

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: P308952

Luminaire Tested: **22FCZ2-24HE-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: P308952
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: 22FCZ2-24HE-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: 2029.0 lumens
Efficiency: N/A
Efficacy: 107.9 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

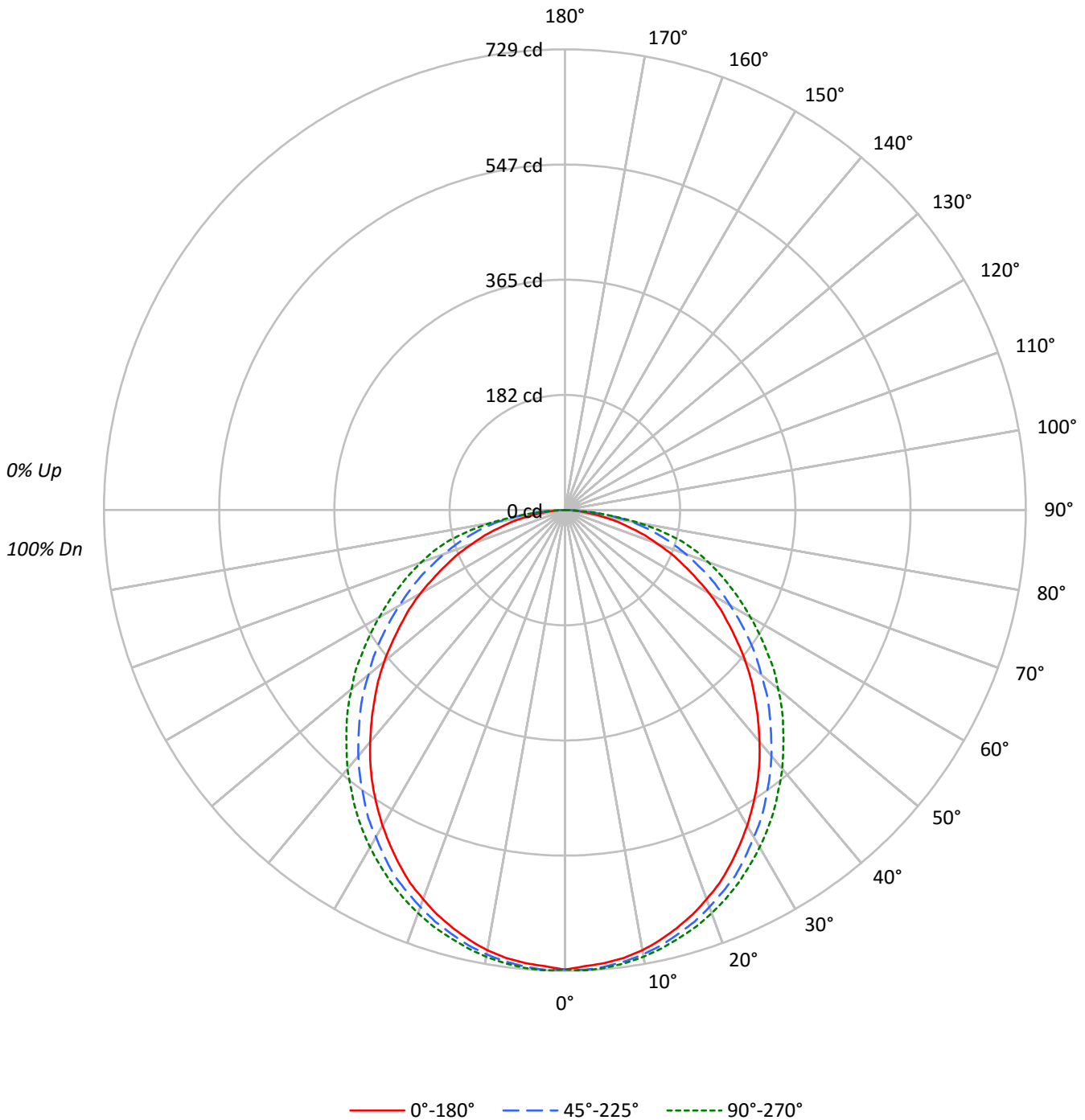
Input Watts (W): 18.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1957	1957	1957
5°	1944	1959	1964
10°	1932	1950	1961
15°	1907	1933	1952
20°	1876	1914	1944
25°	1838	1895	1931
30°	1791	1856	1915
35°	1741	1823	1897
40°	1683	1786	1879
45°	1621	1744	1859
50°	1562	1696	1843
55°	1488	1666	1830
60°	1421	1625	1824
65°	1326	1615	1845
70°	1222	1601	1899
75°	1102	1624	1998
80°	953	1672	1878
85°	790	1402	1402



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.8	3.4
10°-20°	195.7	9.6
20°-30°	292.8	14.4
30°-40°	346.7	17.1
40°-50°	353.3	17.4
50°-60°	316.7	15.6
60°-70°	247.9	12.2
70°-80°	159.9	7.9
80°-90°	47.2	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°	557.2	27.5
0°-40°	903.9	44.5
0°-60°	1573.9	77.6
0°-90°	2029.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2029.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	727	727	727	727	727	
5°	720	721	725	726	727	68
15°	684	688	694	700	700	193
25°	619	625	638	647	650	285
35°	530	537	555	572	578	331
45°	426	436	458	482	488	329
55°	317	328	355	380	390	284
65°	208	221	254	278	290	207
75°	106	122	156	183	192	114
85°	26	35	45	45	45	30
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	727.1	727.1	727.1	727.1	727.1
2.5°	722.3	724.2	728.0	728.9	728.9
5°	719.5	721.4	725.2	726.1	727.1
7.5°	714.7	715.7	720.4	722.3	723.3
10°	707.2	709.1	713.8	716.6	717.6
12.5°	696.8	699.6	705.3	709.1	710.0
15°	684.5	688.2	693.9	699.6	700.5
17.5°	671.2	675.0	682.6	689.2	691.1
20°	655.1	659.8	668.4	675.9	678.8
22.5°	639.0	642.8	653.2	662.7	665.5
25°	619.1	624.8	638.1	646.6	650.4
27.5°	598.3	604.9	618.2	629.5	633.3
30°	576.5	583.2	597.4	611.6	616.3
32.5°	553.8	561.4	578.4	592.6	597.4
35°	530.1	536.8	554.8	571.8	577.5
37.5°	505.5	511.2	532.0	550.0	555.7
40°	479.0	486.6	508.4	529.2	534.9
42.5°	452.5	461.0	482.8	505.5	511.2
45°	426.0	435.5	458.2	481.9	488.5
47.5°	400.4	408.0	433.6	456.3	465.8
50°	373.0	380.6	405.2	430.7	440.2
52.5°	344.6	355.0	381.5	406.1	417.5
55°	317.1	327.6	355.0	379.6	390.0
57.5°	291.6	300.1	328.5	354.1	364.5
60°	264.1	271.7	302.0	329.4	338.9
62.5°	234.8	246.1	277.4	302.9	314.3
65°	208.3	220.6	253.7	278.3	289.7
67.5°	183.7	195.0	227.2	253.7	266.0
70°	155.3	170.4	203.5	230.0	241.4
72.5°	132.5	145.8	179.9	206.4	218.7
75°	106.0	122.1	156.2	182.7	192.2
77.5°	84.3	100.3	132.5	153.4	158.1
80°	61.5	77.6	107.9	118.3	121.2
82.5°	41.7	56.8	77.6	80.5	81.4
85°	25.6	35.0	45.4	45.4	45.4
87.5°	12.3	14.2	16.1	15.1	15.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)