

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: P309931

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CP125-W2A-U-6500K**

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: P309931
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-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.125" POLYCARB SHEET
Light Source: (336) 6500K 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: 2210.0 lumens
Efficiency: N/A
Efficacy: 81.2 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

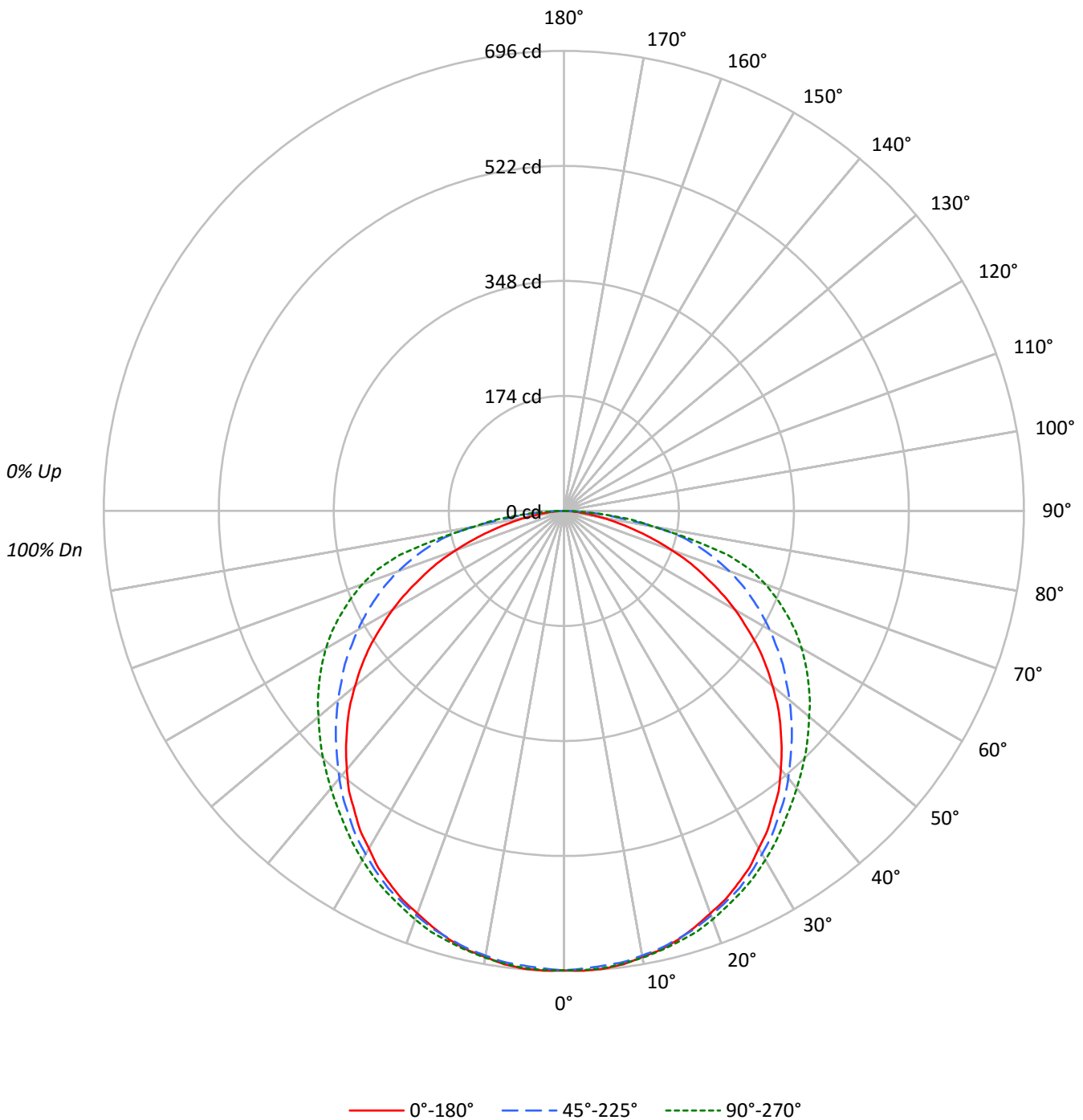
Input Watts (W): 27.2
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	935	935	935
5°	939	933	937
10°	936	933	938
15°	935	933	939
20°	928	932	942
25°	924	934	944
30°	916	932	947
35°	908	929	951
40°	897	928	963
45°	882	928	985
50°	863	934	1014
55°	841	949	1059
60°	805	967	1118
65°	754	1002	1187
70°	686	1048	1277
75°	581	1106	1333
80°	459	1113	1079
85°	338	846	948



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	65.9	3.0
10°-20°	189.7	8.6
20°-30°	290.1	13.1
30°-40°	354.7	16.0
40°-50°	378.0	17.1
50°-60°	361.4	16.4
60°-70°	306.2	13.9
70°-80°	205.8	9.3
80°-90°	58.0	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°	545.8	24.7
0°-40°	900.5	40.7
0°-60°	1640.0	74.2
0°-90°	2210.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2210.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	695	695	695	695	695	
5°	695	694	691	694	694	66
15°	671	671	670	675	674	189
25°	623	625	629	635	636	287
35°	552	557	566	577	579	346
45°	464	471	488	509	517	358
55°	358	372	404	436	452	319
65°	237	261	315	356	373	235
75°	112	152	213	249	256	120
85°	22	45	55	59	61	27
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	695.0	695.0	695.0	695.0	695.0
2.5°	696.1	696.1	692.8	695.0	695.0
5°	695.0	693.9	690.6	693.9	693.9
7.5°	691.7	690.6	688.4	691.7	690.6
10°	685.1	685.1	682.9	686.2	686.2
12.5°	679.6	678.5	677.4	681.8	680.7
15°	670.9	670.9	669.8	675.3	674.2
17.5°	659.9	661.0	662.1	666.5	667.6
20°	647.8	650.0	651.1	657.7	657.7
22.5°	636.9	638.0	640.2	646.7	646.7
25°	622.6	624.8	629.2	634.7	635.8
27.5°	608.4	609.5	615.0	622.6	623.7
30°	589.7	593.0	599.6	608.4	609.5
32.5°	573.3	576.6	584.3	593.0	595.2
35°	552.5	556.9	565.6	576.6	578.8
37.5°	533.8	537.1	548.1	560.2	563.4
40°	510.8	517.4	528.4	542.6	548.1
42.5°	487.8	494.4	507.5	526.2	532.7
45°	463.7	471.4	487.8	508.6	517.4
47.5°	439.6	448.3	467.0	491.1	501.0
50°	412.2	423.1	446.1	473.6	484.5
52.5°	385.9	399.0	424.2	454.9	469.2
55°	358.5	371.6	404.5	436.3	451.6
57.5°	327.8	345.3	381.5	417.6	434.1
60°	299.3	315.7	359.5	399.0	415.5
62.5°	268.6	290.5	337.6	379.3	395.7
65°	236.8	260.9	314.6	356.3	372.7
67.5°	208.3	234.6	291.6	333.2	349.7
70°	174.3	207.2	266.4	308.0	324.5
72.5°	142.5	178.7	240.1	280.6	296.0
75°	111.8	152.4	212.7	248.8	256.5
77.5°	83.3	126.1	184.2	199.5	194.0
80°	59.2	100.8	143.6	135.9	139.2
82.5°	38.4	76.7	88.8	100.8	104.1
85°	21.9	44.9	54.8	59.2	61.4
87.5°	9.9	16.4	21.9	21.9	20.8
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)