

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: P474076

Luminaire Tested: **24CZ2-65HE-S-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474076
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-65HE-S-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY,SMOOTH LENS
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 7043.9 lumens
Efficiency: N/A
Efficacy: 144.0 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

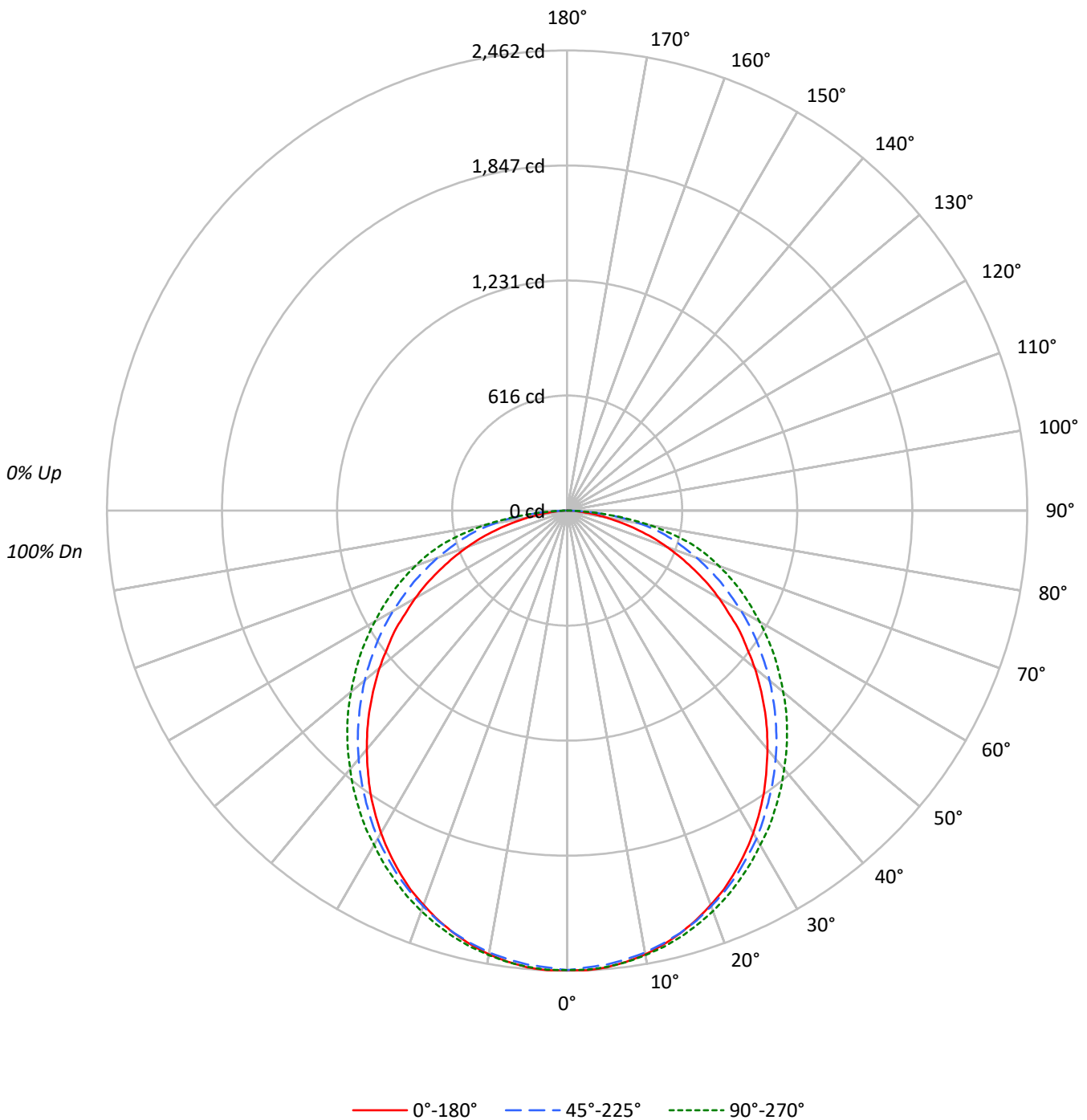
Input Watts (W): 48.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	105	101	97	93	97	93	90	93	90	87	89	87	85	83
2	98	90	83	77	95	88	81	76	84	79	74	81	76	72	78	74	71	68
3	89	78	70	63	87	77	69	63	74	67	62	71	65	61	68	64	59	57
4	82	69	60	54	79	68	60	53	66	58	52	63	57	52	61	55	51	49
5	75	62	53	46	73	61	52	46	59	51	45	57	50	45	55	49	44	42
6	69	56	47	40	67	55	46	40	53	45	40	51	44	39	50	44	39	37
7	64	51	42	35	63	50	41	35	48	41	35	47	40	35	45	39	34	32
8	60	46	38	32	58	45	37	31	44	37	31	43	36	31	42	35	31	29
9	56	42	34	28	54	42	34	28	41	33	28	39	33	28	38	32	28	26
10	52	39	31	26	51	39	31	26	38	30	26	37	30	25	36	30	25	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	3308	3308	3308
5°	3313	3293	3310
10°	3294	3280	3299
15°	3260	3259	3286
20°	3216	3226	3265
25°	3162	3190	3240
30°	3095	3149	3209
35°	3018	3094	3191
40°	2928	3048	3172
45°	2840	3001	3166
50°	2744	2960	3158
55°	2646	2923	3175
60°	2525	2895	3197
65°	2391	2884	3275
70°	2230	2899	3391
75°	1985	2983	3573
80°	1623	3048	3488
85°	1142	2661	2716



