

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: P309853

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP250-W2A-U-3500K**

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: P309853
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-19)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 24FCZ2-30HE-UNV-L82765-RDP-CP250-W2A-U-3500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 3500K 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: 1711.0 lumens
Efficiency: N/A
Efficacy: 80.7 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.3 / 1.41
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

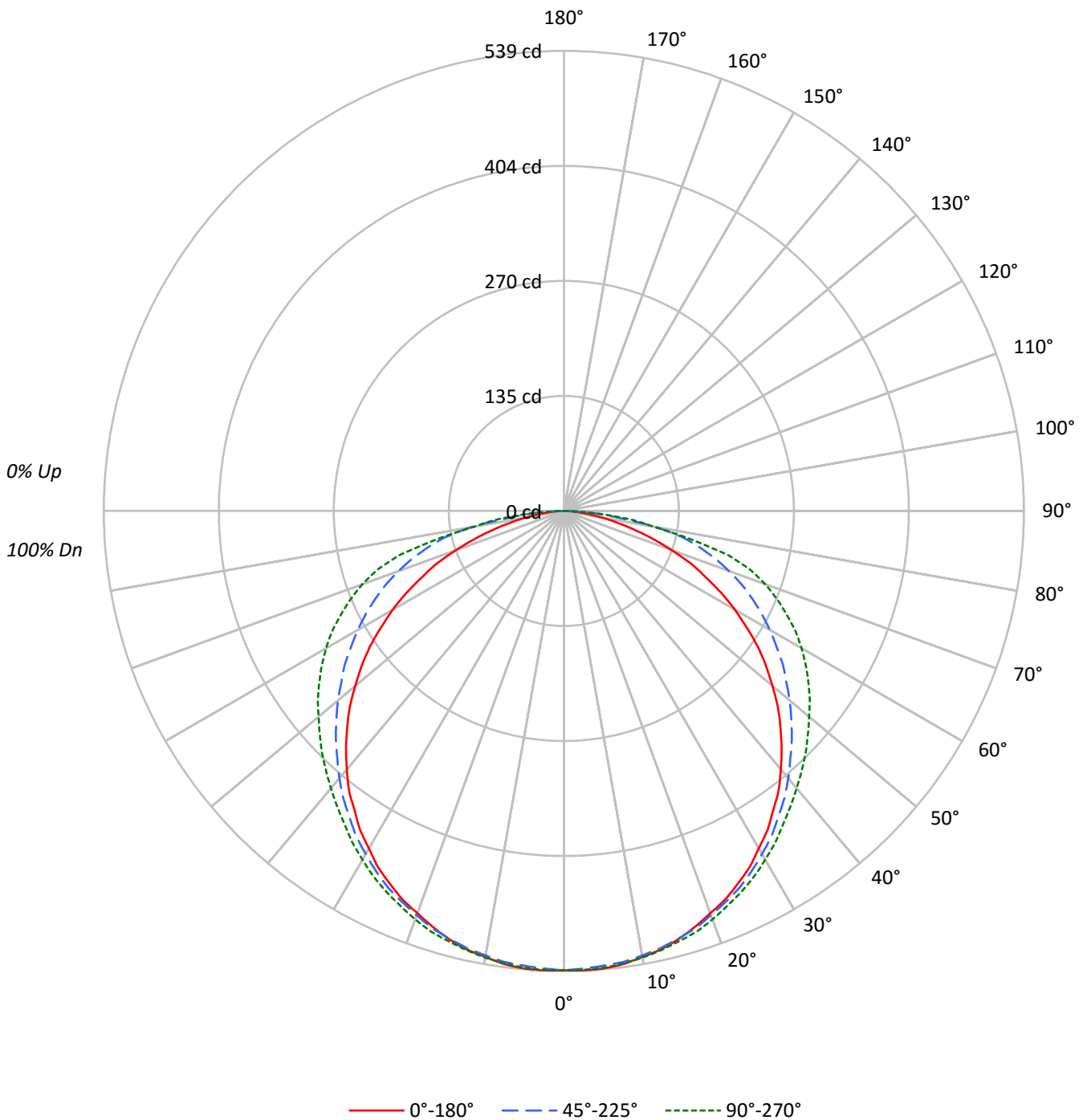
Input Watts (W): 21.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



