

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: P474413

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

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474413
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-40-HRP-UNV-L835-CD1-U
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS W/ HRP INSERT
Light Source: 3500K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

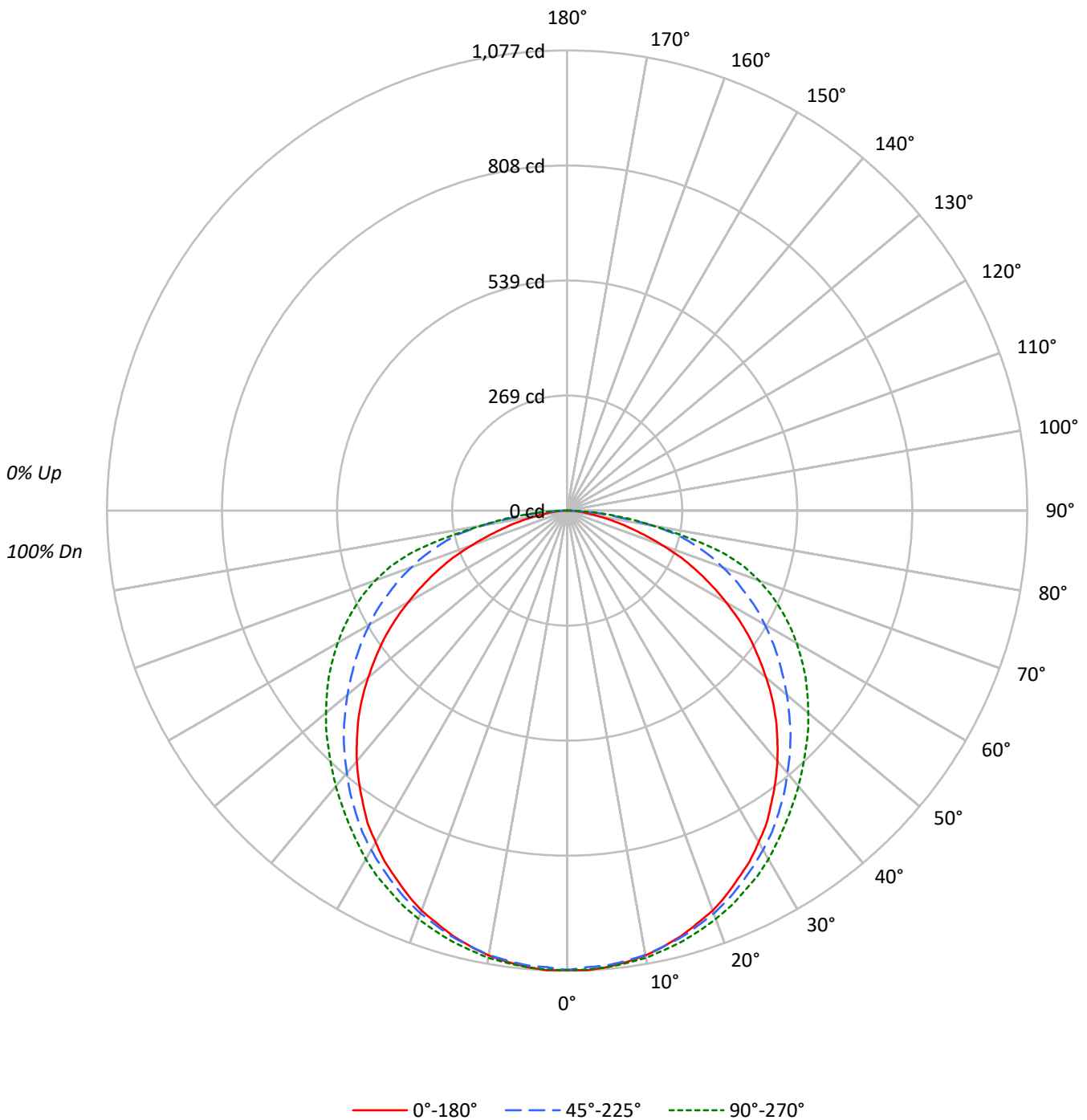
Lumens per Lamp: N/A
Luminaire Lumens: 3314.2 lumens
Efficiency: N/A
Efficacy: 104.9 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 31.6
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°	1447	1447	1447
5°	1449	1443	1449
10°	1444	1443	1452
15°	1436	1440	1453
20°	1426	1436	1456
25°	1409	1430	1458
30°	1393	1425	1464
35°	1370	1418	1465
40°	1345	1409	1479
45°	1315	1407	1502
50°	1272	1406	1542
55°	1227	1416	1598
60°	1157	1438	1669
65°	1069	1471	1763
70°	933	1523	1878
75°	757	1601	1940
80°	559	1570	1570
85°	429	1156	1306



