

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: P474490

Luminaire Tested: **24CZ2-80VHE-HRP-UNV-L840-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474490
Test Lab: INNOVATION CENTER(G3)
Issue Date: 01/28/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 24CZ2-80VHE-HRP-UNV-L840-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 4000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6619.8 lumens
Efficiency: N/A
Efficacy: 117.8 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

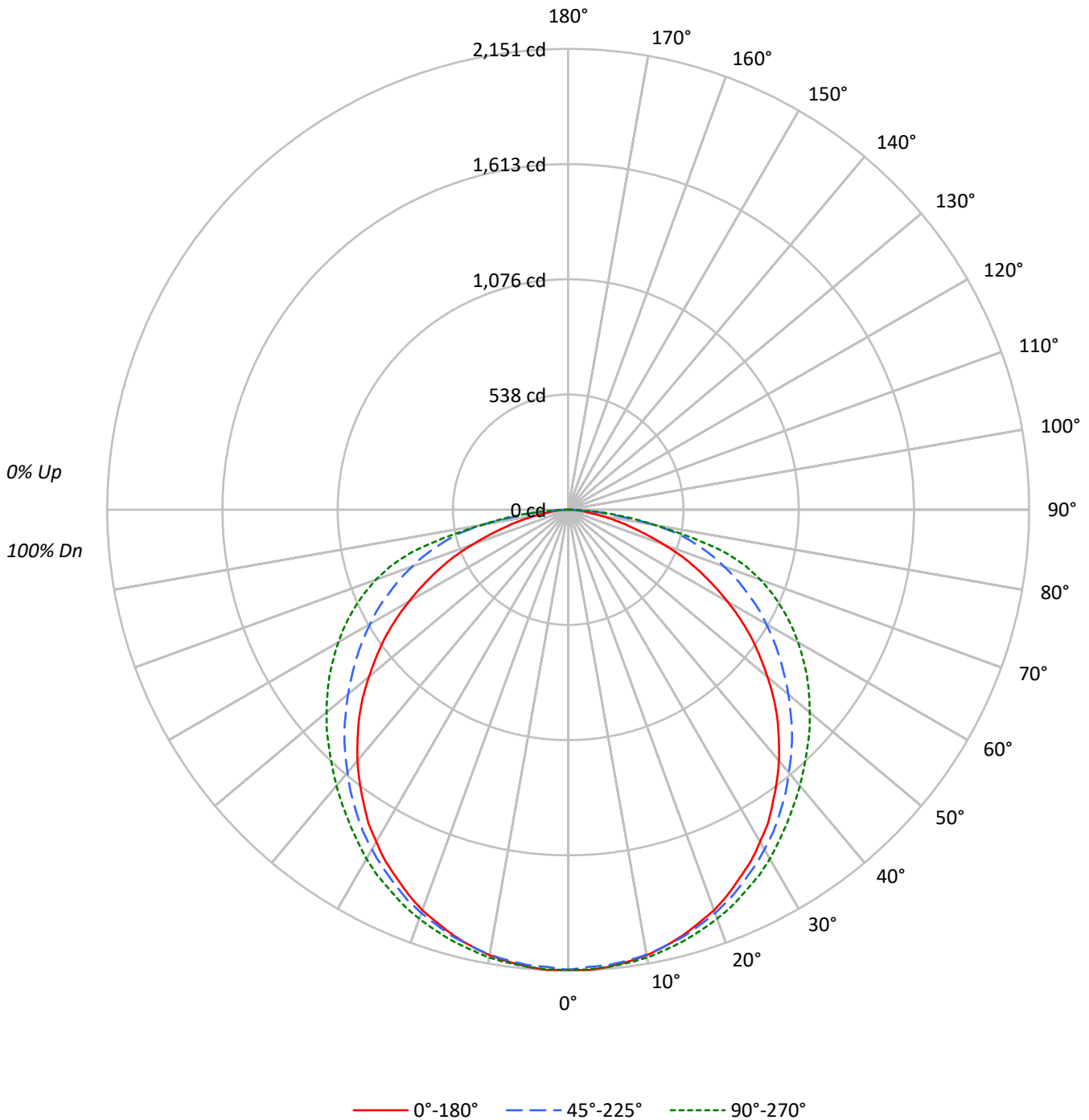
Input Watts (W): 56.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2890	2890	2890
5°	2894	2882	2894
10°	2885	2882	2900
15°	2868	2876	2903
20°	2849	2869	2909
25°	2814	2855	2913
30°	2781	2846	2924
35°	2736	2831	2927
40°	2687	2814	2954
45°	2626	2811	3001
50°	2541	2808	3081
55°	2451	2828	3192
60°	2312	2871	3333
65°	2135	2939	3521
70°	1864	3041	3751
75°	1513	3198	3876
80°	1117	3137	3137
85°	857	2309	2609



