

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: P390221

Luminaire Tested: **22CZ2-29VHE-HRP-UNV-L940-CD1-U**

Issue Date: 2/28/2020

This test was performed under the Supervised Manufacturer's Testing Program. The results of this test have not been influenced by sources from within Cooper Lighting Solutions or from external interests.

Test Information

Test Method: LM-79-08
Report Number: P390221
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-24)
Test Lab: INNOVATIONS CENTER(G3)
Issue Date: 2/28/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: 22CZ2-29VHE-HRP-UNV-L940-CD1-U
Description: 2x2 CRUZE LED TROFFER WITH 4000K, 90 LEDS, AND HRP LENS
Light Source: -
Ballast/Driver: -

Luminaire Equipment: Sample No. Condition Description

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2257.9 lumens
Efficiency: N/A
Efficacy: 104.1 lumens/watt
Spacing Criteria (0/90/45): 1.25 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

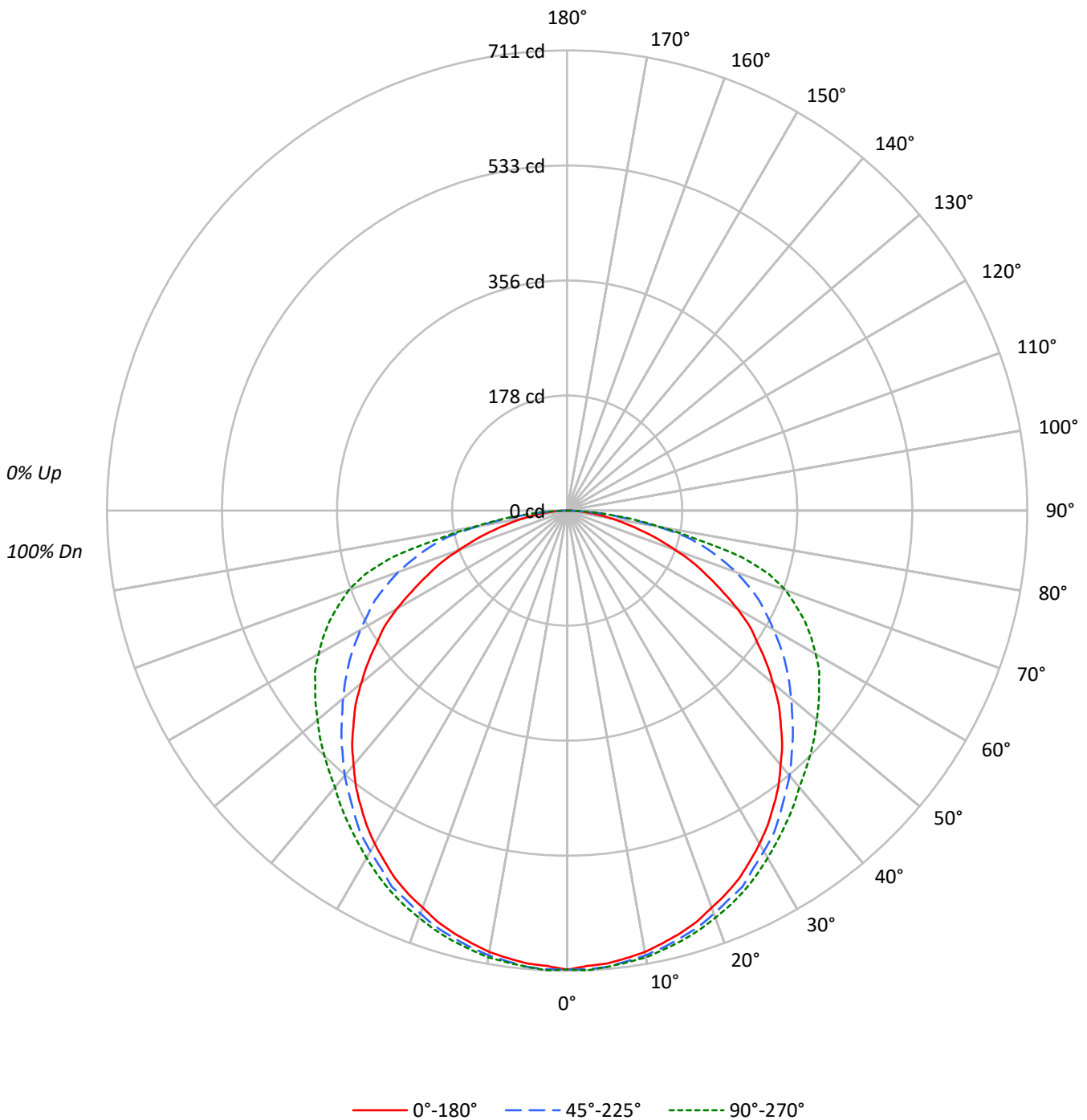
Input Watts (W): 21.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	100	96	92	96	92	89	92	89	86	88	86	84	82
2	97	88	81	75	95	86	80	74	83	77	72	80	75	71	76	72	69	67
3	88	77	68	61	86	75	67	61	72	65	60	70	64	59	67	62	58	55
4	80	68	59	51	78	66	58	51	64	56	50	61	55	50	59	54	49	47
5	74	60	51	44	72	59	50	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	44	38	51	43	38	50	43	37	48	42	37	35
7	63	49	40	33	61	48	39	33	47	39	33	45	38	33	44	37	33	31
8	59	45	36	30	57	44	35	30	43	35	29	41	34	29	40	34	29	27
9	55	41	32	27	53	40	32	27	39	32	26	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1908	1908	1908
5°	1898	1911	1911
10°	1893	1906	1915
15°	1883	1902	1916
20°	1869	1898	1917
25°	1864	1904	1923
30°	1848	1889	1925
35°	1828	1882	1937
40°	1803	1879	1961
45°	1776	1877	2023
50°	1738	1891	2107
55°	1691	1932	2228
60°	1636	1984	2387
65°	1523	2083	2581
70°	1398	2183	2823
75°	1226	2297	2918
80°	1055	2188	2290
85°	923	1590	1744



