

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: P474434

Luminaire Tested: **24CZ2-40VHE-HRP-UNV-L835-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474434
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40VHE-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: 3281.0 lumens
Efficiency: N/A
Efficacy: 120.2 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

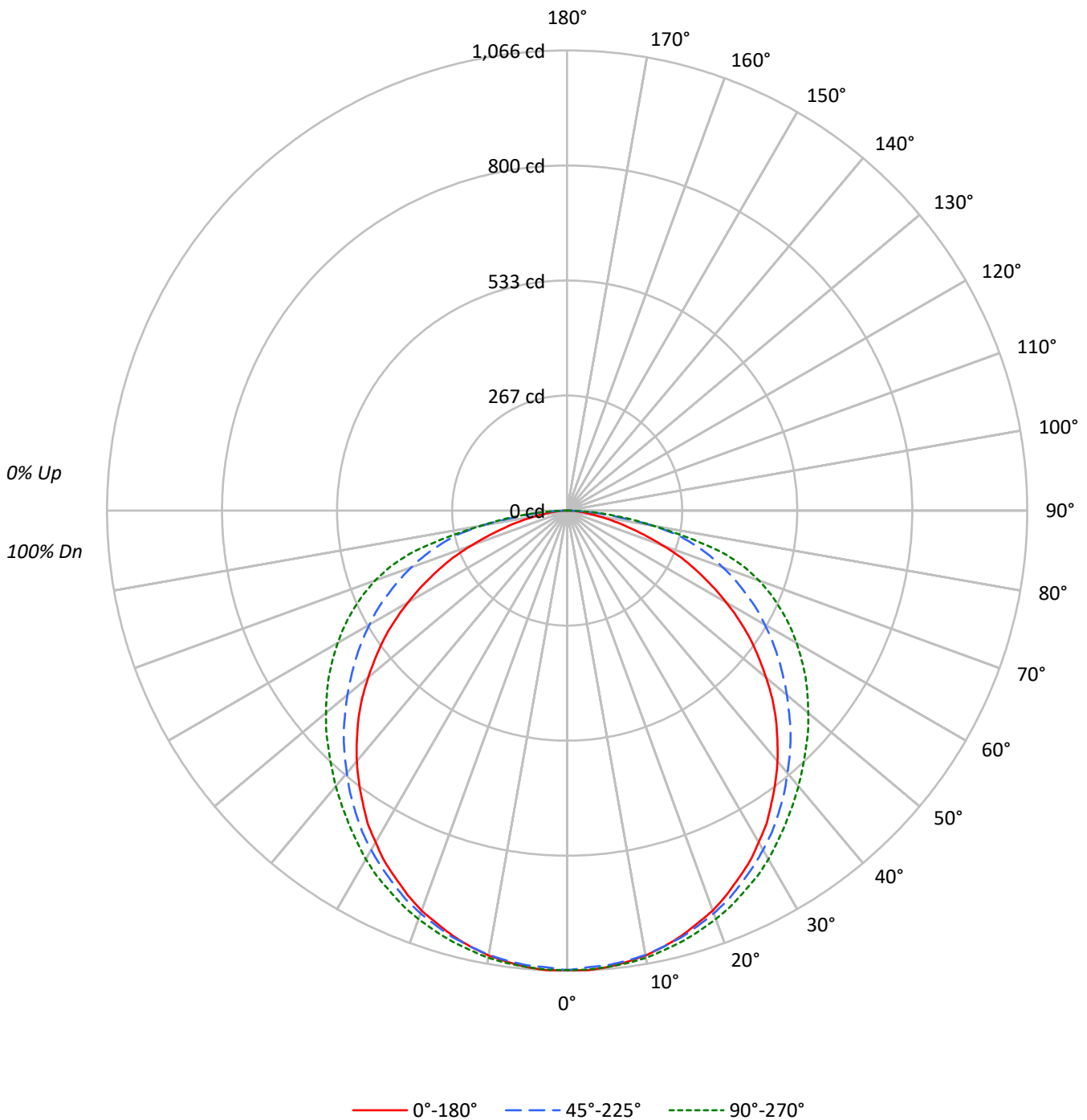
Input Watts (W): 27.3
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1432	1432	1432
5°	1434	1428	1434
10°	1430	1428	1437
15°	1422	1425	1439
20°	1412	1422	1442
25°	1395	1415	1444
30°	1379	1411	1449
35°	1356	1403	1451
40°	1332	1395	1464
45°	1302	1393	1487
50°	1259	1392	1527
55°	1215	1402	1582
60°	1146	1423	1652
65°	1058	1457	1745
70°	924	1507	1859
75°	750	1585	1921
80°	554	1554	1554
85°	425	1145	1292



