

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: P474491

Luminaire Tested: **24CZ2-85VHE-HRP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474491
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-85VHE-HRP-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7010.2 lumens
Efficiency: N/A
Efficacy: 117.4 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

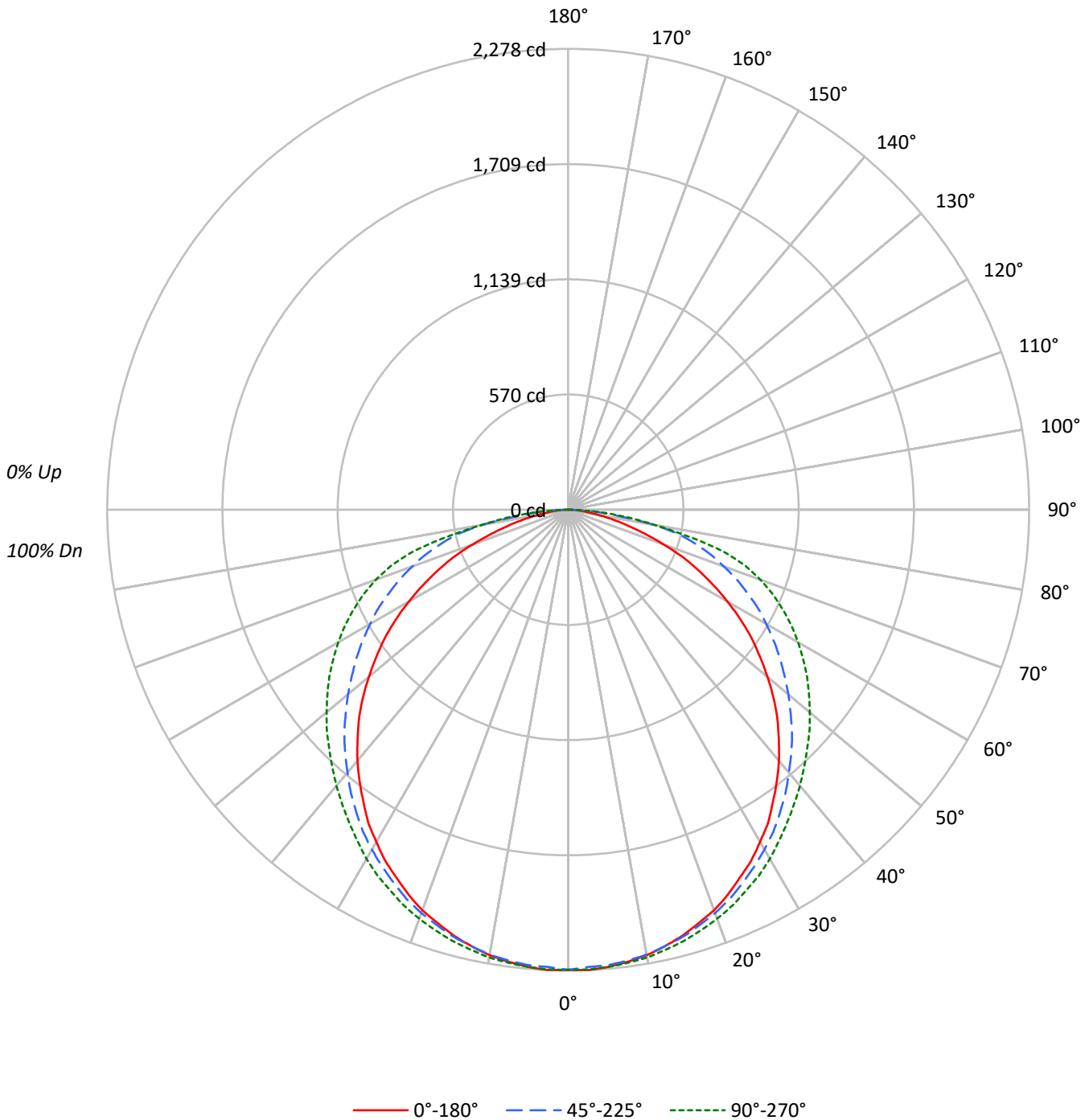
Input Watts (W): 59.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	3060	3060	3060
5°	3064	3052	3064
10°	3055	3052	3071
15°	3037	3046	3074
20°	3017	3038	3080
25°	2980	3024	3085
30°	2945	3014	3096
35°	2897	2998	3100
40°	2845	2980	3129
45°	2781	2976	3178
50°	2691	2973	3262
55°	2595	2994	3380
60°	2448	3040	3530
65°	2261	3112	3728
70°	1974	3221	3972
75°	1602	3387	4104
80°	1183	3321	3321
85°	906	2445	2762



