

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: P475180

Luminaire Tested: **22CZ2-29VHE-HRP-UNV-L840-CD1-U**

Issue Date: 02/10/2021

Test Information

Test Method: LM-79-08
Report Number: P475180
Test Lab: INNOVATION CENTER(G3)
Issue Date: 02/10/2021
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-29VHE-HRP-UNV-L840-CD1-U
Description: 2'X2' 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: 2413.6 lumens
Efficiency: N/A
Efficacy: 121.3 lumens/watt
Spacing Criteria (0/90/45): 1.23 / 1.29 / 1.38
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

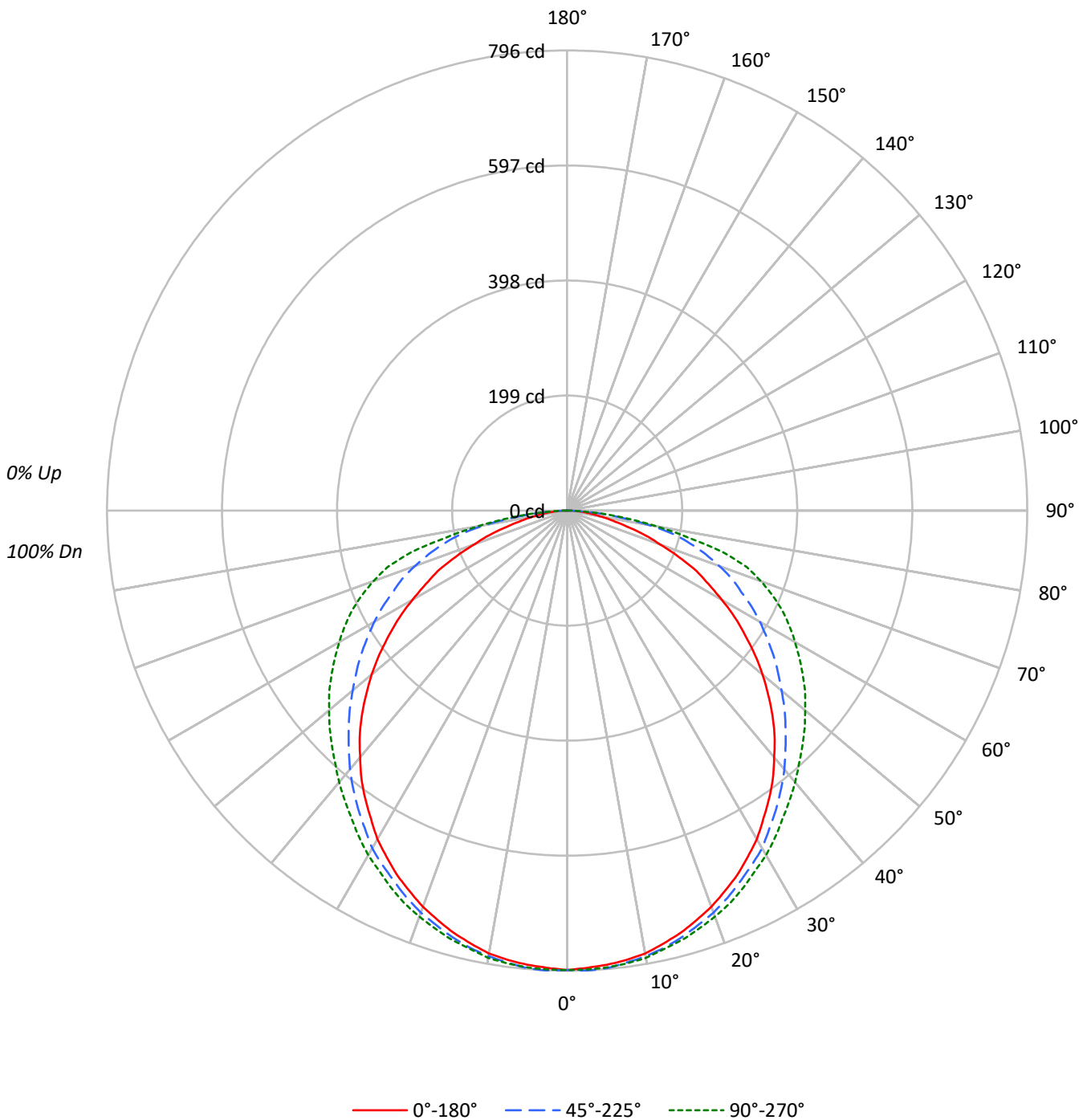
Input Watts (W): 19.9
Input Voltage (V): 120
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	101	96	93	96	93	90	92	90	87	89	87	84	82
2	98	89	82	76	95	87	80	75	84	78	73	80	75	71	77	73	70	68
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	59	52	79	67	59	52	65	57	51	62	56	51	60	55	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	39	50	43	38	49	43	38	36
7	64	50	41	34	62	49	40	34	47	40	34	46	39	34	44	38	33	31
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	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	25	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2139	2139	2139
5°	2130	2147	2143
10°	2126	2138	2147
15°	2108	2129	2142
20°	2088	2119	2141
25°	2066	2102	2138
30°	2039	2096	2138
35°	2001	2071	2136
40°	1957	2054	2155
45°	1912	2034	2190
50°	1848	2027	2250
55°	1764	2043	2336
60°	1664	2073	2450
65°	1571	2113	2618
70°	1341	2204	2803
75°	1124	2296	2912
80°	922	2218	2430
85°	797	1646	1785