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	100.8	3.1
10°-20°	289.6	8.8
20°-30°	440.9	13.4
30°-40°	535.3	16.3
40°-50°	565.6	17.2
50°-60°	533.6	16.3
60°-70°	443.7	13.5
70°-80°	291.9	8.9
80°-90°	79.6	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°	831.3	25.3
0°-40°	1366.6	41.7
0°-60°	2465.8	75.2
0°-90°	3281.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3281.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1064	1064	1064	1064	1064	
5°	1062	1062	1058	1062	1062	101
15°	1020	1022	1023	1033	1033	288
25°	940	945	953	970	972	433
35°	826	835	854	876	883	517
45°	684	698	732	768	782	527
55°	518	540	598	654	674	461
65°	332	371	458	525	548	329
75°	144	210	305	361	370	155
85°	28	60	74	82	84	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1064.5	1064.5	1064.5	1064.5	1064.5
2.5°	1065.9	1064.5	1059.0	1064.5	1064.5
5°	1061.8	1061.8	1057.6	1061.8	1061.8
7.5°	1054.9	1054.9	1052.1	1057.6	1057.6
10°	1046.6	1046.6	1045.3	1052.1	1052.1
12.5°	1034.3	1035.6	1034.3	1042.5	1042.5
15°	1020.5	1021.9	1023.3	1032.9	1032.9
17.5°	1002.8	1005.4	1008.3	1019.1	1020.5
20°	986.3	987.5	993.0	1005.4	1006.8
22.5°	964.3	968.4	975.3	987.5	991.8
25°	939.5	945.0	953.3	969.8	972.4
27.5°	916.2	920.3	931.3	949.2	954.7
30°	887.3	894.2	907.9	925.8	932.7
32.5°	859.8	866.7	883.2	902.4	907.9
35°	825.6	835.1	854.3	876.3	883.2
37.5°	792.6	802.2	825.6	850.2	858.5
40°	758.2	769.2	794.0	822.7	833.7
42.5°	721.1	736.2	763.7	795.2	807.6
45°	684.0	697.8	732.1	767.8	781.6
47.5°	644.3	660.8	697.8	740.4	756.9
50°	601.7	622.3	664.8	711.5	729.4
52.5°	559.1	582.4	630.4	682.6	701.9
55°	517.8	539.8	597.5	653.8	674.4
57.5°	472.5	500.0	563.2	623.5	644.3
60°	425.7	456.1	528.8	592.0	613.9
62.5°	379.1	413.5	495.8	559.1	582.4
65°	332.4	370.9	457.5	524.7	548.1
67.5°	287.0	329.6	421.7	489.0	512.3
70°	234.9	288.4	383.2	449.1	472.5
72.5°	186.8	248.7	346.1	408.0	428.6
75°	144.2	210.2	304.9	361.2	369.5
77.5°	105.7	171.7	262.4	281.5	282.9
80°	71.5	137.3	200.6	197.8	200.6
82.5°	46.7	103.1	126.3	141.5	142.8
85°	27.5	60.5	74.2	82.5	83.7
87.5°	13.7	20.6	26.1	27.5	30.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)