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	215.5	3.1
10°-20°	618.7	8.8
20°-30°	941.9	13.4
30°-40°	1143.7	16.3
40°-50°	1208.4	17.2
50°-60°	1140.2	16.3
60°-70°	948.1	13.5
70°-80°	623.7	8.9
80°-90°	170.0	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°	1776.1	25.3
0°-40°	2919.9	41.7
0°-60°	5268.4	75.2
0°-90°	7010.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7010.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2274	2274	2274	2274	2274	
5°	2269	2269	2260	2269	2269	215
15°	2180	2184	2186	2207	2207	615
25°	2007	2019	2037	2072	2078	926
35°	1764	1784	1825	1872	1887	1104
45°	1462	1491	1564	1640	1670	1126
55°	1106	1153	1276	1397	1441	986
65°	710	792	977	1121	1171	702
75°	308	449	652	772	790	332
85°	59	129	158	176	179	72
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2274.5	2274.5	2274.5	2274.5	2274.5
2.5°	2277.5	2274.5	2262.7	2274.5	2274.5
5°	2268.7	2268.7	2259.7	2268.7	2268.7
7.5°	2254.0	2254.0	2247.9	2259.7	2259.7
10°	2236.2	2236.2	2233.5	2247.9	2247.9
12.5°	2210.0	2212.7	2210.0	2227.5	2227.5
15°	2180.5	2183.5	2186.5	2207.0	2207.0
17.5°	2142.5	2148.2	2154.3	2177.5	2180.5
20°	2107.3	2110.0	2121.7	2148.2	2151.3
22.5°	2060.3	2069.0	2083.8	2110.0	2119.0
25°	2007.3	2019.0	2036.8	2072.0	2077.8
27.5°	1957.6	1966.3	1989.8	2028.1	2039.8
30°	1895.8	1910.6	1939.8	1978.1	1992.8
32.5°	1837.1	1851.9	1887.1	1928.1	1939.8
35°	1763.9	1784.4	1825.3	1872.3	1887.1
37.5°	1693.4	1713.9	1763.9	1816.6	1834.4
40°	1619.9	1643.4	1696.4	1757.9	1781.4
42.5°	1540.7	1572.9	1631.7	1699.1	1725.6
45°	1461.5	1491.0	1564.2	1640.4	1669.9
47.5°	1376.5	1411.8	1491.0	1582.0	1617.2
50°	1285.6	1329.6	1420.5	1520.2	1558.5
52.5°	1194.6	1244.3	1347.0	1458.5	1499.7
55°	1106.4	1153.3	1276.5	1397.0	1441.0
57.5°	1009.7	1068.4	1203.3	1332.3	1376.5
60°	909.7	974.4	1129.8	1264.8	1311.8
62.5°	810.0	883.5	1059.4	1194.6	1244.3
65°	710.3	792.5	977.4	1121.1	1171.1
67.5°	613.3	704.2	900.9	1044.9	1094.6
70°	501.8	616.3	818.7	959.7	1009.7
72.5°	399.1	531.3	739.5	871.7	915.7
75°	308.1	449.1	651.5	771.7	789.5
77.5°	225.9	366.9	560.6	601.5	604.5
80°	152.7	293.4	428.6	422.6	428.6
82.5°	99.7	220.2	269.9	302.4	305.1
85°	58.7	129.2	158.4	176.2	178.9
87.5°	29.2	44.0	55.7	58.7	64.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)