

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: P312789

Luminaire Tested: **22FCZ2-24HE-UNV-L83050-CP250-W2A-U-5000K**

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: P312789
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: 22FCZ2-24HE-UNV-L83050-CP250-W2A-U-5000K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" POLYCARB SHEET
Light Source: (168) 5000K 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: 2159.0 lumens
Efficiency: N/A
Efficacy: 109.0 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

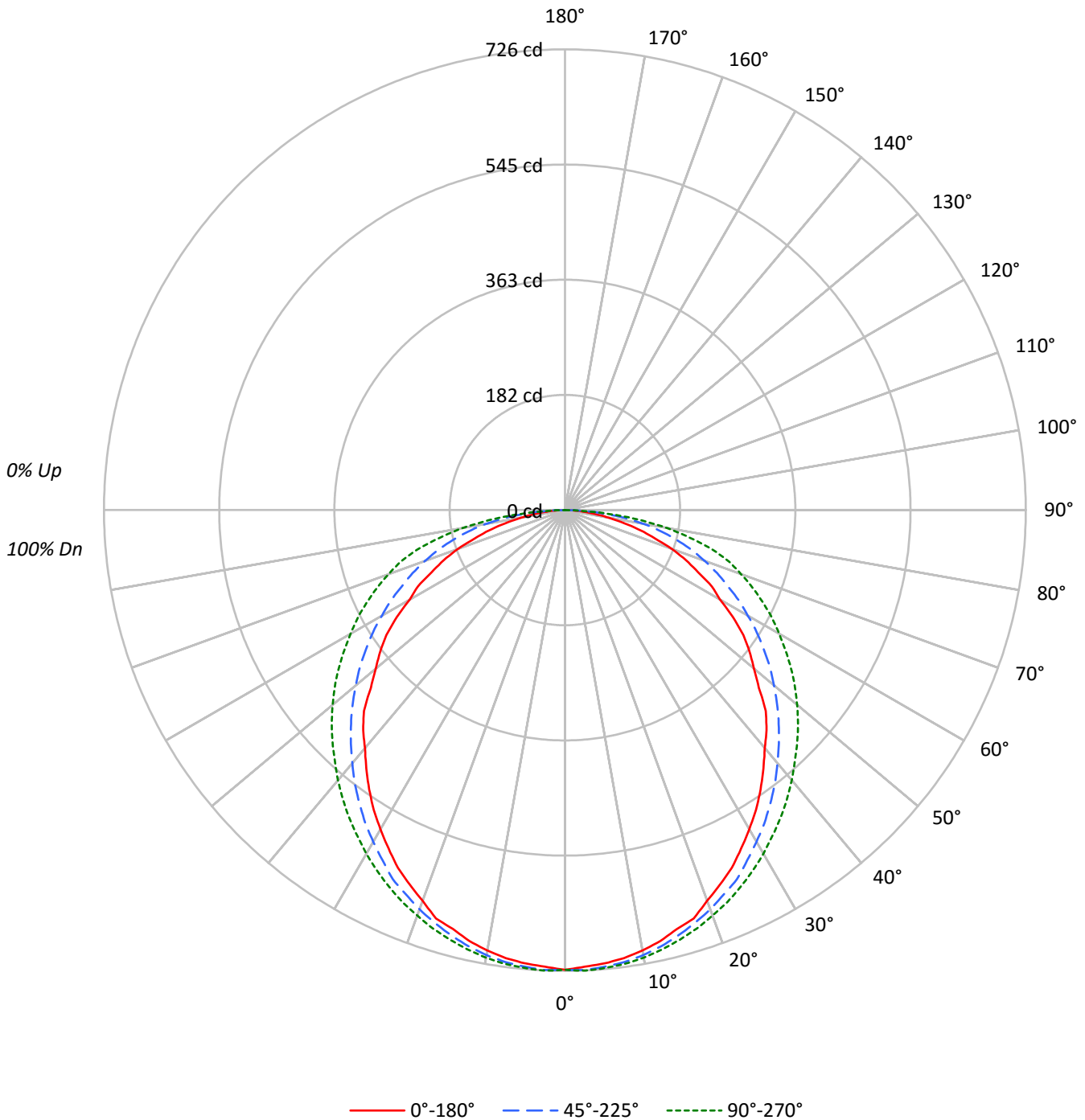
Input Watts (W): 19.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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Luminous Intensity Polar Plot





