722.2	726.4
30°	675.1	680.4	690.8	704.4	709.6
32.5°	654.2	659.4	672.0	686.6	690.8
35°	628.1	635.4	650.0	666.7	672.0
37.5°	603.0	610.3	628.1	646.9	653.2
40°	576.9	585.2	604.1	626.0	634.3
42.5°	548.6	560.1	581.0	605.1	614.5
45°	520.4	530.9	557.0	584.1	594.7
47.5°	490.2	502.7	530.9	563.3	575.9
50°	457.8	473.5	505.8	541.3	555.0
52.5°	425.4	443.1	479.7	519.4	534.1
55°	394.0	410.7	454.6	497.5	513.1
57.5°	359.5	380.5	428.5	474.4	490.2
60°	323.9	347.0	402.3	450.4	467.1
62.5°	288.4	314.6	377.2	425.4	443.1
65°	252.9	282.2	348.1	399.2	417.0
67.5°	218.4	250.8	320.8	372.1	389.8
70°	178.7	219.5	291.5	341.7	359.5
72.5°	142.1	189.2	263.3	310.4	326.1
75°	109.7	159.9	232.0	274.8	281.1
77.5°	80.4	130.6	199.6	214.2	215.3
80°	54.4	104.5	152.6	150.5	152.6
82.5°	35.5	78.4	96.1	107.7	108.7
85°	20.9	46.0	56.4	62.7	63.7
87.5°	10.4	15.7	19.8	20.9	23.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)