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	232.4	3.3
10°-20°	662.0	9.4
20°-30°	992.4	14.1
30°-40°	1181.9	16.8
40°-50°	1218.7	17.3
50°-60°	1112.0	15.8
60°-70°	889.2	12.6
70°-80°	580.8	8.2
80°-90°	174.4	2.5
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°	1886.8	26.8
0°-40°	3068.7	43.6
0°-60°	5399.5	76.7
0°-90°	7043.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	7043.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2459	2459	2459	2459	2459	
5°	2453	2448	2438	2453	2450	233
15°	2341	2342	2340	2359	2359	660
25°	2130	2134	2149	2180	2182	981
35°	1837	1850	1884	1931	1943	1148
45°	1492	1519	1577	1643	1664	1151
55°	1128	1160	1246	1328	1354	1005
65°	751	802	906	995	1029	745
75°	382	445	574	666	687	406
85°	74	133	172	176	176	94
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2458.6	2458.6	2458.6	2458.6	2458.6
2.5°	2462.1	2458.6	2445.9	2461.0	2458.6
5°	2452.9	2448.2	2437.8	2452.9	2450.5
7.5°	2434.3	2432.0	2421.6	2439.0	2436.7
10°	2411.2	2408.9	2400.8	2418.2	2414.7
12.5°	2378.8	2377.7	2371.9	2392.7	2390.4
15°	2340.6	2341.8	2339.5	2359.1	2359.1
17.5°	2296.7	2295.5	2300.1	2324.4	2322.1
20°	2245.8	2246.9	2252.7	2280.5	2280.5
22.5°	2192.5	2191.4	2204.1	2231.9	2234.2
25°	2130.1	2133.5	2148.6	2179.8	2182.1
27.5°	2062.9	2068.7	2087.2	2123.1	2126.6
30°	1992.4	1999.3	2027.1	2060.6	2065.3
32.5°	1914.9	1929.9	1955.3	1998.2	2009.7
35°	1837.3	1850.1	1883.6	1931.1	1942.6
37.5°	1751.7	1772.5	1810.7	1862.8	1877.8
40°	1667.3	1688.1	1735.5	1789.9	1806.1
42.5°	1581.6	1603.6	1658.0	1719.3	1736.7
45°	1492.5	1519.2	1577.0	1643.0	1663.8
47.5°	1401.1	1432.4	1494.9	1566.6	1589.7
50°	1310.9	1342.1	1413.9	1487.9	1508.7
52.5°	1213.7	1253.0	1329.4	1409.2	1430.1
55°	1128.1	1160.5	1246.1	1328.2	1353.7
57.5°	1027.4	1071.4	1162.8	1246.1	1270.4
60°	938.3	978.8	1076.0	1160.5	1188.2
62.5°	848.1	889.7	986.9	1083.0	1108.4
65°	750.9	801.8	905.9	995.0	1028.6
67.5°	658.3	711.6	818.0	912.9	947.6
70°	566.9	621.3	737.0	834.2	862.0
72.5°	476.7	533.4	653.7	748.6	781.0
75°	381.8	445.4	573.9	666.4	687.3
77.5°	292.7	363.3	492.9	555.4	570.4
80°	209.4	286.9	393.4	438.5	450.1
82.5°	137.7	212.9	293.9	318.2	314.7
85°	74.0	133.1	172.4	175.9	175.9
87.5°	28.9	53.2	54.4	41.7	39.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)