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.3	3.1
10°-20°	215.5	8.9
20°-30°	326.5	13.5
30°-40°	394.3	16.3
40°-50°	414.3	17.2
50°-60°	389.8	16.2
60°-70°	325.0	13.5
70°-80°	215.4	8.9
80°-90°	57.4	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°	617.3	25.6
0°-40°	1011.6	41.9
0°-60°	1815.8	75.2
0°-90°	2413.6	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2413.6	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	795	795	795	795	795	
5°	789	790	795	795	793	75
15°	757	760	764	767	769	213
25°	696	700	708	717	720	320
35°	609	615	630	644	650	381
45°	502	510	534	562	576	387
55°	376	393	436	480	498	336
65°	247	268	332	387	411	240
75°	108	151	221	266	280	117
85°	26	40	53	58	58	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	794.7	794.7	794.7	794.7	794.7
2.5°	791.7	793.2	796.3	796.3	794.7
5°	788.6	790.1	794.7	794.7	793.2
7.5°	784.1	785.7	788.6	791.7	790.1
10°	778.0	779.5	782.6	785.7	785.7
12.5°	767.4	768.9	774.9	776.5	776.5
15°	756.6	759.7	764.3	767.4	768.9
17.5°	743.1	746.0	752.1	758.3	758.3
20°	729.3	732.3	740.0	746.0	747.5
22.5°	712.5	717.1	724.8	732.3	735.4
25°	695.9	700.4	708.0	717.1	720.2
27.5°	675.9	680.5	691.3	701.9	703.4
30°	656.2	660.7	674.5	683.6	688.2
32.5°	631.8	637.9	651.6	665.3	669.9
35°	609.0	615.2	630.4	644.1	650.1
37.5°	584.6	590.7	607.5	624.3	631.8
40°	557.2	564.9	584.6	602.9	613.5
42.5°	531.4	539.0	558.8	583.1	593.8
45°	502.5	510.0	534.5	561.8	575.5
47.5°	471.9	481.1	510.0	543.6	557.2
50°	441.5	452.2	484.2	522.2	537.4
52.5°	409.5	423.2	459.8	501.0	519.1
55°	376.0	392.8	435.5	479.6	497.9
57.5°	344.0	359.4	409.5	456.7	476.5
60°	309.1	328.8	385.2	433.9	455.2
62.5°	275.6	297.0	359.4	411.1	433.9
65°	246.7	267.9	331.9	386.7	411.1
67.5°	208.6	237.5	309.1	360.8	385.2
70°	170.5	210.1	280.1	333.4	356.3
72.5°	141.6	179.7	251.2	304.5	325.9
75°	108.1	150.8	220.8	266.4	280.1
77.5°	80.7	124.8	188.8	211.7	213.2
80°	59.5	95.9	143.1	150.8	156.8
82.5°	41.2	67.0	92.9	101.9	105.0
85°	25.8	39.5	53.3	57.8	57.8
87.5°	13.7	15.2	18.3	18.3	18.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)