

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: P309236

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-HRP-CA08-W2A-U-5500K**

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: P309236
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1808-918-20)
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-HRP-CA08-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.08" ACRYLIC SHEET
Light Source: (336) 5500K 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: 2538.0 lumens
Efficiency: N/A
Efficacy: 95.1 lumens/watt
Spacing Criteria (0/90/45): 1.24 / 1.3 / 1.4
Luminous Opening: Rectangular (W 2' x L: 4' x H: 0')
CIE Type: Direct

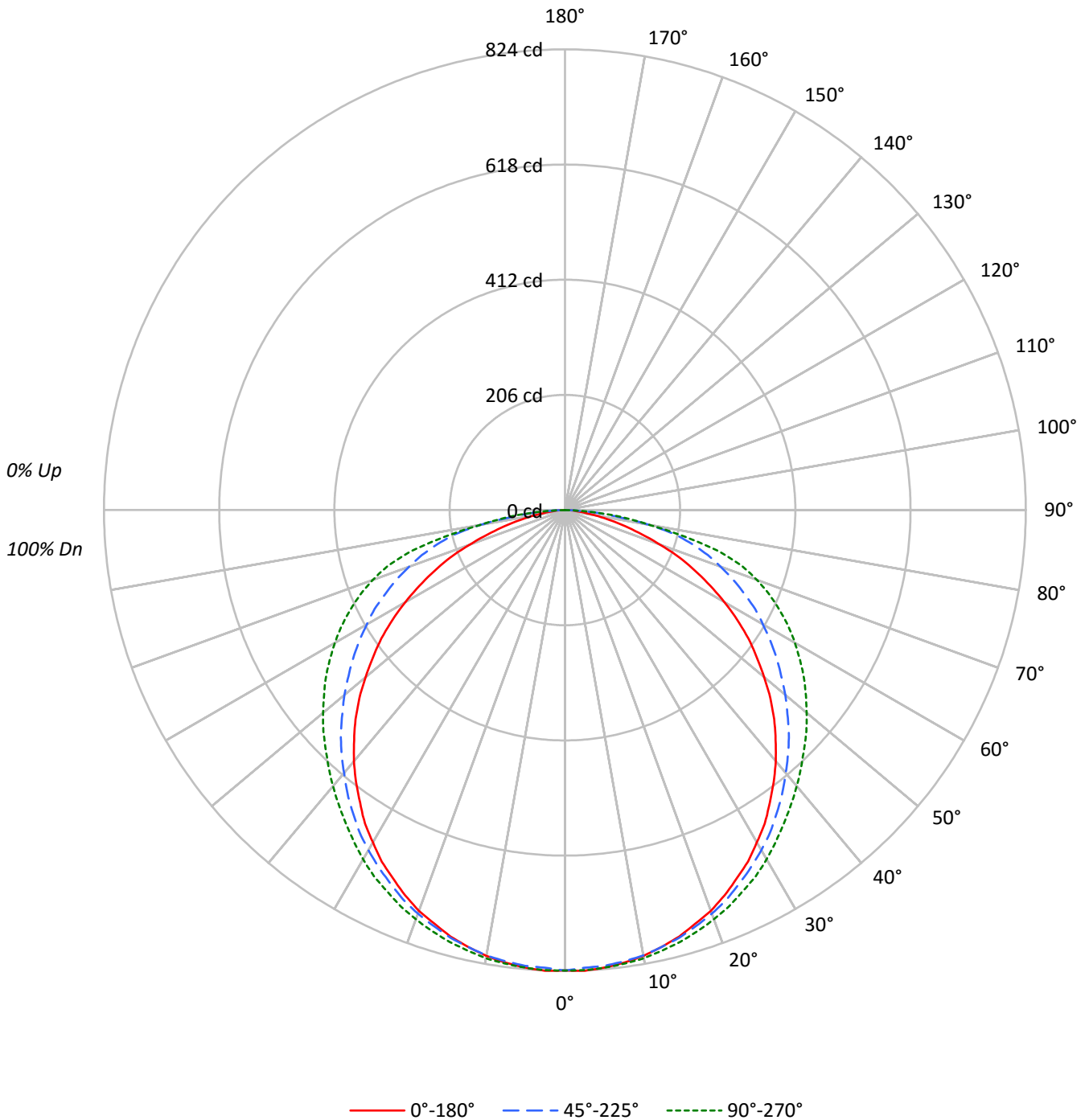
Input Watts (W): 26.7
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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	101	96	93	96	93	90	92	90	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	59	68	63	58	56
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	38	50	43	38	49	42	38	36
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1108	1108	1108
5°	1109	1105	1109
10°	1106	1105	1112
15°	1100	1103	1113
20°	1092	1100	1115
25°	1079	1095	1117
30°	1066	1091	1121
35°	1049	1086	1122
40°	1030	1079	1133
45°	1007	1078	1150
50°	974	1077	1181
55°	940	1084	1224
60°	886	1101	1278
65°	819	1126	1350
70°	715	1166	1438
75°	580	1226	1486
80°	428	1202	1202
85°	329	886	1000