TEST NUMBER: P309853

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-RDP-CP250-W2A-U-3500K

Luminous Intensity Polar Plot





TEST NUMBER: P309853

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-RDP-CP250-W2A-U-3500K

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	89	92	89	87	88	86	84	82
2	97	89	81	75	95	87	80	74	83	77	72	80	75	71	77	73	69	67
3	88	77	68	62	86	76	68	61	72	66	60	70	64	59	67	62	58	56
4	81	68	59	52	78	67	58	51	64	57	51	62	55	50	59	54	49	47
5	74	60	51	44	72	59	51	44	57	49	43	55	48	43	53	47	42	40
6	68	54	45	38	66	53	45	38	51	44	38	50	43	37	48	42	37	35
7	63	49	40	34	61	48	40	34	47	39	33	45	38	33	44	38	33	31
8	59	45	36	30	57	44	36	30	43	35	30	41	34	29	40	34	29	27
9	55	41	33	27	53	40	32	27	39	32	27	38	31	26	37	31	26	24
10	51	38	30	24	50	37	29	24	36	29	24	35	29	24	34	28	24	22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	724	724	724
5°	727	722	726
10°	725	722	726
15°	723	722	727
20°	718	722	729
25°	716	723	731
30°	709	721	733
35°	703	719	736
40°	695	719	745
45°	683	719	762
50°	668	723	785
55°	651	735	820
60°	623	749	865
65°	584	776	918
70°	531	811	988
75°	450	856	1032
80°	355	862	835
85°	262	655	733



TEST NUMBER: P309853

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-RDP-CP250-W2A-U-3500K

ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	51.0	3.0
10°-20°	146.9	8.6
20°-30°	224.6	13.1
30°-40°	274.6	16.0
40°-50°	292.7	17.1
50°-60°	279.8	16.4
60°-70°	237.0	13.9
70°-80°	159.3	9.3
80°-90°	44.9	2.6
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°	422.6	24.7
0°-40°	697.2	40.7
0°-60°	1269.7	74.2
0°-90°	1711.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1711.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	538	538	538	538	538	
5°	538	537	535	537	537	51
15°	519	519	518	523	522	146
25°	482	484	487	491	492	222
35°	428	431	438	446	448	268
45°	359	365	378	394	401	277
55°	278	288	313	338	350	247
65°	183	202	244	276	288	182
75°	87	118	165	193	199	93
85°	17	35	42	46	48	21
90°	0	0	0	0	0	



TEST NUMBER: P309853

CATALOG NUMBER: 24FCZ2-30HE-UNV-L82765-RDP-CP250-W2A-U-3500K

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	538.1	538.1	538.1	538.1	538.1
2.5°	538.9	538.9	536.4	538.1	538.1
5°	538.1	537.2	534.7	537.2	537.2
7.5°	535.5	534.7	533.0	535.5	534.7
10°	530.4	530.4	528.7	531.3	531.3
12.5°	526.2	525.3	524.5	527.9	527.0
15°	519.4	519.4	518.5	522.8	521.9
17.5°	510.9	511.8	512.6	516.0	516.8
20°	501.6	503.3	504.1	509.2	509.2
22.5°	493.1	493.9	495.6	500.7	500.7
25°	482.0	483.7	487.1	491.4	492.2
27.5°	471.0	471.9	476.1	482.0	482.9
30°	456.6	459.1	464.2	471.0	471.9
32.5°	443.9	446.4	452.3	459.1	460.8
35°	427.7	431.1	437.9	446.4	448.1
37.5°	413.3	415.9	424.3	433.7	436.2
40°	395.5	400.6	409.1	420.1	424.3
42.5°	377.7	382.8	392.9	407.4	412.5
45°	359.0	364.9	377.7	393.8	400.6
47.5°	340.3	347.1	361.5	380.2	387.8
50°	319.1	327.6	345.4	366.6	375.1
52.5°	298.7	308.9	328.4	352.2	363.2
55°	277.5	287.7	313.2	337.8	349.7
57.5°	253.8	267.3	295.3	323.3	336.1
60°	231.7	244.4	278.4	308.9	321.6
62.5°	207.9	224.9	261.4	293.6	306.4
65°	183.3	202.0	243.6	275.8	288.5
67.5°	161.2	181.6	225.7	258.0	270.7
70°	134.9	160.4	206.2	238.5	251.2
72.5°	110.3	138.3	185.9	217.3	229.1
75°	86.6	118.0	164.6	192.6	198.6
77.5°	64.5	97.6	142.6	154.5	150.2
80°	45.8	78.1	111.2	105.2	107.8
82.5°	29.7	59.4	68.7	78.1	80.6
85°	17.0	34.8	42.4	45.8	47.5
87.5°	7.6	12.7	17.0	17.0	16.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)