

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: P309851

Luminaire Tested: **24FCZ2-30HE-UNV-L82765-RDP-CP250-W2A-U-2700K**

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: P309851
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-2700K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.250" POLYCARB SHEET
Light Source: (336) 2700K 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: 1608.0 lumens
Efficiency: N/A
Efficacy: 76.2 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

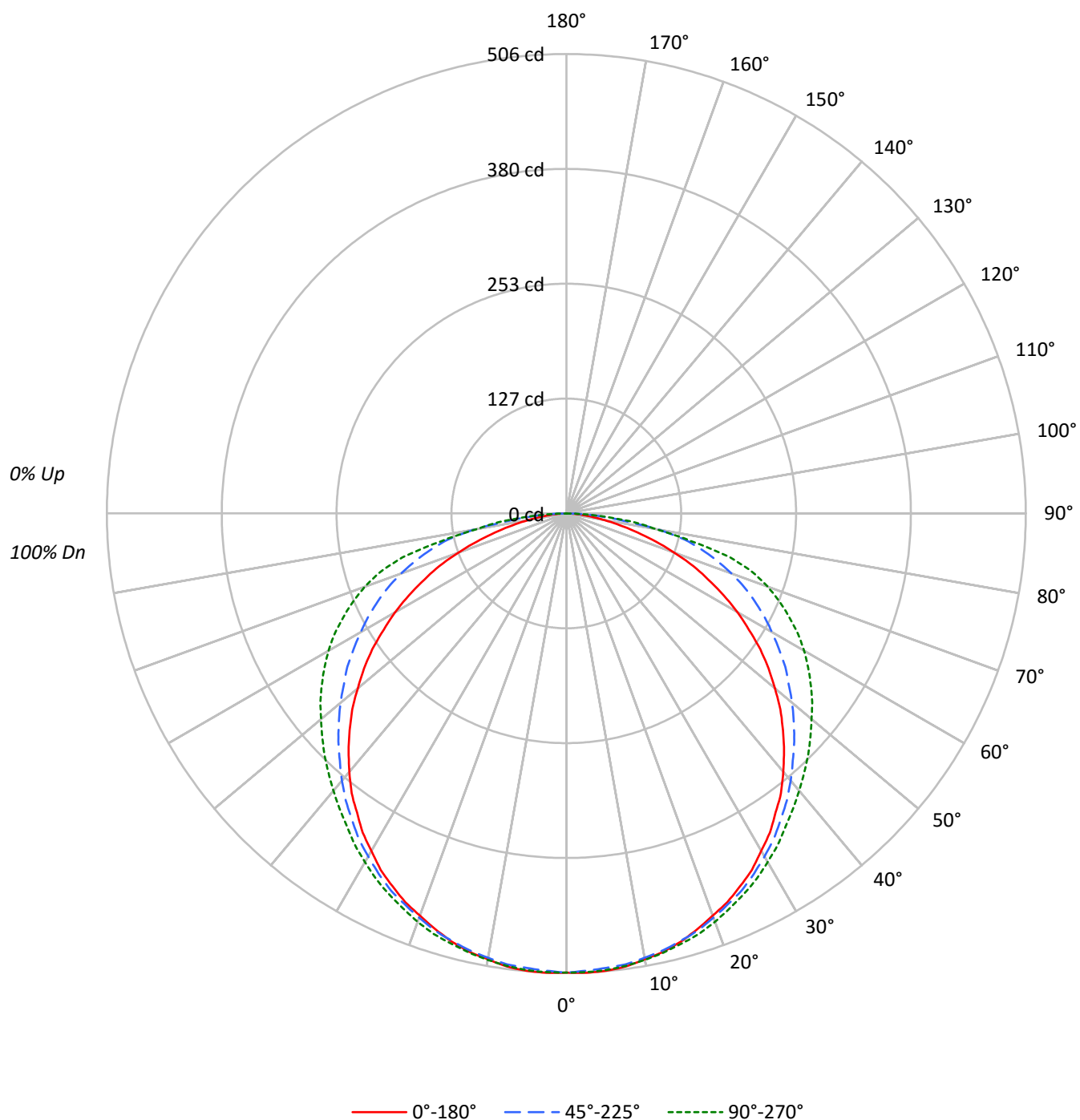
Input Watts (W): 21.1
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				0
RW	70	50	30	10	70	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		100
1	108	103	98	94	105	100	96	92	96	93	89		92	89	87		82
2	97	89	81	75	95	87	80	74	83	77	72		80	75	71		67
3	88	77	68	62	86	76	67	61	72	66	60		70	64	59		56
4	81	68	59	52	78	67	58	51	64	57	51		62	55	50		47
5	74	60	51	44	72	59	51	44	57	49	43		55	48	43		40
6	68	54	45	38	66	53	45	38	51	44	38		50	43	37		35
7	63	49	40	34	61	48	40	34	47	39	33		45	38	33		31
8	59	45	36	30	57	44	36	30	43	35	30		41	34	29		27
9	55	41	33	27	53	40	32	27	39	32	27		38	31	26		24
10	51	38	30	24	50	37	29	24	36	29	24		35	29	24		22

