

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: P309308

Luminaire Tested: **24FCZ2-35-UNV-L82765-HRP-CP187-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: P309308
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: 24FCZ2-35-UNV-L82765-HRP-CP187-W2A-U-5500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (168) 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: 2401.0 lumens
Efficiency: N/A
Efficacy: 83.4 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

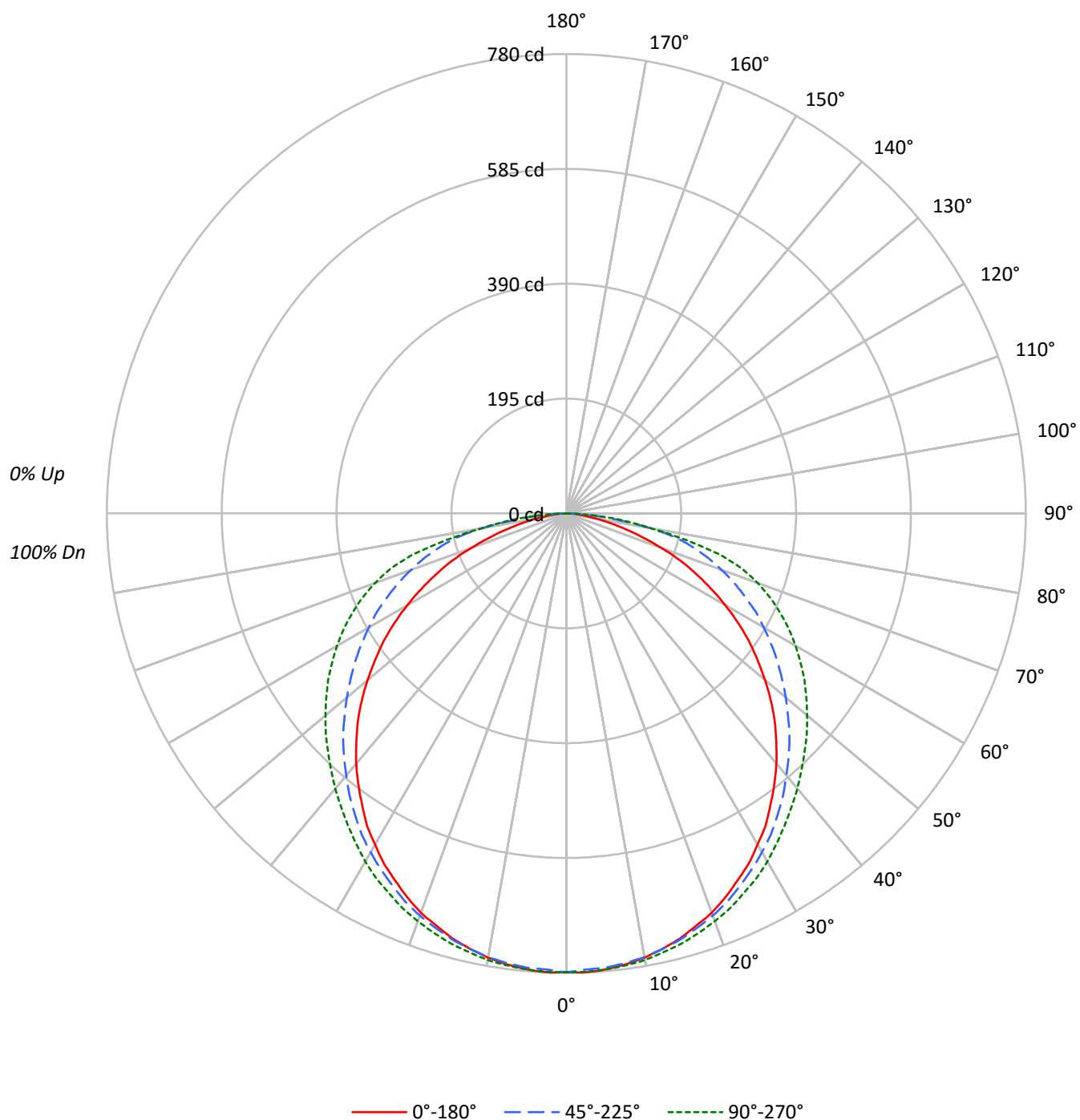
Input Watts (W): 28.8
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1048	1048	1048
5°	1049	1045	1049
10°	1046	1045	1052
15°	1040	1043	1053
20°	1033	1041	1055
25°	1021	1036	1057
30°	1009	1032	1060
35°	992	1027	1062
40°	975	1020	1072
45°	953	1020	1088
50°	922	1018	1117
55°	889	1026	1158
60°	839	1041	1209
65°	775	1066	1277
70°	676	1103	1360
75°	548	1160	1406
80°	405	1137	1137
85°	310	838	946



