

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: P474437

Luminaire Tested: **24CZ2-60VHE-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474437
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60VHE-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: 4866.4 lumens
Efficiency: N/A
Efficacy: 119.6 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

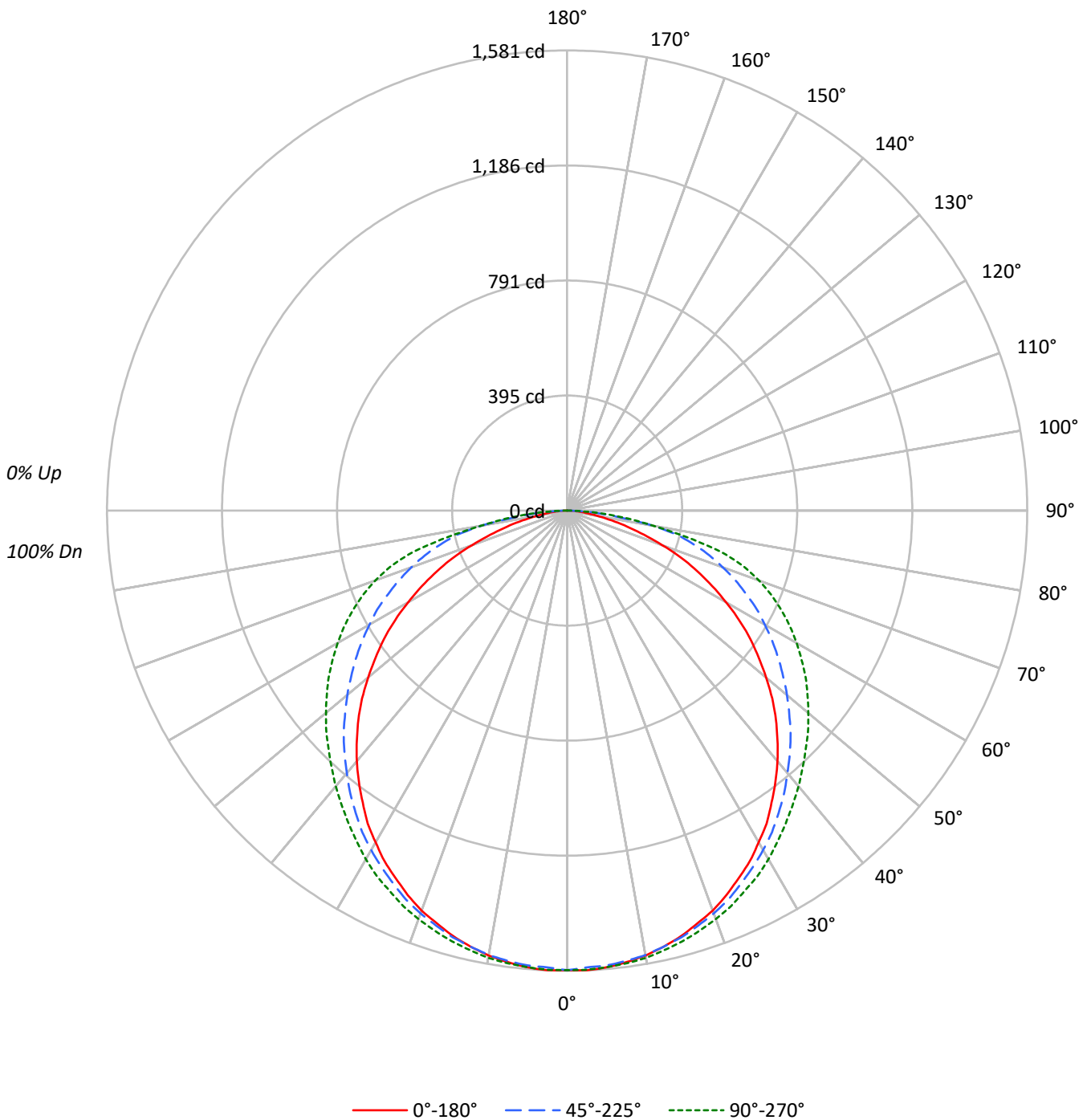
Input Watts (W): 40.7
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2124	2124	2124
5°	2127	2119	2127
10°	2121	2118	2132
15°	2108	2114	2134
20°	2094	2109	2138
25°	2069	2099	2141
30°	2045	2092	2149
35°	2011	2081	2152
40°	1975	2068	2172
45°	1930	2066	2206
50°	1868	2064	2265
55°	1802	2079	2346
60°	1699	2111	2450
65°	1570	2160	2588
70°	1371	2236	2757
75°	1112	2351	2849
80°	821	2305	2305
85°	630	1698	1917