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	101.9	3.1
10°-20°	292.5	8.8
20°-30°	445.3	13.4
30°-40°	540.7	16.3
40°-50°	571.3	17.2
50°-60°	539.1	16.3
60°-70°	448.2	13.5
70°-80°	294.9	8.9
80°-90°	80.4	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°	839.7	25.3
0°-40°	1380.4	41.7
0°-60°	2490.7	75.2
0°-90°	3314.2	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	3314.2	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1075	1075	1075	1075	1075	
5°	1073	1073	1068	1073	1073	102
15°	1031	1032	1034	1043	1043	291
25°	949	954	963	980	982	438
35°	834	844	863	885	892	522
45°	691	705	740	776	790	532
55°	523	545	604	660	681	466
65°	336	375	462	530	554	332
75°	146	212	308	365	373	157
85°	28	61	75	83	85	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1075.3	1075.3	1075.3	1075.3	1075.3
2.5°	1076.7	1075.3	1069.7	1075.3	1075.3
5°	1072.6	1072.6	1068.3	1072.6	1072.6
7.5°	1065.6	1065.6	1062.8	1068.3	1068.3
10°	1057.2	1057.2	1055.9	1062.8	1062.8
12.5°	1044.8	1046.1	1044.8	1053.1	1053.1
15°	1030.9	1032.3	1033.7	1043.4	1043.4
17.5°	1012.9	1015.6	1018.5	1029.4	1030.9
20°	996.2	997.5	1003.1	1015.6	1017.0
22.5°	974.0	978.2	985.1	997.5	1001.8
25°	949.0	954.5	962.9	979.6	982.3
27.5°	925.5	929.6	940.7	958.8	964.4
30°	896.3	903.3	917.1	935.2	942.1
32.5°	868.5	875.5	892.2	911.5	917.1
35°	833.9	843.6	863.0	885.2	892.2
37.5°	800.6	810.3	833.9	858.8	867.2
40°	765.8	776.9	802.0	831.1	842.2
42.5°	728.4	743.6	771.4	803.3	815.8
45°	690.9	704.9	739.5	775.5	789.5
47.5°	650.8	667.4	704.9	747.9	764.6
50°	607.8	628.6	671.6	718.7	736.8
52.5°	564.8	588.3	636.8	689.5	709.0
55°	523.0	545.3	603.5	660.5	681.3
57.5°	477.3	505.1	568.9	629.8	650.8
60°	430.1	460.7	534.2	597.9	620.2
62.5°	382.9	417.7	500.8	564.8	588.3
65°	335.8	374.7	462.1	530.0	553.7
67.5°	289.9	332.9	425.9	494.0	517.5
70°	237.2	291.4	387.1	453.7	477.3
72.5°	188.7	251.2	349.6	412.1	432.9
75°	145.7	212.3	308.0	364.8	373.2
77.5°	106.8	173.4	265.0	284.4	285.8
80°	72.2	138.7	202.6	199.8	202.6
82.5°	47.1	104.1	127.6	143.0	144.3
85°	27.8	61.1	74.9	83.3	84.6
87.5°	13.8	20.8	26.3	27.8	30.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)