

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: P474692

Luminaire Tested: **24CZ2-90VHE-SQR-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474692
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-90VHE-SQR-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SQUARE LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 8789.4 lumens
Efficiency: N/A
Efficacy: 137.1 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.3 / 1.39
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

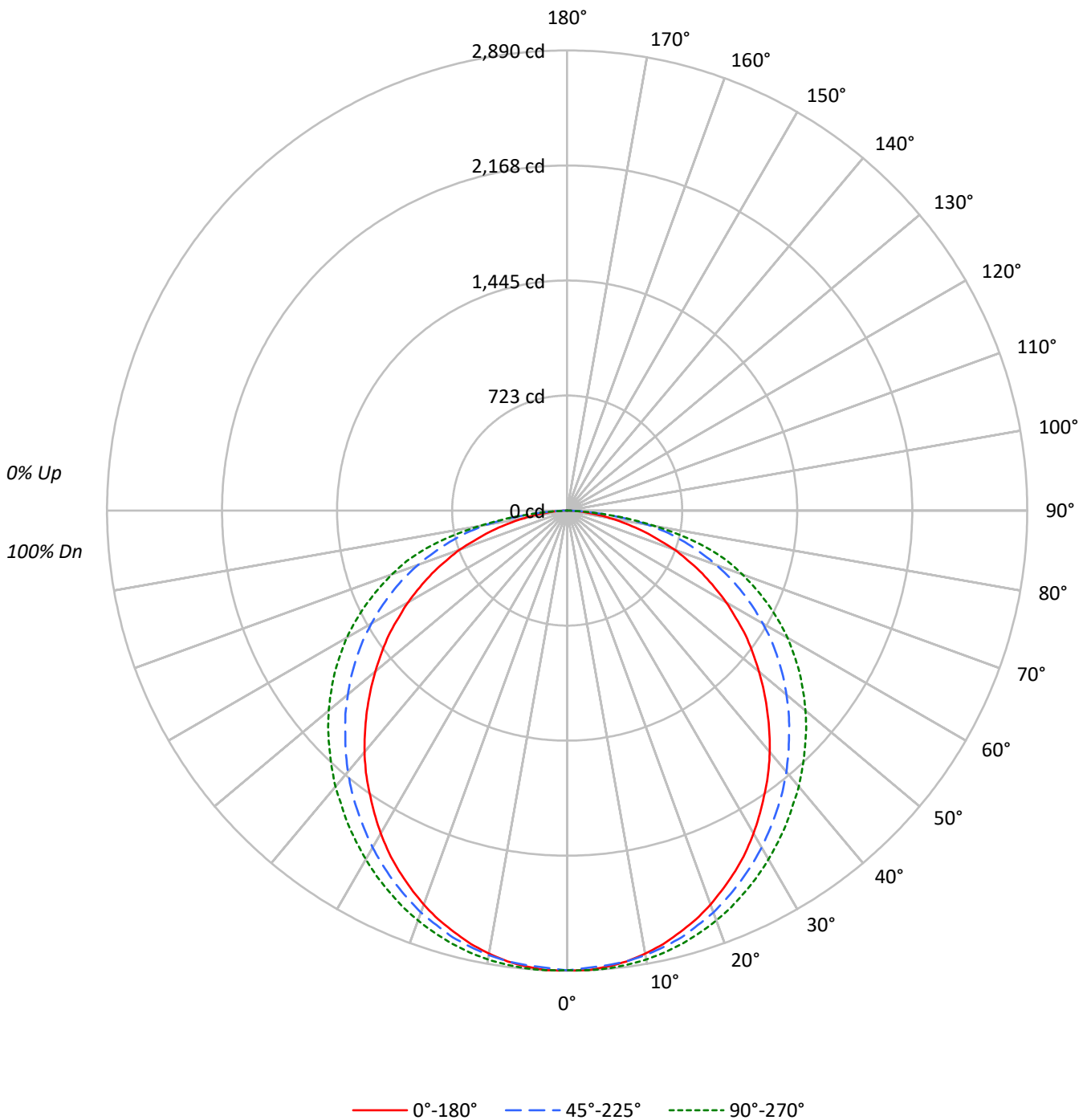
Input Watts (W): 64.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	81	75	84	78	73	80	76	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	53	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°	7769	7769	7769
5°	7768	7746	7799
10°	7720	7747	7824
15°	7636	7730	7836
20°	7540	7692	7845
25°	7417	7638	7847
30°	7274	7592	7858
35°	7109	7547	7888
40°	6955	7522	7952
45°	6765	7503	8037
50°	6584	7525	8183
55°	6430	7576	8366
60°	6212	7633	8600
65°	5964	7725	8861
70°	5657	7833	9214
75°	5067	7942	9519
80°	4265	7964	8639
85°	3165	6027	5681