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	149.6	3.1
10°-20°	429.5	8.8
20°-30°	653.9	13.4
30°-40°	794.0	16.3
40°-50°	838.8	17.2
50°-60°	791.5	16.3
60°-70°	658.1	13.5
70°-80°	433.0	8.9
80°-90°	118.0	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°	1233.0	25.3
0°-40°	2026.9	41.7
0°-60°	3657.2	75.2
0°-90°	4866.4	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	4866.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1579	1579	1579	1579	1579	
5°	1575	1575	1569	1575	1575	150
15°	1514	1516	1518	1532	1532	427
25°	1393	1402	1414	1438	1442	643
35°	1224	1239	1267	1300	1310	766
45°	1014	1035	1086	1139	1159	781
55°	768	801	886	970	1000	684
65°	493	550	678	778	813	487
75°	214	312	452	536	548	230
85°	41	90	110	122	124	50
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1578.9	1578.9	1578.9	1578.9	1578.9
2.5°	1581.0	1578.9	1570.7	1578.9	1578.9
5°	1574.9	1574.9	1568.6	1574.9	1574.9
7.5°	1564.7	1564.7	1560.5	1568.6	1568.6
10°	1552.3	1552.3	1550.4	1560.5	1560.5
12.5°	1534.1	1536.0	1534.1	1546.3	1546.3
15°	1513.6	1515.7	1517.8	1532.0	1532.0
17.5°	1487.3	1491.3	1495.5	1511.6	1513.6
20°	1462.8	1464.7	1472.9	1491.3	1493.4
22.5°	1430.2	1436.3	1446.5	1464.7	1471.0
25°	1393.4	1401.6	1413.9	1438.4	1442.3
27.5°	1358.9	1365.0	1381.3	1407.8	1416.0
30°	1316.1	1326.3	1346.6	1373.1	1383.4
32.5°	1275.3	1285.5	1310.0	1338.4	1346.6
35°	1224.5	1238.7	1267.1	1299.7	1310.0
37.5°	1175.5	1189.8	1224.5	1261.1	1273.4
40°	1124.5	1140.8	1177.6	1220.3	1236.6
42.5°	1069.5	1091.9	1132.7	1179.5	1197.9
45°	1014.5	1035.0	1085.8	1138.7	1159.2
47.5°	955.6	980.0	1035.0	1098.2	1122.6
50°	892.4	923.0	986.1	1055.3	1081.9
52.5°	829.3	863.8	935.1	1012.4	1041.1
55°	768.0	800.6	886.1	969.8	1000.3
57.5°	700.9	741.7	835.3	924.8	955.6
60°	631.5	676.4	784.3	878.0	910.6
62.5°	562.3	613.3	735.4	829.3	863.8
65°	493.0	550.1	678.5	778.3	813.0
67.5°	425.7	488.9	625.4	725.4	759.9
70°	348.4	427.8	568.3	666.2	700.9
72.5°	277.1	368.8	513.3	605.1	635.7
75°	213.9	311.8	452.3	535.7	548.0
77.5°	156.8	254.7	389.1	417.6	419.7
80°	106.0	203.7	297.5	293.4	297.5
82.5°	69.2	152.8	187.4	209.9	211.8
85°	40.8	89.7	110.0	122.3	124.2
87.5°	20.3	30.5	38.7	40.8	44.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)