

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: P474390

Luminaire Tested: **24CZ2-80VHE-HRP-UNV-L830-CD1-U**

Issue Date: 01/28/2021

Test Information

Test Method: LM-79-08
Report Number: P474390
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-L830-CD1-U
Description: 2'X4' TROFFER LED MODULE, VERY HIGH EFFICIENCY,SMOOTH LENS W/ HRP
INSERT
Light Source: 3000K CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 6269.0 lumens
Efficiency: N/A
Efficacy: 111.5 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

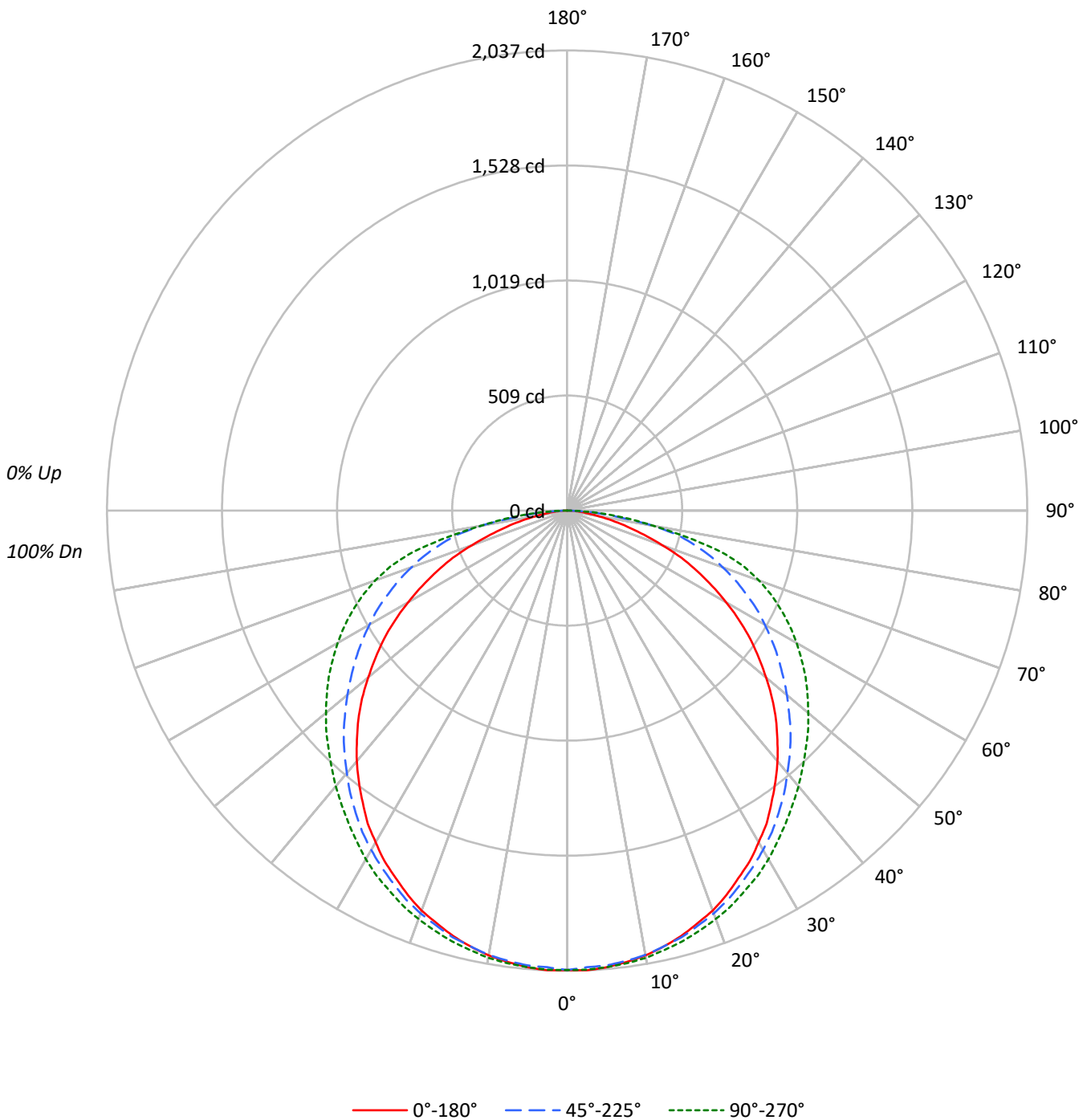
Input Watts (W): 56.2
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	2737	2737	2737
5°	2740	2729	2740
10°	2732	2729	2746
15°	2716	2724	2749
20°	2698	2717	2755
25°	2665	2704	2759
30°	2634	2695	2769
35°	2591	2681	2772
40°	2544	2664	2798
45°	2487	2662	2841
50°	2406	2659	2917
55°	2321	2678	3023
60°	2189	2719	3157
65°	2022	2783	3334
70°	1766	2880	3552
75°	1433	3029	3670
80°	1058	2970	2970
85°	810	2188	2470