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	273.6	3.1
10°-20°	784.1	8.9
20°-30°	1187.0	13.5
30°-40°	1435.9	16.3
40°-50°	1515.7	17.2
50°-60°	1429.3	16.3
60°-70°	1178.4	13.4
70°-80°	773.0	8.8
80°-90°	212.5	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°	2244.7	25.5
0°-40°	3680.5	41.9
0°-60°	6625.5	75.4
0°-90°	8789.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	8789.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2887	2887	2887	2887	2887	
5°	2876	2876	2867	2887	2887	273
15°	2741	2756	2775	2807	2813	773
25°	2498	2529	2572	2626	2643	1150
35°	2164	2220	2297	2376	2401	1355
45°	1778	1858	1972	2077	2112	1372
55°	1370	1467	1615	1736	1783	1221
65°	937	1049	1213	1342	1392	925
75°	487	612	764	885	916	515
85°	102	177	195	190	184	127
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2887.0	2887.0	2887.0	2887.0	2887.0
2.5°	2889.9	2887.0	2874.4	2891.3	2889.9
5°	2875.8	2875.8	2867.4	2887.0	2887.0
7.5°	2856.2	2857.6	2854.8	2877.2	2877.2
10°	2825.3	2830.9	2835.1	2860.4	2863.2
12.5°	2788.8	2798.6	2807.0	2837.9	2840.7
15°	2741.0	2756.5	2774.7	2807.0	2812.6
17.5°	2691.9	2710.1	2729.8	2771.9	2778.9
20°	2632.9	2653.9	2686.2	2728.4	2739.6
22.5°	2566.9	2596.4	2630.1	2680.6	2694.7
25°	2498.1	2529.0	2572.5	2625.9	2642.7
27.5°	2423.7	2460.2	2509.3	2571.1	2589.4
30°	2340.8	2382.9	2443.3	2509.3	2529.0
32.5°	2253.8	2302.9	2370.3	2443.3	2465.8
35°	2163.9	2220.0	2297.3	2375.9	2401.2
37.5°	2075.4	2131.6	2222.9	2305.7	2329.6
40°	1979.9	2041.7	2141.4	2229.9	2263.6
42.5°	1878.8	1951.8	2057.2	2155.5	2187.8
45°	1777.7	1857.8	1971.5	2076.8	2111.9
47.5°	1675.2	1763.7	1888.7	1995.4	2036.1
50°	1572.7	1666.8	1797.4	1912.5	1954.7
52.5°	1468.8	1567.1	1708.9	1831.1	1869.0
55°	1370.5	1467.4	1614.8	1735.6	1783.3
57.5°	1256.8	1366.3	1522.2	1644.3	1690.7
60°	1154.3	1261.0	1418.2	1547.4	1598.0
62.5°	1043.3	1152.9	1318.5	1447.7	1496.9
65°	936.6	1048.9	1213.2	1342.4	1391.6
67.5°	821.5	939.4	1107.9	1232.9	1280.6
70°	719.0	829.9	995.6	1123.4	1171.1
72.5°	594.0	720.4	879.0	1005.4	1057.4
75°	487.3	612.2	763.9	884.6	915.5
77.5°	374.9	499.9	650.1	728.8	749.8
80°	275.2	393.2	513.9	556.1	557.5
82.5°	185.4	289.3	358.1	379.1	376.3
85°	102.5	176.9	195.2	189.6	184.0
87.5°	42.1	59.0	47.7	33.7	26.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)