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	680	680	680
5°	683	679	682
10°	681	679	682
15°	680	679	683
20°	675	678	685
25°	673	680	687
30°	667	678	689
35°	660	676	692
40°	653	675	700
45°	642	675	716
50°	628	679	738
55°	612	690	771
60°	586	704	813
65°	549	729	863
70°	499	762	929
75°	423	804	970
80°	334	810	785
85°	247	616	690



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	48.0	3.0
10°-20°	138.0	8.6
20°-30°	211.1	13.1
30°-40°	258.1	16.0
40°-50°	275.1	17.1
50°-60°	263.0	16.4
60°-70°	222.8	13.9
70°-80°	149.7	9.3
80°-90°	42.3	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°	397.1	24.7
0°-40°	655.2	40.7
0°-60°	1193.3	74.2
0°-90°	1608.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	1608.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	506	506	506	506	506	
5°	506	505	502	505	505	48
15°	488	488	487	491	490	138
25°	453	455	458	462	463	209
35°	402	405	412	420	421	252
45°	337	343	355	370	376	260
55°	261	270	294	317	329	232
65°	172	190	229	259	271	171
75°	81	111	155	181	187	87
85°	16	33	40	43	45	20
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	505.7	505.7	505.7	505.7	505.7
2.5°	506.5	506.5	504.1	505.7	505.7
5°	505.7	504.9	502.5	504.9	504.9
7.5°	503.3	502.5	500.9	503.3	502.5
10°	498.5	498.5	496.9	499.3	499.3
12.5°	494.5	493.7	492.9	496.1	495.3
15°	488.1	488.1	487.3	491.3	490.5
17.5°	480.1	480.9	481.7	484.9	485.7
20°	471.4	473.0	473.8	478.6	478.6
22.5°	463.4	464.2	465.8	470.6	470.6
25°	453.0	454.6	457.8	461.8	462.6
27.5°	442.7	443.5	447.4	453.0	453.8
30°	429.1	431.5	436.3	442.7	443.5
32.5°	417.1	419.5	425.1	431.5	433.1
35°	402.0	405.2	411.6	419.5	421.1
37.5°	388.4	390.8	398.8	407.6	410.0
40°	371.7	376.5	384.4	394.8	398.8
42.5°	354.9	359.7	369.3	382.8	387.6
45°	337.4	343.0	354.9	370.1	376.5
47.5°	319.8	326.2	339.8	357.3	364.5
50°	299.9	307.9	324.6	344.6	352.5
52.5°	280.8	290.3	308.7	331.0	341.4
55°	260.8	270.4	294.3	317.4	328.6
57.5°	238.5	251.2	277.6	303.9	315.8
60°	217.7	229.7	261.6	290.3	302.3
62.5°	195.4	211.4	245.7	276.0	287.9
65°	172.3	189.8	228.9	259.2	271.2
67.5°	151.5	170.7	212.2	242.5	254.4
70°	126.8	150.7	193.8	224.1	236.1
72.5°	103.7	130.0	174.7	204.2	215.3
75°	81.4	110.9	154.7	181.1	186.6
77.5°	60.6	91.7	134.0	145.2	141.2
80°	43.1	73.4	104.5	98.9	101.3
82.5°	27.9	55.8	64.6	73.4	75.8
85°	16.0	32.7	39.9	43.1	44.7
87.5°	7.2	12.0	16.0	16.0	15.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)