

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: P308997

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-S-CP250-W2A-U-3000K**

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: P308997
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
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-S-CP250-W2A-U-3000K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.250" 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: 2372.0 lumens
Efficiency: N/A
Efficacy: 106.8 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

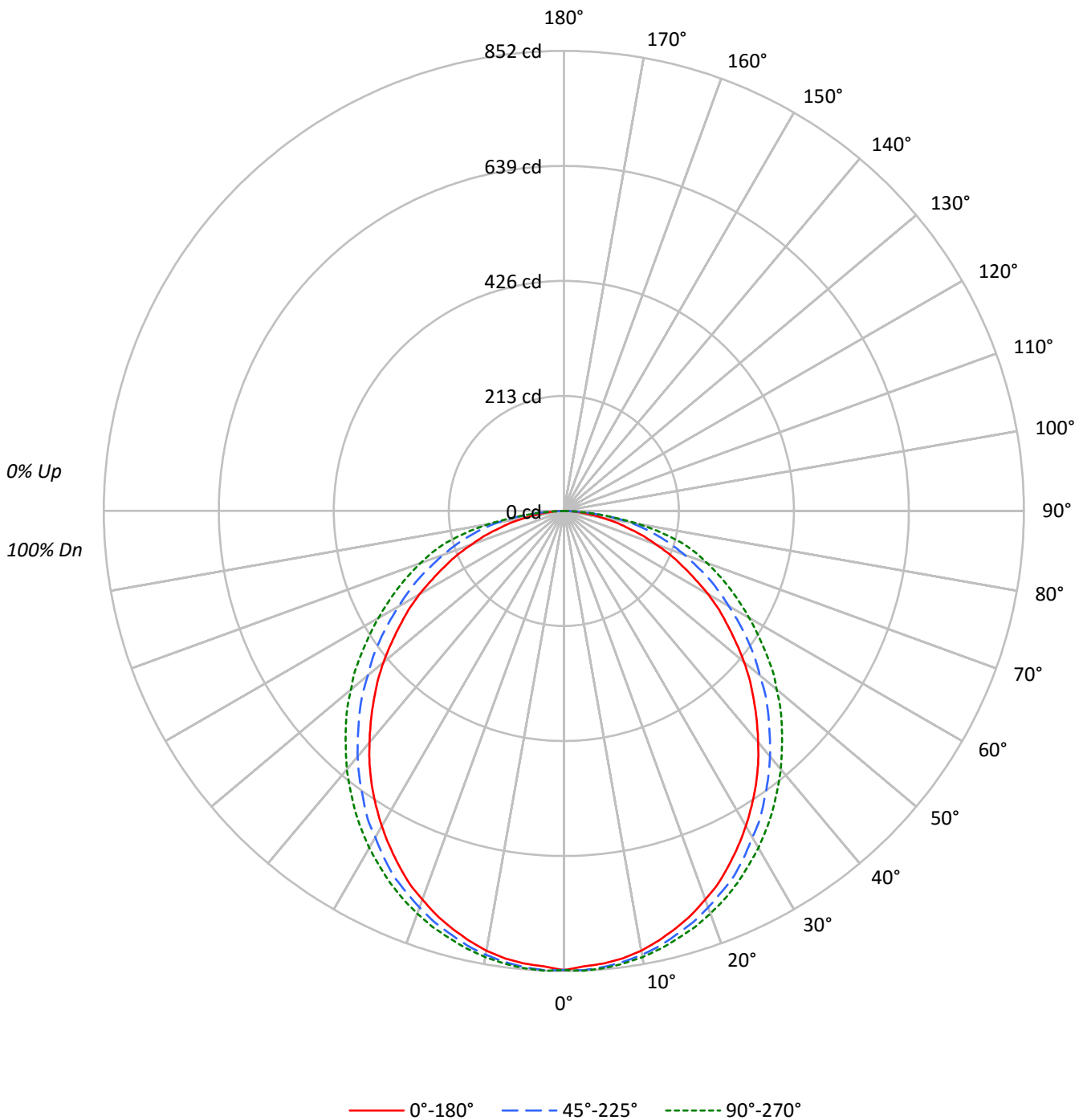
Input Watts (W): 22.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2287	2287	2287
5°	2272	2290	2296
10°	2259	2280	2292
15°	2229	2260	2282
20°	2193	2237	2272
25°	2149	2215	2257
30°	2094	2170	2239
35°	2036	2130	2218
40°	1967	2088	2197
45°	1895	2039	2173
50°	1825	1983	2154
55°	1740	1947	2139
60°	1662	1900	2132
65°	1550	1889	2157
70°	1428	1872	2220
75°	1289	1899	2336
80°	1114	1956	2196
85°	923	1639	1639



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	80.4	3.4
10°-20°	228.7	9.6
20°-30°	342.3	14.4
30°-40°	405.3	17.1
40°-50°	413.1	17.4
50°-60°	370.2	15.6
60°-70°	289.9	12.2
70°-80°	186.9	7.9
80°-90°	55.2	2.3
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°	651.4	27.5
0°-40°	1056.7	44.5
0°-60°	1840.0	77.6
0°-90°	2372.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2372.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	850	850	850	850	850	
5°	841	843	848	849	850	80
15°	800	805	811	818	819	226
25°	724	730	746	756	760	333
35°	620	628	648	668	675	387
45°	498	509	536	563	571	385
55°	371	383	415	444	456	332
65°	244	258	297	325	339	242
75°	124	143	183	214	225	133
85°	30	41	53	53	53	35
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	850.0	850.0	850.0	850.0	850.0
2.5°	844.4	846.6	851.1	852.2	852.2
5°	841.1	843.3	847.7	848.9	850.0
7.5°	835.6	836.7	842.2	844.4	845.5
10°	826.7	828.9	834.5	837.8	838.9
12.5°	814.5	817.9	824.5	828.9	830.0
15°	800.2	804.6	811.2	817.9	819.0
17.5°	784.7	789.1	797.9	805.7	807.9
20°	765.9	771.4	781.3	790.2	793.5
22.5°	747.0	751.5	763.6	774.7	778.0
25°	723.8	730.4	745.9	755.9	760.3
27.5°	699.4	707.2	722.7	736.0	740.4
30°	674.0	681.7	698.3	714.9	720.5
32.5°	647.4	656.3	676.2	692.8	698.3
35°	619.8	627.5	648.5	668.5	675.1
37.5°	591.0	597.6	622.0	643.0	649.6
40°	560.0	568.9	594.3	618.7	625.3
42.5°	529.0	539.0	564.4	591.0	597.6
45°	498.0	509.1	535.7	563.3	571.1
47.5°	468.1	477.0	506.9	533.4	544.5
50°	436.0	444.9	473.7	503.6	514.6
52.5°	402.8	415.0	446.0	474.8	488.1
55°	370.8	382.9	415.0	443.8	456.0
57.5°	340.9	350.8	384.0	413.9	426.1
60°	308.8	317.6	353.0	385.1	396.2
62.5°	274.5	287.7	324.3	354.2	367.4
65°	243.5	257.9	296.6	325.4	338.7
67.5°	214.7	228.0	265.6	296.6	311.0
70°	181.5	199.2	237.9	268.9	282.2
72.5°	154.9	170.4	210.3	241.3	255.7
75°	124.0	142.8	182.6	213.6	224.7
77.5°	98.5	117.3	154.9	179.3	184.8
80°	71.9	90.8	126.2	138.3	141.7
82.5°	48.7	66.4	90.8	94.1	95.2
85°	29.9	40.9	53.1	53.1	53.1
87.5°	14.4	16.6	18.8	17.7	17.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)