

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: P308958

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CP250-W2A-U-5700K**

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: P308958
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-5700K
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: 2240.0 lumens
Efficiency: N/A
Efficacy: 115.5 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

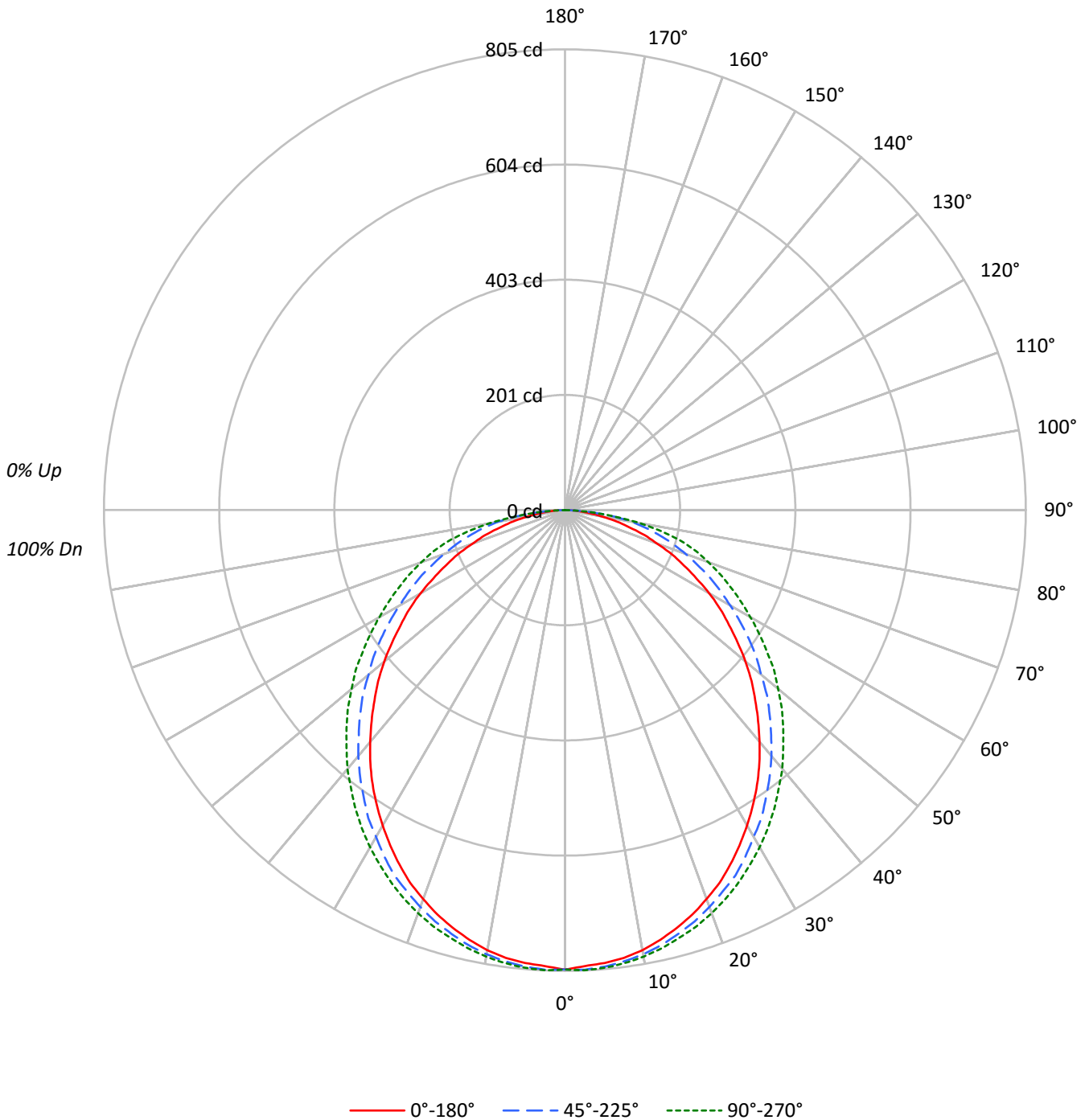
Input Watts (W): 19.4
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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°	2160	2160	2160
5°	2146	2163	2168
10°	2133	2153	2165
15°	2105	2134	2155
20°	2071	2113	2146
25°	2029	2091	2132
30°	1978	2049	2114
35°	1923	2012	2094
40°	1858	1971	2074
45°	1790	1925	2052
50°	1724	1873	2035
55°	1643	1839	2020
60°	1569	1794	2014
65°	1464	1784	2036
70°	1349	1768	2097
75°	1218	1792	2206
80°	1052	1846	2073
85°	871	1550	1550



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	75.9	3.4
10°-20°	216.0	9.6
20°-30°	323.2	14.4
30°-40°	382.8	17.1
40°-50°	390.1	17.4
50°-60°	349.6	15.6
60°-70°	273.7	12.2
70°-80°	176.5	7.9
80°-90°	52.1	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°	615.1	27.5
0°-40°	997.9	44.5
0°-60°	1737.6	77.6
0°-90°	2240.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2240.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	803	803	803	803	803	
5°	794	796	801	802	803	75
15°	756	760	766	772	773	213
25°	684	690	704	714	718	315
35°	585	593	612	631	638	366
45°	470	481	506	532	539	363
55°	350	362	392	419	431	314
65°	230	244	280	307	320	228
75°	117	135	172	202	212	125
85°	28	39	50	50	50	33
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	802.7	802.7	802.7	802.7	802.7
2.5°	797.4	799.5	803.7	804.8	804.8
5°	794.3	796.4	800.6	801.6	802.7
7.5°	789.1	790.1	795.3	797.4	798.5
10°	780.7	782.8	788.0	791.2	792.2
12.5°	769.2	772.4	778.6	782.8	783.8
15°	755.6	759.8	766.1	772.4	773.4
17.5°	741.0	745.2	753.5	760.9	762.9
20°	723.2	728.5	737.9	746.2	749.4
22.5°	705.5	709.6	721.1	731.6	734.7
25°	683.5	689.8	704.4	713.8	718.0
27.5°	660.5	667.8	682.5	695.0	699.2
30°	636.5	643.8	659.5	675.2	680.4
32.5°	611.4	619.8	638.6	654.3	659.5
35°	585.3	592.6	612.4	631.3	637.5
37.5°	558.1	564.4	587.4	607.2	613.5
40°	528.8	537.2	561.2	584.2	590.5
42.5°	499.6	509.0	533.0	558.1	564.4
45°	470.3	480.8	505.8	532.0	539.3
47.5°	442.1	450.5	478.7	503.8	514.2
50°	411.8	420.1	447.3	475.5	486.0
52.5°	380.4	391.9	421.2	448.4	460.9
55°	350.1	361.6	391.9	419.1	430.6
57.5°	321.9	331.3	362.7	390.9	402.4
60°	291.6	300.0	333.4	363.7	374.2
62.5°	259.2	271.7	306.2	334.4	347.0
65°	229.9	243.5	280.1	307.3	319.8
67.5°	202.8	215.3	250.8	280.1	293.7
70°	171.4	188.1	224.7	254.0	266.5
72.5°	146.3	161.0	198.6	227.8	241.4
75°	117.1	134.8	172.4	201.7	212.2
77.5°	93.0	110.8	146.3	169.3	174.5
80°	67.9	85.7	119.1	130.6	133.8
82.5°	46.0	62.7	85.7	88.8	89.9
85°	28.2	38.7	50.2	50.2	50.2
87.5°	13.6	15.7	17.8	16.7	16.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)