

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: FAIL-SAFE

Report Number: P308717

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-CP187-W2A-U-2700K**

Issue Date: 3/3/2020

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: P308717
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-29HE-UNV-L82765-CP187-W2A-U-2700K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.187" POLYCARB SHEET
Light Source: (168) 3000K TUNABLE CCT, 80 CRI LEDS
Ballast/Driver: ELECTRONIC DRIVER
Luminaire Equipment:

<u>Sample No.</u>	<u>Condition</u>	<u>Description</u>
AS-5443-1	Good	WHITE TWIN R-EVOLVE FLOOD
AS-5443-2	Good	REFLECTOR
AS-5443-3	Good	DRIVER
AS-5443-4	Good	UPPER MODULE
AS-5443-5	Good	LENS
AS-5443-6	Good	DRIVER 2
AS-5443-7	Good	TRIM RING

Summary

Lumens per Lamp: N/A
Luminaire Lumens: 2204.0 lumens
Efficiency: N/A
Efficacy: 98.4 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

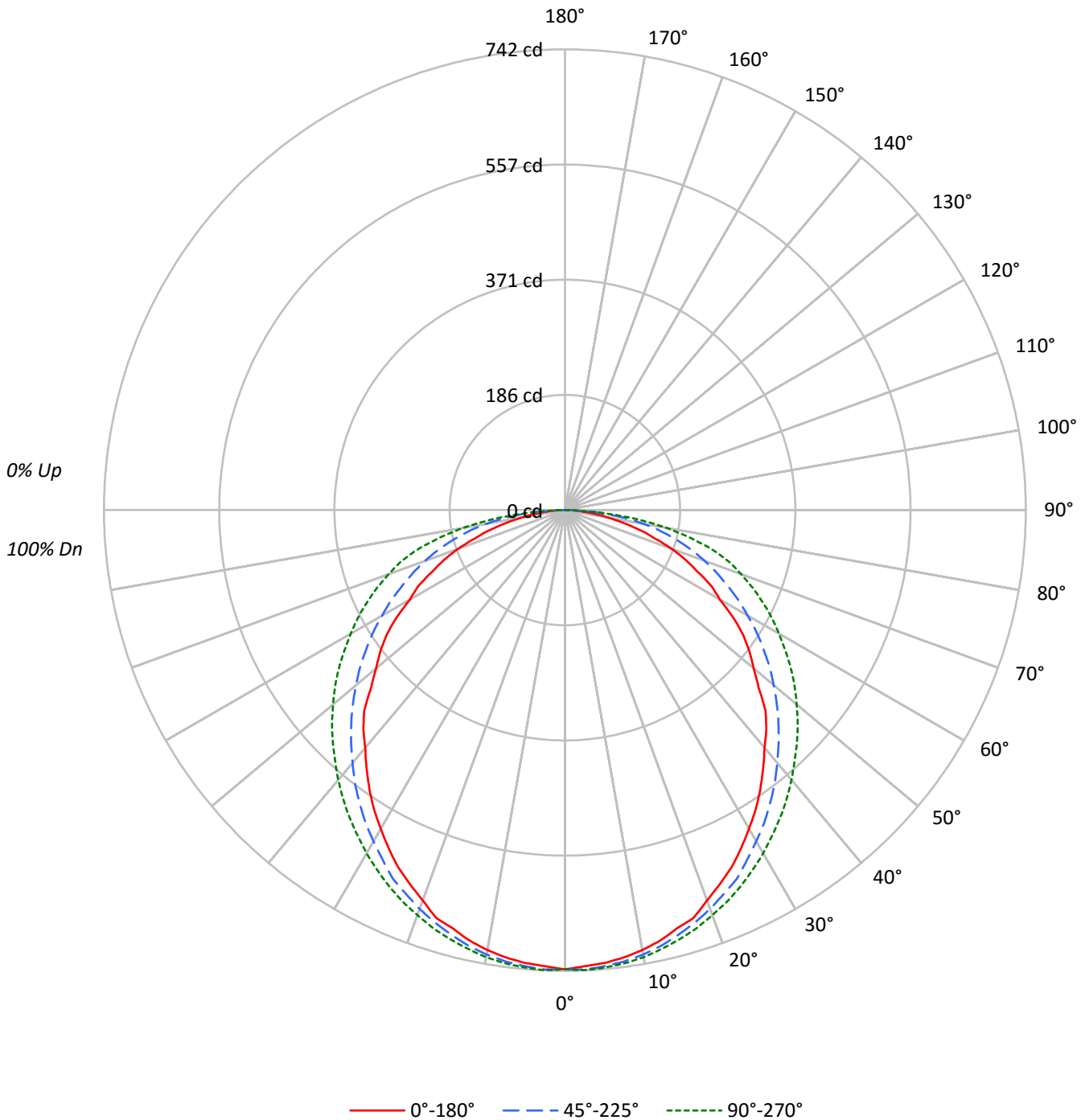
Input Watts (W): 22.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	93	90	92	89	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	60	68	63	59	56
4	81	69	60	53	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	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
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	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1990	1990	1990
5°	1978	1992	1998
10°	1966	1986	1997
15°	1943	1972	1992
20°	1915	1958	1988
25°	1885	1945	1986
30°	1842	1914	1983
35°	1802	1892	1986
40°	1756	1868	1994
45°	1738	1851	2011
50°	1660	1837	2040
55°	1643	1831	2084
60°	1550	1828	2140
65°	1505	1840	2237
70°	1444	1884	2374
75°	1316	1941	2556
80°	1128	2010	2583
85°	911	1920	2214