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	73.8	3.1
10°-20°	211.9	8.8
20°-30°	322.6	13.4
30°-40°	391.7	16.3
40°-50°	413.9	17.2
50°-60°	390.5	16.3
60°-70°	324.7	13.5
70°-80°	213.6	8.9
80°-90°	58.2	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°	608.3	25.3
0°-40°	1000.1	41.7
0°-60°	1804.4	75.2
0°-90°	2401.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2401.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	779	779	779	779	779	
5°	777	777	774	777	777	74
15°	747	748	749	756	756	211
25°	688	692	698	710	712	317
35°	604	611	625	641	646	378
45°	501	511	536	562	572	385
55°	379	395	437	478	494	338
65°	243	271	335	384	401	240
75°	106	154	223	264	270	114
85°	20	44	54	60	61	25
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	779.0	779.0	779.0	779.0	779.0
2.5°	780.0	779.0	775.0	779.0	779.0
5°	777.0	777.0	774.0	777.0	777.0
7.5°	772.0	772.0	770.0	774.0	774.0
10°	765.9	765.9	764.9	770.0	770.0
12.5°	756.9	757.9	756.9	762.9	762.9
15°	746.8	747.8	748.9	755.9	755.9
17.5°	733.8	735.8	737.8	745.8	746.8
20°	721.7	722.7	726.7	735.8	736.8
22.5°	705.6	708.6	713.7	722.7	725.7
25°	687.5	691.6	697.6	709.6	711.7
27.5°	670.4	673.5	681.5	694.6	698.6
30°	649.3	654.4	664.4	677.5	682.5
32.5°	629.2	634.3	646.3	660.4	664.4
35°	604.1	611.1	625.2	641.3	646.3
37.5°	580.0	587.0	604.1	622.2	628.2
40°	554.9	562.9	581.0	602.1	610.1
42.5°	527.7	538.8	558.9	582.0	591.0
45°	500.6	510.6	535.8	561.9	571.9
47.5°	471.4	483.5	510.6	541.8	553.8
50°	440.3	455.3	486.5	520.7	533.7
52.5°	409.1	426.2	461.4	499.6	513.6
55°	378.9	395.0	437.2	478.5	493.5
57.5°	345.8	365.9	412.1	456.3	471.4
60°	311.6	333.7	387.0	433.2	449.3
62.5°	277.4	302.6	362.9	409.1	426.2
65°	243.3	271.4	334.7	384.0	401.1
67.5°	210.1	241.2	308.6	357.8	374.9
70°	171.9	211.1	280.4	328.7	345.8
72.5°	136.7	181.9	253.3	298.5	313.6
75°	105.5	153.8	223.1	264.4	270.4
77.5°	77.4	125.6	192.0	206.1	207.1
80°	52.3	100.5	146.8	144.7	146.8
82.5°	34.2	75.4	92.5	103.5	104.5
85°	20.1	44.2	54.3	60.3	61.3
87.5°	10.1	15.1	19.1	20.1	22.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)