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.1	3.0
10°-20°	192.6	8.5
20°-30°	293.9	13.0
30°-40°	358.8	15.9
40°-50°	383.7	17.0
50°-60°	370.3	16.4
60°-70°	318.8	14.1
70°-80°	215.7	9.6
80°-90°	56.9	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°	553.6	24.5
0°-40°	912.5	40.4
0°-60°	1666.5	73.8
0°-90°	2257.9	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2257.9	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	709	709	709	709	709	
5°	703	704	708	708	708	67
15°	676	678	683	686	688	191
25°	628	631	641	644	648	289
35°	556	561	573	585	590	348
45°	467	475	493	518	532	360
55°	360	372	412	454	475	323
65°	239	262	327	379	405	238
75°	118	156	221	266	281	127
85°	30	42	52	53	56	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	709.2	709.2	709.2	709.2	709.2
2.5°	704.3	705.9	709.2	709.2	710.9
5°	702.6	704.3	707.6	707.6	707.6
7.5°	697.6	699.3	702.6	704.3	704.3
10°	692.6	694.3	697.6	699.3	700.9
12.5°	684.3	686.0	691.0	694.3	694.3
15°	676.0	677.7	682.7	686.0	687.7
17.5°	666.1	669.4	674.4	677.7	679.3
20°	652.8	656.1	662.7	667.7	669.4
22.5°	641.1	644.5	651.1	656.1	659.4
25°	627.9	631.2	641.1	644.5	647.8
27.5°	611.2	614.6	622.9	629.5	634.5
30°	594.6	598.0	607.9	616.2	619.6
32.5°	576.4	581.3	593.0	599.6	604.6
35°	556.4	561.4	573.0	584.7	589.7
37.5°	536.5	541.5	553.1	568.1	574.7
40°	513.2	519.9	534.8	554.8	558.1
42.5°	491.7	500.0	513.2	536.5	544.8
45°	466.7	475.0	493.3	518.2	531.5
47.5°	443.5	451.8	471.7	501.6	518.2
50°	415.2	426.9	451.8	486.7	503.3
52.5°	388.7	398.6	431.9	470.1	490.0
55°	360.4	372.1	411.9	453.5	475.0
57.5°	335.5	345.5	390.3	436.8	461.8
60°	304.0	317.3	368.7	418.6	443.5
62.5°	270.7	290.7	347.1	398.6	425.2
65°	239.2	262.4	327.2	378.7	405.3
67.5°	210.9	235.9	302.3	357.1	382.0
70°	177.7	209.3	277.4	330.5	358.8
72.5°	147.8	182.7	249.1	302.3	327.2
75°	117.9	156.1	220.9	265.8	280.7
77.5°	91.4	127.9	189.4	202.6	204.3
80°	68.1	101.3	141.2	142.8	147.8
82.5°	46.5	71.4	91.4	99.7	101.3
85°	29.9	41.5	51.5	53.2	56.5
87.5°	13.3	14.9	18.3	16.6	16.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)