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CATALOG NUMBER: 22FC22-24HE-UNV-L83050-CP250-W2A-U-5000K

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°	1949	1949	1949
5°	1937	1951	1957
10°	1926	1946	1957
15°	1903	1932	1952
20°	1876	1918	1947
25°	1847	1905	1945
30°	1804	1875	1943
35°	1765	1853	1945
40°	1721	1829	1953
45°	1703	1813	1970
50°	1626	1800	1999
55°	1610	1794	2041
60°	1518	1791	2097
65°	1474	1803	2191
70°	1415	1846	2325
75°	1289	1902	2504
80°	1105	1970	2531
85°	892	1883	2171



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	68.5	3.2
10°-20°	195.5	9.1
20°-30°	294.3	13.6
30°-40°	353.2	16.4
40°-50°	369.2	17.1
50°-60°	344.0	15.9
60°-70°	282.2	13.1
70°-80°	190.1	8.8
80°-90°	61.9	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°	558.4	25.9
0°-40°	911.6	42.2
0°-60°	1624.8	75.3
0°-90°	2159.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2159.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	724	724	724	724	724	
5°	717	719	722	723	724	68
15°	683	687	693	700	701	193
25°	622	626	642	651	655	286
35°	537	545	564	584	592	336
45°	447	450	476	505	518	342
55°	343	349	382	418	435	304
65°	232	242	283	324	344	230
75°	124	137	183	224	241	130
85°	29	41	61	71	70	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	724.4	724.4	724.4	724.4	724.4
2.5°	720.2	722.3	725.4	726.4	726.4
5°	717.1	719.2	722.3	723.3	724.4
7.5°	712.0	714.0	718.2	720.2	721.3
10°	704.7	706.8	712.0	715.1	716.1
12.5°	695.4	697.5	703.7	707.8	708.9
15°	683.0	687.2	693.4	699.6	700.6
17.5°	674.8	673.7	682.0	689.2	691.3
20°	655.1	660.3	669.6	677.9	679.9
22.5°	638.6	642.7	655.1	664.4	668.6
25°	622.1	626.2	641.7	651.0	655.1
27.5°	601.4	607.6	622.1	635.5	640.7
30°	580.7	586.9	603.5	619.0	625.2
32.5°	560.1	567.3	584.9	601.4	608.6
35°	537.3	544.6	564.2	583.8	592.1
37.5°	513.6	522.9	543.5	565.2	574.5
40°	489.8	499.1	520.8	545.6	555.9
42.5°	470.2	474.3	499.1	526.0	536.3
45°	447.4	450.5	476.4	505.3	517.7
47.5°	414.4	425.7	453.6	485.7	498.1
50°	388.5	400.9	429.9	464.0	477.4
52.5°	366.8	375.1	407.1	441.2	456.7
55°	343.1	349.3	382.3	418.5	435.0
57.5°	314.1	325.5	358.6	395.8	412.3
60°	282.1	296.6	332.7	373.0	389.6
62.5°	261.4	269.7	309.0	349.3	367.9
65°	231.5	241.8	283.1	324.5	344.1
67.5°	206.7	217.0	259.4	300.7	320.3
70°	179.8	190.1	234.6	275.9	295.5
72.5°	148.8	163.3	209.8	251.1	271.8
75°	124.0	137.4	182.9	224.2	240.8
77.5°	96.1	113.7	156.0	190.1	202.5
80°	71.3	88.9	127.1	151.9	163.3
82.5°	48.6	66.1	95.1	113.7	119.9
85°	28.9	41.3	61.0	71.3	70.3
87.5°	13.4	17.6	24.8	24.8	23.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)