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	78.0	3.1
10°-20°	224.0	8.8
20°-30°	341.0	13.4
30°-40°	414.1	16.3
40°-50°	437.5	17.2
50°-60°	412.8	16.3
60°-70°	343.2	13.5
70°-80°	225.8	8.9
80°-90°	61.6	2.4
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°	643.0	25.3
0°-40°	1057.1	41.7
0°-60°	1907.4	75.2
0°-90°	2538.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2538.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	824	824	824	824	824	
5°	821	821	818	821	821	78
15°	790	790	792	799	799	223
25°	727	731	737	750	752	335
35°	639	646	661	678	683	400
45°	529	540	566	594	605	407
55°	401	418	462	506	522	357
65°	257	287	354	406	424	254
75°	112	163	236	279	286	120
85°	21	47	57	64	65	26
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	823.5	823.5	823.5	823.5	823.5
2.5°	824.5	823.5	819.2	823.5	823.5
5°	821.3	821.3	818.1	821.3	821.3
7.5°	816.0	816.0	813.9	818.1	818.1
10°	809.6	809.6	808.6	813.9	813.9
12.5°	800.1	801.1	800.1	806.5	806.5
15°	789.5	790.5	791.6	799.0	799.0
17.5°	775.6	777.8	779.9	788.4	789.5
20°	762.9	764.0	768.2	777.8	778.8
22.5°	745.9	749.1	754.4	764.0	767.1
25°	726.8	731.0	737.4	750.1	752.3
27.5°	708.7	711.9	720.4	734.2	738.5
30°	686.4	691.7	702.3	716.1	721.5
32.5°	665.1	670.5	683.2	698.1	702.3
35°	638.6	646.0	660.9	677.9	683.2
37.5°	613.1	620.5	638.6	657.7	664.1
40°	586.5	595.0	614.1	636.5	645.0
42.5°	557.8	569.5	590.8	615.2	624.8
45°	529.1	539.8	566.3	594.0	604.6
47.5°	498.3	511.1	539.8	572.7	585.5
50°	465.4	481.3	514.3	550.4	564.2
52.5°	432.4	450.5	487.7	528.1	542.9
55°	400.6	417.6	462.2	505.8	521.7
57.5°	365.5	386.8	435.6	482.4	498.3
60°	329.4	352.8	409.1	457.9	474.9
62.5°	293.3	319.8	383.6	432.4	450.5
65°	257.1	286.9	353.8	405.9	423.9
67.5°	222.1	255.0	326.2	378.3	396.3
70°	181.7	223.1	296.4	347.4	365.5
72.5°	144.5	192.3	267.8	315.6	331.5
75°	111.6	162.6	235.9	279.4	285.8
77.5°	81.8	132.8	202.9	217.8	218.9
80°	55.3	106.3	155.1	153.0	155.1
82.5°	36.1	79.7	97.8	109.4	110.5
85°	21.3	46.8	57.4	63.8	64.8
87.5°	10.6	15.9	20.2	21.3	23.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)