

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: P474442

Luminaire Tested: **24CZ2-90VHE-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474442
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-90VHE-HRP-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7355.0 lumens
Efficiency: N/A
Efficacy: 114.7 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

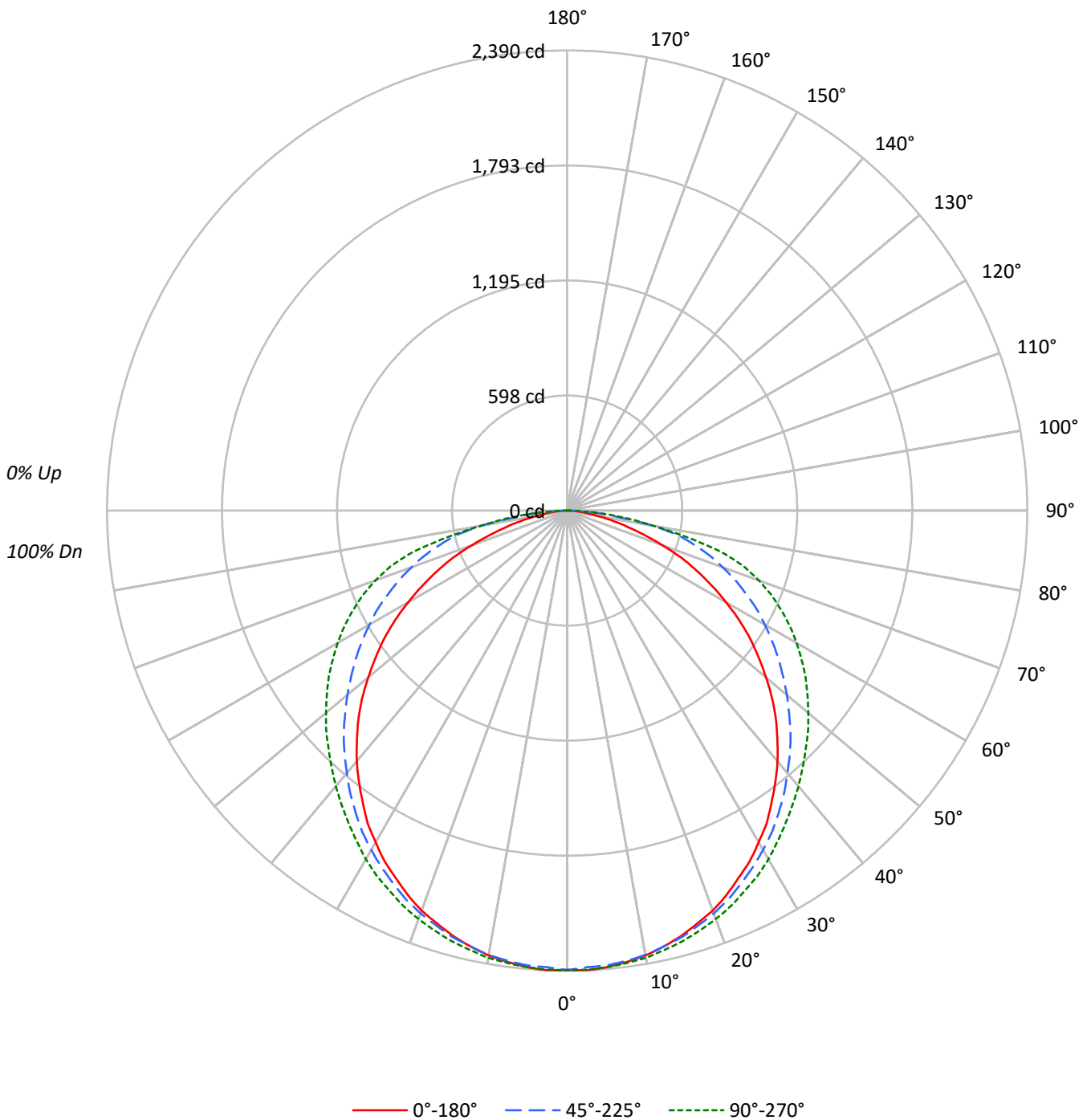
Input Watts (W): 64.1
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	3211	3211	3211
5°	3215	3202	3215
10°	3205	3202	3222
15°	3187	3196	3225
20°	3166	3187	3232
25°	3127	3173	3236
30°	3090	3162	3248
35°	3040	3146	3252
40°	2985	3126	3283
45°	2918	3123	3334
50°	2823	3120	3423
55°	2723	3142	3547
60°	2568	3190	3704
65°	2372	3265	3912
70°	2071	3379	4167
75°	1681	3554	4306
80°	1241	3484	3484
85°	951	2566	2898



