

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: P309927

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CP125-W2A-U-4500K**

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: P309927
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: 24FCZ2-35HE-UNV-L82765-RDP-CP125-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 4500K 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: 2148.0 lumens
Efficiency: N/A
Efficacy: 81.1 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

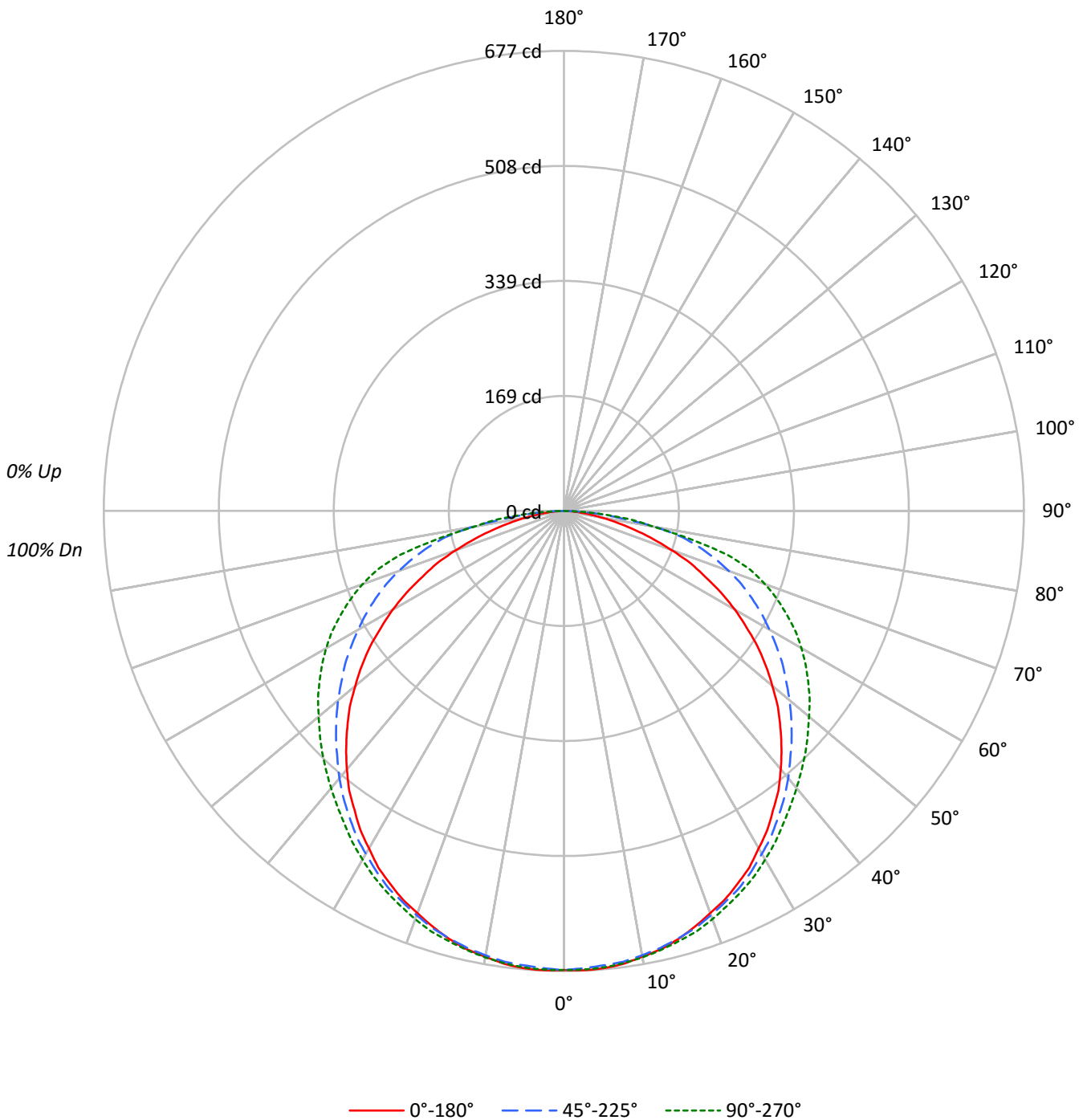
Input Watts (W): 26.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	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	67	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°	909	909	909
5°	912	907	911
10°	910	907	911
15°	908	907	913
20°	902	906	915
25°	898	908	917
30°	891	905	920
35°	882	903	924
40°	872	902	936
45°	858	902	957
50°	839	908	986
55°	817	922	1030
60°	783	940	1087
65°	733	974	1153
70°	666	1018	1241
75°	565	1075	1296
80°	446	1082	1048
85°	329	823	922



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	64.1	3.0
10°-20°	184.4	8.6
20°-30°	282.0	13.1
30°-40°	344.7	16.0
40°-50°	367.4	17.1
50°-60°	351.3	16.4
60°-70°	297.6	13.9
70°-80°	200.0	9.3
80°-90°	56.4	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°	530.5	24.7
0°-40°	875.2	40.7
0°-60°	1594.0	74.2
0°-90°	2148.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2148.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	676	676	676	676	676	
5°	676	674	671	674	674	64
15°	652	652	651	656	655	184
25°	605	607	612	617	618	279
35°	537	541	550	560	562	336
45°	451	458	474	494	503	348
55°	348	361	393	424	439	310
65°	230	254	306	346	362	228
75°	109	148	207	242	249	116
85°	21	44	53	58	60	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	675.5	675.5	675.5	675.5	675.5
2.5°	676.6	676.6	673.4	675.5	675.5
5°	675.5	674.4	671.2	674.4	674.4
7.5°	672.3	671.2	669.1	672.3	671.2
10°	665.9	665.9	663.8	667.0	667.0
12.5°	660.6	659.5	658.4	662.7	661.6
15°	652.0	652.0	651.0	656.3	655.2
17.5°	641.4	642.5	643.5	647.8	648.8
20°	629.7	631.8	632.9	639.3	639.3
22.5°	619.0	620.1	622.2	628.6	628.6
25°	605.2	607.3	611.6	616.9	618.0
27.5°	591.3	592.4	597.7	605.2	606.2
30°	573.2	576.4	582.8	591.3	592.4
32.5°	557.2	560.4	567.9	576.4	578.5
35°	537.0	541.2	549.8	560.4	562.5
37.5°	518.9	522.1	532.7	544.4	547.6
40°	496.5	502.9	513.5	527.4	532.7
42.5°	474.1	480.5	493.3	511.4	517.8
45°	450.7	458.1	474.1	494.4	502.9
47.5°	427.2	435.8	453.9	477.3	486.9
50°	400.6	411.3	433.6	460.3	470.9
52.5°	375.0	387.8	412.3	442.2	456.0
55°	348.4	361.2	393.1	424.0	439.0
57.5°	318.6	335.6	370.8	405.9	421.9
60°	290.9	306.8	349.5	387.8	403.8
62.5°	261.0	282.3	328.2	368.6	384.6
65°	230.1	253.6	305.8	346.3	362.2
67.5°	202.4	228.0	283.4	323.9	339.9
70°	169.4	201.4	258.9	299.4	315.4
72.5°	138.5	173.7	233.3	272.8	287.7
75°	108.7	148.1	206.7	241.9	249.3
77.5°	81.0	122.5	179.0	193.9	188.6
80°	57.5	98.0	139.6	132.1	135.3
82.5°	37.3	74.6	86.3	98.0	101.2
85°	21.3	43.7	53.3	57.5	59.7
87.5°	9.6	16.0	21.3	21.3	20.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)