

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: P474075

Luminaire Tested: **24CZ2-60HE-S-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474075
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-60HE-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

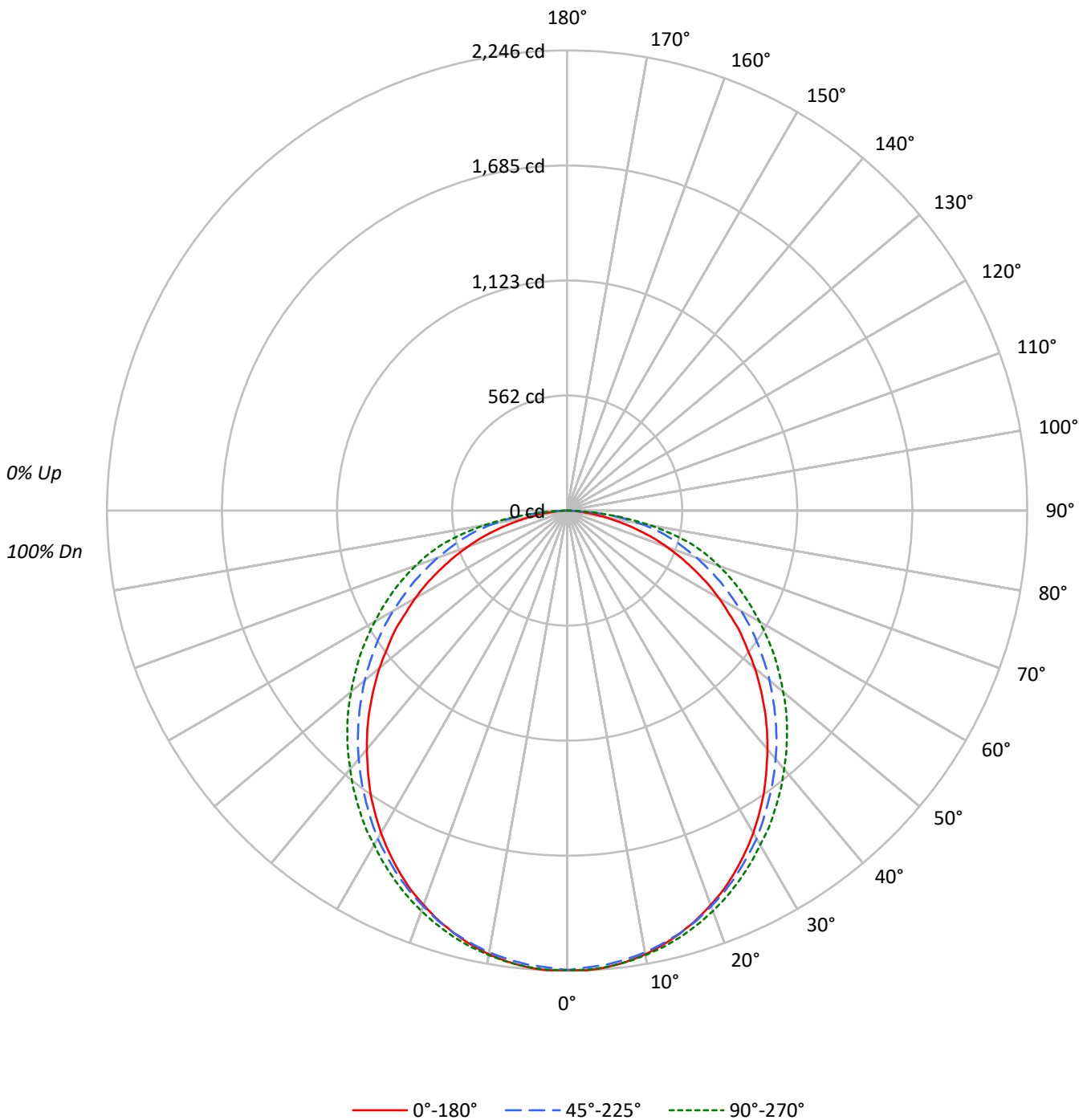
Lumens per Lamp: N/A
Luminaire Lumens: 6425.5 lumens
Efficiency: N/A
Efficacy: 145.7 lumens/watt
Spacing Criteria (0/90/45): 1.21 / 1.25 / 1.35
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