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	203.5	3.1
10°-20°	584.3	8.8
20°-30°	889.5	13.4
30°-40°	1080.0	16.3
40°-50°	1141.1	17.2
50°-60°	1076.7	16.3
60°-70°	895.2	13.5
70°-80°	589.0	8.9
80°-90°	160.6	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°	1677.2	25.3
0°-40°	2757.2	41.7
0°-60°	4975.0	75.2
0°-90°	6619.8	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6619.8	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2148	2148	2148	2148	2148	
5°	2142	2142	2134	2142	2142	203
15°	2059	2062	2065	2084	2084	581
25°	1896	1907	1923	1957	1962	874
35°	1666	1685	1724	1768	1782	1043
45°	1380	1408	1477	1549	1577	1063
55°	1045	1089	1205	1319	1361	931
65°	671	748	923	1059	1106	663
75°	291	424	615	729	746	314
85°	56	122	150	166	169	68
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2147.8	2147.8	2147.8	2147.8	2147.8
2.5°	2150.6	2147.8	2136.7	2147.8	2147.8
5°	2142.4	2142.4	2133.8	2142.4	2142.4
7.5°	2128.4	2128.4	2122.7	2133.8	2133.8
10°	2111.6	2111.6	2109.1	2122.7	2122.7
12.5°	2086.9	2089.5	2086.9	2103.4	2103.4
15°	2059.0	2061.9	2064.7	2084.1	2084.1
17.5°	2023.2	2028.6	2034.3	2056.2	2059.0
20°	1989.9	1992.5	2003.6	2028.6	2031.4
22.5°	1945.5	1953.8	1967.7	1992.5	2001.0
25°	1895.5	1906.6	1923.3	1956.6	1962.0
27.5°	1848.5	1856.8	1879.0	1915.1	1926.2
30°	1790.2	1804.2	1831.8	1867.9	1881.8
32.5°	1734.8	1748.7	1782.0	1820.7	1831.8
35°	1665.7	1685.0	1723.7	1768.0	1782.0
37.5°	1599.1	1618.4	1665.7	1715.4	1732.2
40°	1529.7	1551.9	1601.9	1660.0	1682.1
42.5°	1454.9	1485.3	1540.8	1604.5	1629.5
45°	1380.1	1408.0	1477.1	1549.0	1576.9
47.5°	1299.9	1333.1	1408.0	1493.9	1527.1
50°	1214.0	1255.5	1341.4	1435.5	1471.7
52.5°	1128.1	1175.0	1272.0	1377.2	1416.2
55°	1044.7	1089.1	1205.4	1319.2	1360.7
57.5°	953.4	1008.9	1136.3	1258.1	1299.9
60°	859.0	920.1	1066.9	1194.3	1238.7
62.5°	764.8	834.2	1000.4	1128.1	1175.0
65°	670.7	748.3	923.0	1058.7	1105.9
67.5°	579.1	665.0	850.7	986.7	1033.6
70°	473.9	582.0	773.1	906.2	953.4
72.5°	376.9	501.7	698.3	823.2	864.7
75°	291.0	424.1	615.2	728.7	745.5
77.5°	213.3	346.4	529.3	568.0	570.9
80°	144.2	277.0	404.8	399.1	404.8
82.5°	94.1	207.9	254.9	285.6	288.1
85°	55.5	122.0	149.6	166.4	169.0
87.5°	27.6	41.5	52.6	55.5	60.9
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)