

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: P309913

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-RDP-CA08-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: P309913
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-CA08-W2A-U-6500K
Description: 2'X4' TROFFER LED MODULE, SMOOTH LENS WITH INSERT, 0.08" ACRYLIC 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: 2262.0 lumens
Efficiency: N/A
Efficacy: 83.2 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

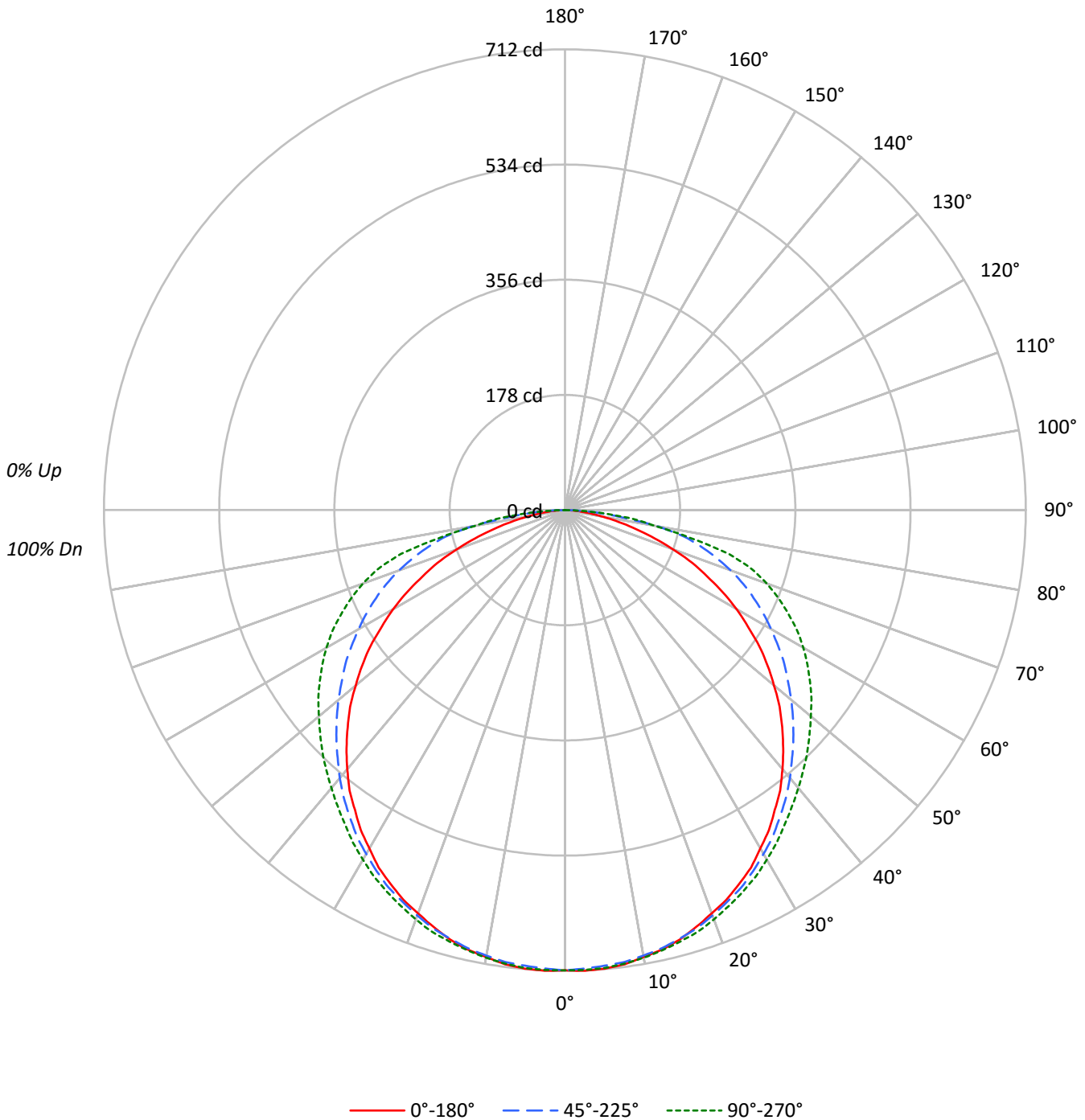
Input Watts (W): 27.2
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	957	957	957
5°	961	955	959
10°	958	955	960
15°	957	955	961
20°	949	954	964
25°	946	956	966
30°	938	953	969
35°	929	951	973
40°	918	950	985
45°	903	950	1008
50°	883	956	1038
55°	861	971	1084
60°	824	990	1144
65°	771	1025	1215
70°	702	1072	1306
75°	595	1132	1365
80°	470	1139	1104
85°	346	866	969



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	67.5	3.0
10°-20°	194.2	8.6
20°-30°	297.0	13.1
30°-40°	363.0	16.0
40°-50°	386.9	17.1
50°-60°	369.9	16.4
60°-70°	313.4	13.9
70°-80°	210.6	9.3
80°-90°	59.4	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°	558.6	24.7
0°-40°	921.7	40.7
0°-60°	1678.6	74.2
0°-90°	2262.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2262.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	711	711	711	711	711	
5°	711	710	707	710	710	68
15°	687	687	686	691	690	194
25°	637	640	644	650	651	294
35°	566	570	579	590	592	354
45°	475	482	499	521	530	366
55°	367	380	414	446	462	327
65°	242	267	322	365	382	241
75°	114	156	218	255	262	123
85°	22	46	56	61	63	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	711.3	711.3	711.3	711.3	711.3
2.5°	712.5	712.5	709.1	711.3	711.3
5°	711.3	710.2	706.8	710.2	710.2
7.5°	708.0	706.8	704.6	708.0	706.8
10°	701.2	701.2	699.0	702.4	702.4
12.5°	695.6	694.5	693.4	697.9	696.7
15°	686.7	686.7	685.5	691.1	690.0
17.5°	675.4	676.6	677.7	682.2	683.3
20°	663.1	665.3	666.5	673.2	673.2
22.5°	651.9	653.0	655.2	662.0	662.0
25°	637.3	639.5	644.0	649.6	650.7
27.5°	622.7	623.8	629.4	637.3	638.4
30°	603.6	607.0	613.7	622.7	623.8
32.5°	586.8	590.2	598.0	607.0	609.2
35°	565.5	570.0	578.9	590.2	592.4
37.5°	546.4	549.8	561.0	573.3	576.7
40°	522.8	529.6	540.8	555.4	561.0
42.5°	499.3	506.0	519.5	538.5	545.3
45°	474.6	482.5	499.3	520.6	529.6
47.5°	449.9	458.9	478.0	502.6	512.7
50°	421.9	433.1	456.6	484.7	495.9
52.5°	394.9	408.4	434.2	465.6	480.2
55°	366.9	380.4	414.0	446.5	462.3
57.5°	335.5	353.4	390.4	427.5	444.3
60°	306.3	323.1	368.0	408.4	425.2
62.5°	274.9	297.3	345.6	388.2	405.0
65°	242.3	267.0	322.0	364.6	381.5
67.5°	213.2	240.1	298.4	341.1	357.9
70°	178.4	212.1	272.6	315.3	332.1
72.5°	145.9	182.9	245.7	287.2	302.9
75°	114.4	156.0	217.7	254.7	262.5
77.5°	85.3	129.0	188.5	204.2	198.6
80°	60.6	103.2	147.0	139.1	142.5
82.5°	39.3	78.5	90.9	103.2	106.6
85°	22.4	46.0	56.1	60.6	62.8
87.5°	10.1	16.8	22.4	22.4	21.3
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)