Input Watts (W): 44.1
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



TEST NUMBER: P474075
CATALOG NUMBER: 24CZ2-60HE-S-UNV-L840-CD1-U

Luminous Intensity Polar Plot





TEST NUMBER: P474075

CATALOG NUMBER: 24CZ2-60HE-S-UNV-L840-CD1-U

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°	3018	3018	3018
5°	3022	3004	3019
10°	3005	2992	3009
15°	2974	2973	2998
20°	2933	2942	2979
25°	2885	2910	2955
30°	2824	2873	2927
35°	2753	2822	2911
40°	2671	2781	2894
45°	2591	2737	2888
50°	2503	2700	2881
55°	2414	2666	2897
60°	2303	2641	2917
65°	2181	2631	2987
70°	2035	2645	3093
75°	1811	2721	3259
80°	1480	2780	3181
85°	1042	2428	2476



TEST NUMBER: P474075

CATALOG NUMBER: 24CZ2-60HE-S-UNV-L840-CD1-U

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	212.0	3.3
10°-20°	603.9	9.4
20°-30°	905.2	14.1
30°-40°	1078.2	16.8
40°-50°	1111.7	17.3
50°-60°	1014.4	15.8
60°-70°	811.2	12.6
70°-80°	529.8	8.2
80°-90°	159.1	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°	1721.2	26.8
0°-40°	2799.3	43.6
0°-60°	4925.4	76.7
0°-90°	6425.5	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6425.5	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2243	2243	2243	2243	2243	
5°	2238	2233	2224	2238	2235	212
15°	2135	2136	2134	2152	2152	602
25°	1943	1946	1960	1988	1990	895
35°	1676	1688	1718	1762	1772	1047
45°	1362	1386	1438	1499	1518	1050
55°	1029	1059	1137	1212	1235	916
65°	685	731	826	908	938	679
75°	348	406	524	608	627	370
85°	68	121	157	160	160	86
90°	0	0	0	0	0	



TEST NUMBER: P474075

CATALOG NUMBER: 24CZ2-60HE-S-UNV-L840-CD1-U

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2242.8	2242.8	2242.8	2242.8	2242.8
2.5°	2246.0	2242.8	2231.2	2244.9	2242.8
5°	2237.5	2233.3	2223.8	2237.5	2235.4
7.5°	2220.6	2218.5	2209.0	2224.8	2222.7
10°	2199.5	2197.4	2190.0	2205.8	2202.7
12.5°	2170.0	2168.9	2163.6	2182.6	2180.5
15°	2135.1	2136.2	2134.1	2152.0	2152.0
17.5°	2095.0	2094.0	2098.2	2120.4	2118.2
20°	2048.6	2049.6	2054.9	2080.2	2080.2
22.5°	2000.0	1999.0	2010.6	2035.9	2038.0
25°	1943.0	1946.2	1959.9	1988.4	1990.5
27.5°	1881.8	1887.1	1904.0	1936.7	1939.9
30°	1817.4	1823.8	1849.1	1879.7	1883.9
32.5°	1746.7	1760.5	1783.7	1822.7	1833.3
35°	1676.0	1687.6	1718.2	1761.5	1772.1
37.5°	1597.9	1616.9	1651.7	1699.2	1713.0
40°	1520.9	1539.9	1583.1	1632.7	1647.5
42.5°	1442.8	1462.8	1512.4	1568.4	1584.2
45°	1361.5	1385.8	1438.5	1498.7	1517.7
47.5°	1278.1	1306.6	1363.6	1429.0	1450.2
50°	1195.8	1224.3	1289.7	1357.3	1376.3
52.5°	1107.1	1143.0	1212.7	1285.5	1304.5
55°	1029.0	1058.6	1136.7	1211.6	1234.9
57.5°	937.2	977.3	1060.7	1136.7	1158.9
60°	856.0	892.9	981.5	1058.6	1083.9
62.5°	773.6	811.6	900.3	987.9	1011.1
65°	685.0	731.4	826.4	907.7	938.3
67.5°	600.5	649.1	746.2	832.7	864.4
70°	517.2	566.8	672.3	761.0	786.3
72.5°	434.8	486.6	596.3	682.9	712.4
75°	348.3	406.3	523.5	607.9	626.9
77.5°	267.0	331.4	449.6	506.6	520.3
80°	191.0	261.7	358.8	400.0	410.6
82.5°	125.6	194.2	268.1	290.2	287.1
85°	67.5	121.4	157.3	160.4	160.4
87.5°	26.4	48.5	49.6	38.0	35.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)