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.0	3.2
10°-20°	199.6	9.1
20°-30°	300.4	13.6
30°-40°	360.6	16.4
40°-50°	376.9	17.1
50°-60°	351.2	15.9
60°-70°	288.0	13.1
70°-80°	194.1	8.8
80°-90°	63.2	2.9
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°	570.0	25.9
0°-40°	930.6	42.2
0°-60°	1658.6	75.3
0°-90°	2204.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2204.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	740	740	740	740	740	
5°	732	734	737	738	740	69
15°	697	702	708	714	715	197
25°	635	639	655	665	669	292
35°	548	556	576	596	604	343
45°	457	460	486	516	528	349
55°	350	356	390	427	444	310
65°	236	247	289	331	351	235
75°	127	140	187	229	246	133
85°	30	42	62	73	72	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	739.5	739.5	739.5	739.5	739.5
2.5°	735.2	737.4	740.5	741.6	741.6
5°	732.1	734.2	737.4	738.4	739.5
7.5°	726.8	728.9	733.1	735.2	736.3
10°	719.4	721.5	726.8	730.0	731.0
12.5°	709.9	712.0	718.4	722.6	723.6
15°	697.3	701.5	707.8	714.1	715.2
17.5°	688.8	687.8	696.2	703.6	705.7
20°	668.8	674.1	683.6	692.0	694.1
22.5°	651.9	656.1	668.8	678.3	682.5
25°	635.0	639.2	655.1	664.6	668.8
27.5°	613.9	620.3	635.0	648.7	654.0
30°	592.8	599.2	616.0	631.9	638.2
32.5°	571.7	579.1	597.1	613.9	621.3
35°	548.5	555.9	576.0	596.0	604.4
37.5°	524.3	533.8	554.9	577.0	586.5
40°	500.0	509.5	531.7	557.0	567.5
42.5°	480.0	484.2	509.5	536.9	547.5
45°	456.8	459.9	486.3	515.8	528.5
47.5°	423.0	434.6	463.1	495.8	508.4
50°	396.6	409.3	438.8	473.6	487.3
52.5°	374.5	382.9	415.6	450.4	466.3
55°	350.2	356.5	390.3	427.2	444.1
57.5°	320.7	332.3	366.0	404.0	420.9
60°	288.0	302.7	339.7	380.8	397.7
62.5°	266.9	275.3	315.4	356.5	375.5
65°	236.3	246.8	289.0	331.2	351.3
67.5°	211.0	221.5	264.8	307.0	327.0
70°	183.5	194.1	239.5	281.6	301.7
72.5°	151.9	166.7	214.1	256.3	277.4
75°	126.6	140.3	186.7	228.9	245.8
77.5°	98.1	116.0	159.3	194.1	206.8
80°	72.8	90.7	129.7	155.1	166.7
82.5°	49.6	67.5	97.0	116.0	122.4
85°	29.5	42.2	62.2	72.8	71.7
87.5°	13.7	17.9	25.3	25.3	24.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)