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	192.7	3.1
10°-20°	553.3	8.8
20°-30°	842.3	13.4
30°-40°	1022.8	16.3
40°-50°	1080.6	17.2
50°-60°	1019.7	16.3
60°-70°	847.8	13.5
70°-80°	557.8	8.9
80°-90°	152.0	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°	1588.3	25.3
0°-40°	2611.1	41.7
0°-60°	4711.3	75.2
0°-90°	6269.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	6269.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	2034	2034	2034	2034	2034	
5°	2029	2029	2021	2029	2029	193
15°	1950	1953	1955	1974	1974	550
25°	1795	1806	1821	1853	1858	828
35°	1577	1596	1632	1674	1688	987
45°	1307	1333	1399	1467	1493	1007
55°	989	1031	1142	1249	1289	881
65°	635	709	874	1003	1047	628
75°	276	402	583	690	706	297
85°	52	116	142	158	160	64
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	2034.0	2034.0	2034.0	2034.0	2034.0
2.5°	2036.6	2034.0	2023.4	2034.0	2034.0
5°	2028.8	2028.8	2020.8	2028.8	2028.8
7.5°	2015.6	2015.6	2010.2	2020.8	2020.8
10°	1999.7	1999.7	1997.3	2010.2	2010.2
12.5°	1976.3	1978.7	1976.3	1991.9	1991.9
15°	1949.9	1952.6	1955.3	1973.6	1973.6
17.5°	1916.0	1921.1	1926.5	1947.2	1949.9
20°	1884.5	1886.9	1897.4	1921.1	1923.8
22.5°	1842.4	1850.2	1863.4	1886.9	1895.0
25°	1795.0	1805.5	1821.4	1852.9	1858.1
27.5°	1750.6	1758.4	1779.4	1813.6	1824.1
30°	1695.4	1708.6	1734.7	1768.9	1782.1
32.5°	1642.8	1656.0	1687.6	1724.2	1734.7
35°	1577.4	1595.7	1632.3	1674.4	1687.6
37.5°	1514.4	1532.7	1577.4	1624.5	1640.4
40°	1448.6	1469.6	1517.0	1572.0	1593.0
42.5°	1377.8	1406.6	1459.1	1519.5	1543.2
45°	1306.9	1333.3	1398.8	1466.9	1493.3
47.5°	1231.0	1262.5	1333.3	1414.7	1446.2
50°	1149.6	1189.0	1270.3	1359.5	1393.7
52.5°	1068.3	1112.7	1204.6	1304.3	1341.2
55°	989.4	1031.4	1141.6	1249.3	1288.6
57.5°	902.9	955.4	1076.1	1191.4	1231.0
60°	813.5	871.4	1010.4	1131.1	1173.1
62.5°	724.3	790.0	947.3	1068.3	1112.7
65°	635.2	708.7	874.1	1002.6	1047.3
67.5°	548.4	629.8	805.7	934.4	978.9
70°	448.8	551.1	732.1	858.2	902.9
72.5°	356.9	475.2	661.3	779.5	818.9
75°	275.6	401.6	582.6	690.1	706.0
77.5°	202.0	328.1	501.3	537.9	540.6
80°	136.6	262.4	383.3	377.9	383.3
82.5°	89.2	196.9	241.3	270.4	272.9
85°	52.5	115.6	141.7	157.6	160.0
87.5°	26.1	39.3	49.8	52.5	57.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)