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	226.1	3.1
10°-20°	649.2	8.8
20°-30°	988.3	13.4
30°-40°	1200.0	16.3
40°-50°	1267.8	17.2
50°-60°	1196.3	16.3
60°-70°	994.7	13.5
70°-80°	654.4	8.9
80°-90°	178.4	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°	1863.5	25.3
0°-40°	3063.5	41.7
0°-60°	5527.6	75.2
0°-90°	7355.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7355.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2386	2386	2386	2386	2386	
5°	2380	2380	2371	2380	2380	226
15°	2288	2291	2294	2316	2316	645
25°	2106	2118	2137	2174	2180	972
35°	1851	1872	1915	1964	1980	1158
45°	1533	1564	1641	1721	1752	1181
55°	1161	1210	1339	1466	1512	1034
65°	745	832	1026	1176	1229	737
75°	323	471	684	810	828	348
85°	62	136	166	185	188	75
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2386.3	2386.3	2386.3	2386.3	2386.3
2.5°	2389.5	2386.3	2374.0	2386.3	2386.3
5°	2380.3	2380.3	2370.8	2380.3	2380.3
7.5°	2364.8	2364.8	2358.5	2370.8	2370.8
10°	2346.2	2346.2	2343.4	2358.5	2358.5
12.5°	2318.7	2321.5	2318.7	2337.0	2337.0
15°	2287.7	2290.9	2294.1	2315.5	2315.5
17.5°	2247.9	2253.9	2260.2	2284.6	2287.7
20°	2210.9	2213.8	2226.1	2253.9	2257.1
22.5°	2161.6	2170.8	2186.3	2213.8	2223.3
25°	2106.0	2118.3	2137.0	2174.0	2180.0
27.5°	2053.9	2063.0	2087.7	2127.8	2140.1
30°	1989.1	2004.6	2035.2	2075.4	2090.8
32.5°	1927.5	1942.9	1979.9	2022.9	2035.2
35°	1850.7	1872.2	1915.1	1964.4	1979.9
37.5°	1776.7	1798.2	1850.7	1906.0	1924.6
40°	1699.6	1724.3	1779.9	1844.3	1869.0
42.5°	1616.5	1650.3	1711.9	1782.7	1810.5
45°	1533.4	1564.3	1641.1	1721.1	1752.1
47.5°	1444.3	1481.2	1564.3	1659.8	1696.8
50°	1348.8	1395.0	1490.4	1595.0	1635.1
52.5°	1253.4	1305.5	1413.3	1530.2	1573.5
55°	1160.8	1210.1	1339.3	1465.7	1511.9
57.5°	1059.3	1121.0	1262.5	1397.8	1444.3
60°	954.4	1022.4	1185.4	1327.0	1376.3
62.5°	849.8	926.9	1111.5	1253.4	1305.5
65°	745.2	831.5	1025.5	1176.3	1228.7
67.5°	643.4	738.9	945.2	1096.3	1148.4
70°	526.5	646.6	859.0	1006.9	1059.3
72.5°	418.7	557.5	775.9	914.6	960.7
75°	323.3	471.2	683.6	809.7	828.3
77.5°	237.0	384.9	588.1	631.1	634.3
80°	160.2	307.8	449.7	443.4	449.7
82.5°	104.6	231.0	283.2	317.3	320.1
85°	61.6	135.6	166.2	184.9	187.7
87.5°	30.7	46.1	58.5	61.6	67.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)