

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: P309398

Luminaire Tested: **24FCZ2-40-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: P309398
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: 24FCZ2-40-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: 2732.0 lumens
Efficiency: N/A
Efficacy: 81.3 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

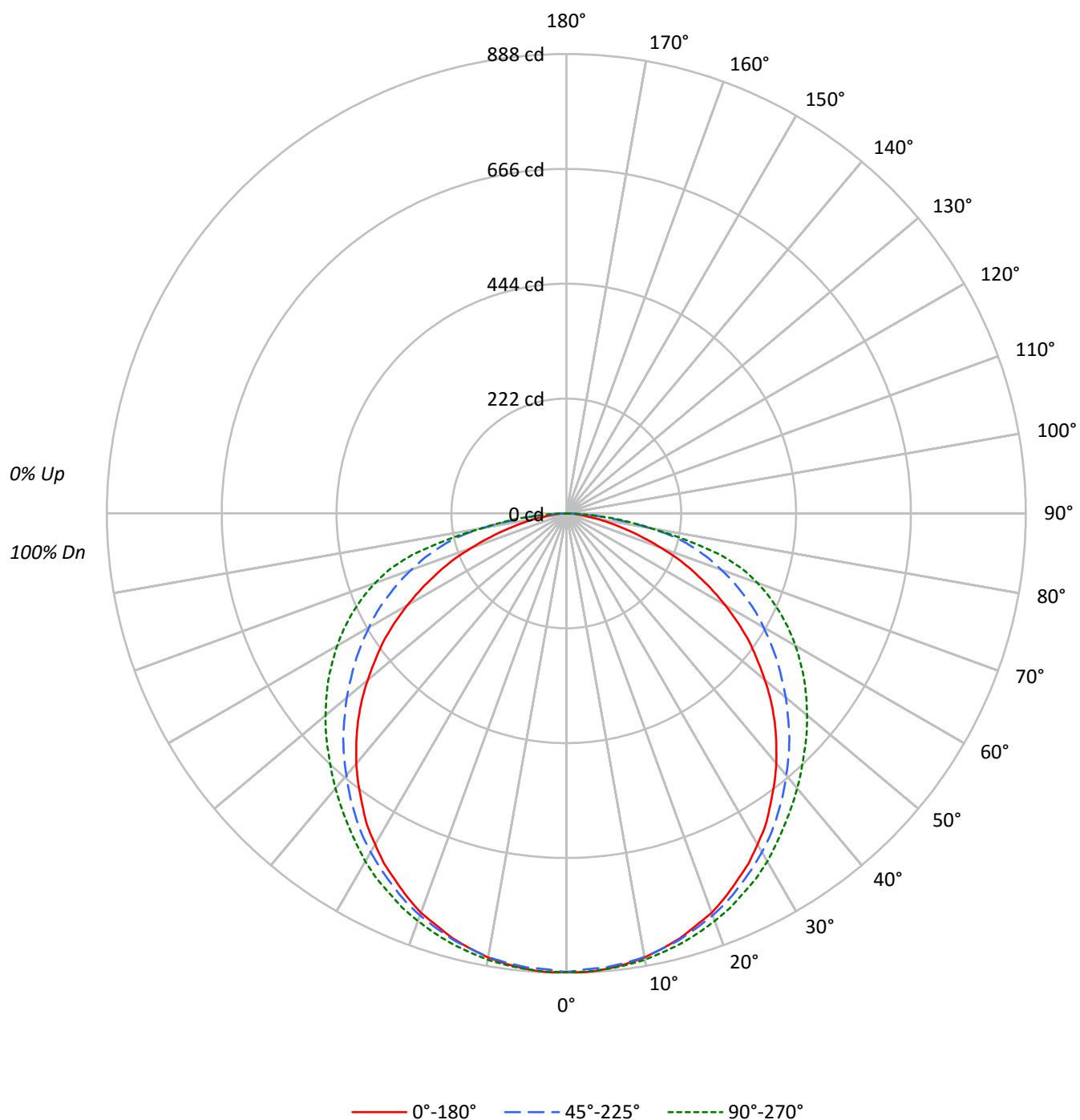
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				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°	1193	1193	1193
5°	1194	1189	1194
10°	1191	1189	1197
15°	1184	1187	1198
20°	1176	1184	1200
25°	1161	1178	1202
30°	1148	1175	1207
35°	1129	1169	1208
40°	1109	1161	1219
45°	1084	1160	1238
50°	1049	1159	1271
55°	1012	1167	1317
60°	954	1185	1376
65°	881	1213	1453
70°	769	1255	1548
75°	624	1320	1600
80°	461	1294	1294
85°	354	954	1078



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	84.0	3.1
10°-20°	241.1	8.8
20°-30°	367.1	13.4
30°-40°	445.7	16.3
40°-50°	470.9	17.2
50°-60°	444.4	16.3
60°-70°	369.5	13.5
70°-80°	243.1	8.9
80°-90°	66.3	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°	692.2	25.3
0°-40°	1137.9	41.7
0°-60°	2053.2	75.2
0°-90°	2732.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2732.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	886	886	886	886	886	
5°	884	884	881	884	884	84
15°	850	851	852	860	860	240
25°	782	787	794	808	810	361
35°	687	695	711	730	735	430
45°	570	581	610	639	651	439
55°	431	450	498	544	562	384
65°	277	309	381	437	456	274
75°	120	175	254	301	308	129
85°	23	50	62	69	70	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	886.4	886.4	886.4	886.4	886.4
2.5°	887.5	886.4	881.8	886.4	886.4
5°	884.1	884.1	880.7	884.1	884.1
7.5°	878.4	878.4	876.1	880.7	880.7
10°	871.5	871.5	870.4	876.1	876.1
12.5°	861.2	862.4	861.2	868.1	868.1
15°	849.8	850.9	852.1	860.1	860.1
17.5°	834.9	837.2	839.5	848.7	849.8
20°	821.2	822.4	826.9	837.2	838.4
22.5°	802.9	806.3	812.1	822.4	825.8
25°	782.3	786.9	793.8	807.5	809.8
27.5°	762.9	766.3	775.5	790.3	794.9
30°	738.9	744.6	756.0	770.9	776.6
32.5°	716.0	721.7	735.4	751.4	756.0
35°	687.4	695.4	711.4	729.7	735.4
37.5°	659.9	667.9	687.4	708.0	714.8
40°	631.3	640.5	661.1	685.1	694.3
42.5°	600.5	613.0	635.9	662.2	672.5
45°	569.6	581.0	609.6	639.4	650.8
47.5°	536.4	550.1	581.0	616.5	630.2
50°	501.0	518.1	553.6	592.5	607.3
52.5°	465.5	484.9	525.0	568.4	584.5
55°	431.2	449.5	497.5	544.4	561.6
57.5°	393.4	416.3	468.9	519.3	536.4
60°	354.6	379.7	440.3	493.0	511.3
62.5°	315.7	344.3	412.9	465.5	484.9
65°	276.8	308.8	380.9	436.9	456.4
67.5°	239.0	274.5	351.1	407.2	426.6
70°	195.6	240.2	319.1	374.0	393.4
72.5°	155.5	207.0	288.2	339.7	356.8
75°	120.1	175.0	253.9	300.8	307.7
77.5°	88.1	143.0	218.5	234.5	235.6
80°	59.5	114.4	167.0	164.7	167.0
82.5°	38.9	85.8	105.2	117.8	118.9
85°	22.9	50.3	61.8	68.6	69.8
87.5°	11.4	17.2	21.7	22.9	25.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)