

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: P309991

Luminaire Tested: **24FCZ2-35-UNV-L82765-RDP-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: P309991
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: 24FCZ2-35-UNV-L82765-RDP-CP250-W2A-U-5000K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 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: 2090.0 lumens
Efficiency: N/A
Efficacy: 72.8 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

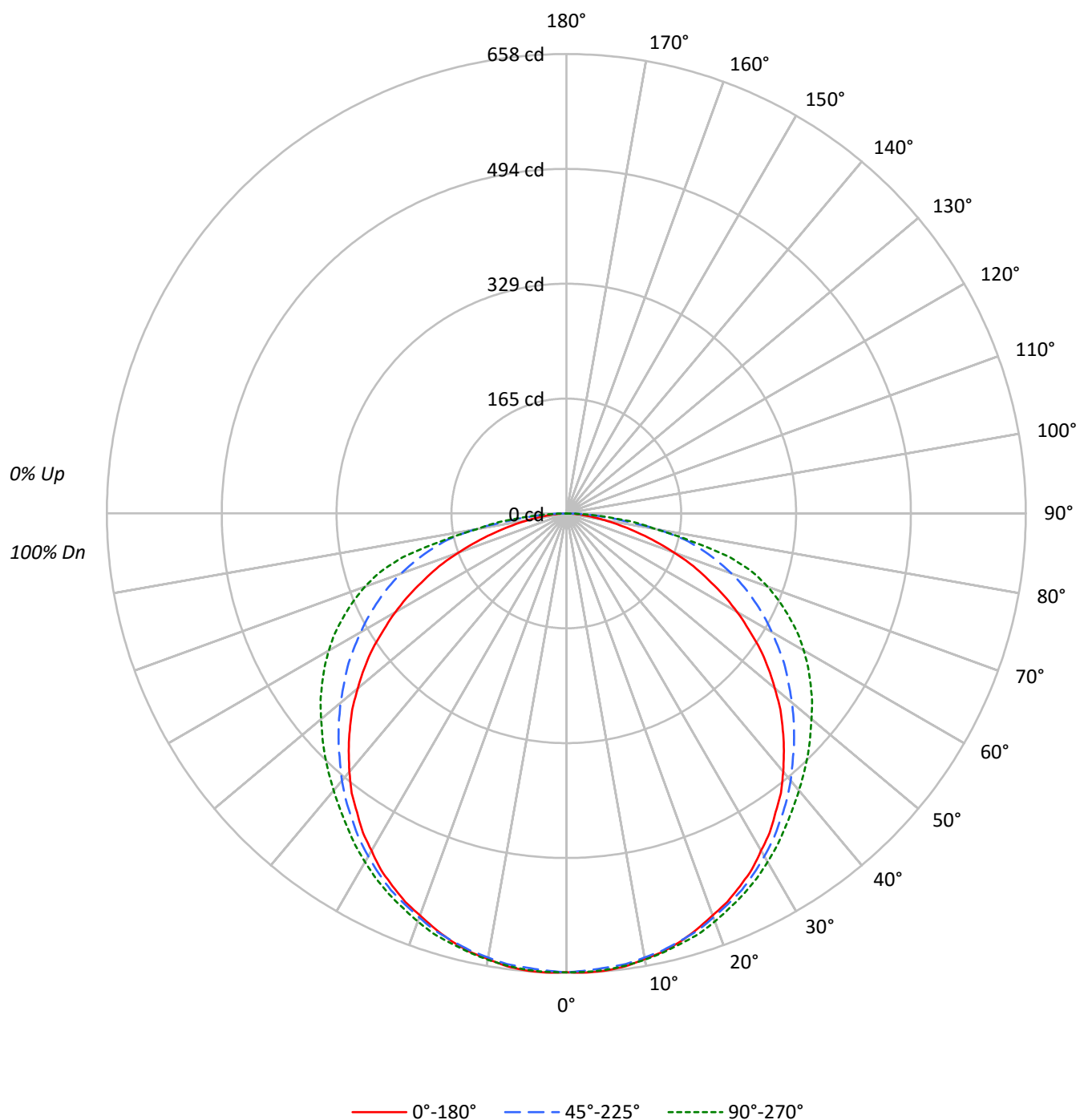
Input Watts (W): 28.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	884	884	884
5°	888	882	886
10°	885	882	887
15°	884	882	888
20°	877	882	891
25°	874	883	893
30°	866	881	896
35°	858	879	899
40°	849	878	910
45°	834	878	931
50°	816	883	959
55°	795	897	1002
60°	762	915	1057
65°	713	947	1122
70°	648	991	1207
75°	549	1045	1261
80°	434	1052	1020
85°	320	800	897



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	62.3	3.0
10°-20°	179.4	8.6
20°-30°	274.4	13.1
30°-40°	335.4	16.0
40°-50°	357.5	17.1
50°-60°	341.8	16.4
60°-70°	289.6	13.9
70°-80°	194.6	9.3
80°-90°	54.9	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°	516.2	24.7
0°-40°	851.6	40.7
0°-60°	1550.9	74.2
0°-90°	2090.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2090.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	657	657	657	657	657	
5°	657	656	653	656	656	62
15°	634	634	633	639	638	179
25°	589	591	595	600	601	271
35°	522	527	535	545	547	327
45°	438	446	461	481	489	338
55°	339	351	382	413	427	302
65°	224	247	298	337	352	222
75°	106	144	201	235	243	113
85°	21	42	52	56	58	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	657.2	657.2	657.2	657.2	657.2
2.5°	658.3	658.3	655.2	657.2	657.2
5°	657.2	656.2	653.1	656.2	656.2
7.5°	654.1	653.1	651.0	654.1	653.1
10°	647.9	647.9	645.8	649.0	649.0
12.5°	642.7	641.7	640.7	644.8	643.8
15°	634.4	634.4	633.4	638.6	637.5
17.5°	624.1	625.1	626.1	630.3	631.3
20°	612.7	614.7	615.8	622.0	622.0
22.5°	602.3	603.3	605.4	611.6	611.6
25°	588.8	590.9	595.0	600.2	601.3
27.5°	575.3	576.4	581.6	588.8	589.9
30°	557.7	560.8	567.1	575.3	576.4
32.5°	542.2	545.3	552.5	560.8	562.9
35°	522.5	526.6	534.9	545.3	547.4
37.5°	504.9	508.0	518.3	529.7	532.8
40°	483.1	489.3	499.7	513.1	518.3
42.5°	461.3	467.5	480.0	497.6	503.8
45°	438.5	445.8	461.3	481.0	489.3
47.5°	415.7	424.0	441.6	464.4	473.8
50°	389.8	400.2	421.9	447.8	458.2
52.5°	364.9	377.3	401.2	430.2	443.7
55°	339.0	351.4	382.5	412.6	427.1
57.5°	310.0	326.5	360.8	395.0	410.5
60°	283.0	298.6	340.0	377.3	392.9
62.5°	254.0	274.7	319.3	358.7	374.2
65°	223.9	246.7	297.5	336.9	352.5
67.5°	197.0	221.8	275.8	315.1	330.7
70°	164.8	195.9	251.9	291.3	306.9
72.5°	134.8	169.0	227.0	265.4	279.9
75°	105.7	144.1	201.1	235.3	242.6
77.5°	78.8	119.2	174.2	188.7	183.5
80°	56.0	95.4	135.8	128.5	131.7
82.5°	36.3	72.6	84.0	95.4	98.5
85°	20.7	42.5	51.8	56.0	58.1
87.5°	9.3	15.5	20.7	20.7	19.7
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)