

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: P309261

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-HRP-CP187-W2A-U-4500K**

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: P309261
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-CP187-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.187"
POLYCARB SHEET
Light Source: (336) 4500K 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: 2320.0 lumens
Efficiency: N/A
Efficacy: 87.5 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

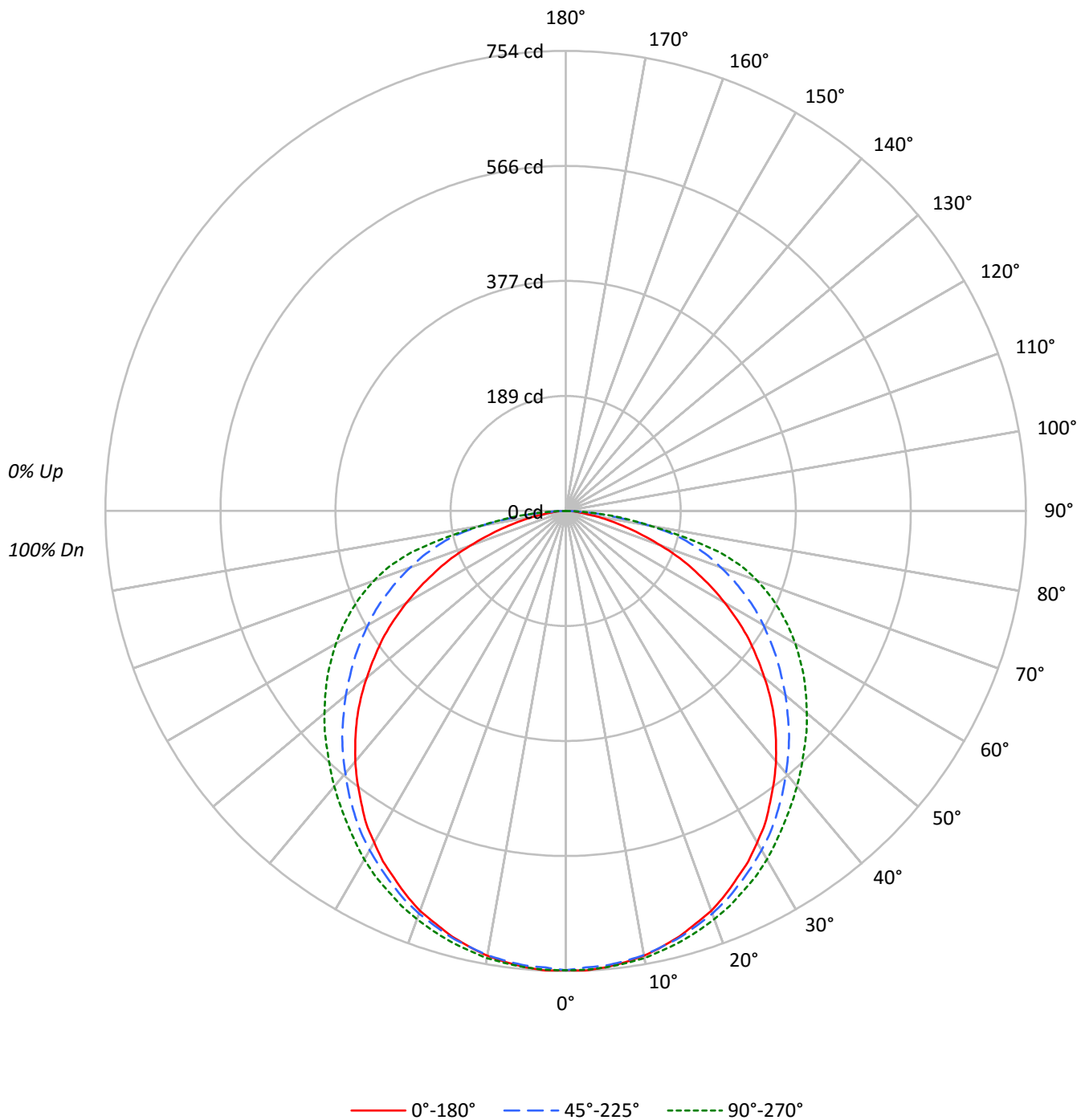
Input Watts (W): 26.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1013	1013	1013
5°	1014	1010	1014
10°	1011	1010	1016
15°	1005	1008	1017
20°	999	1005	1019
25°	986	1001	1021
30°	975	997	1025
35°	959	992	1026
40°	942	986	1036
45°	920	985	1051
50°	890	984	1079
55°	859	991	1119
60°	810	1006	1168
65°	748	1030	1234
70°	653	1066	1314
75°	530	1121	1358
80°	391	1099	1099
85°	299	809	914



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.3	3.1
10°-20°	204.8	8.8
20°-30°	311.7	13.4
30°-40°	378.5	16.3
40°-50°	399.9	17.2
50°-60°	377.3	16.3
60°-70°	313.7	13.5
70°-80°	206.4	8.9
80°-90°	56.3	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°	587.8	25.3
0°-40°	966.3	41.7
0°-60°	1743.6	75.2
0°-90°	2320.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2320.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	753	753	753	753	753	
5°	751	751	748	751	751	71
15°	722	723	724	730	730	204
25°	664	668	674	686	688	306
35°	584	590	604	620	624	365
45°	484	493	518	543	553	372
55°	366	382	422	462	477	326
65°	235	262	323	371	388	232
75°	102	149	216	255	261	110
85°	19	43	52	58	59	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	752.7	752.7	752.7	752.7	752.7
2.5°	753.7	752.7	748.8	752.7	752.7
5°	750.8	750.8	747.9	750.8	750.8
7.5°	745.9	745.9	744.0	747.9	747.9
10°	740.1	740.1	739.1	744.0	744.0
12.5°	731.4	732.3	731.4	737.2	737.2
15°	721.6	722.6	723.6	730.4	730.4
17.5°	709.0	711.0	712.9	720.7	721.6
20°	697.4	698.3	702.2	711.0	711.9
22.5°	681.8	684.7	689.6	698.3	701.2
25°	664.3	668.2	674.1	685.7	687.7
27.5°	647.8	650.7	658.5	671.1	675.0
30°	627.4	632.3	642.0	654.6	659.5
32.5°	608.0	612.9	624.5	638.1	642.0
35°	583.7	590.5	604.1	619.7	624.5
37.5°	560.4	567.2	583.7	601.2	607.0
40°	536.1	543.9	561.4	581.8	589.6
42.5°	509.9	520.6	540.0	562.4	571.1
45°	483.7	493.4	517.7	542.9	552.6
47.5°	455.5	467.2	493.4	523.5	535.2
50°	425.4	440.0	470.1	503.1	515.7
52.5°	395.3	411.8	445.8	482.7	496.3
55°	366.2	381.7	422.5	462.3	476.9
57.5°	334.1	353.5	398.2	441.0	455.5
60°	301.1	322.5	373.9	418.6	434.2
62.5°	268.1	292.3	350.6	395.3	411.8
65°	235.0	262.2	323.4	371.0	387.5
67.5°	203.0	233.1	298.2	345.8	362.3
70°	166.1	204.0	271.0	317.6	334.1
72.5°	132.1	175.8	244.8	288.5	303.0
75°	102.0	148.6	215.6	255.4	261.3
77.5°	74.8	121.4	185.5	199.1	200.1
80°	50.5	97.1	141.8	139.9	141.8
82.5°	33.0	72.8	89.4	100.0	101.0
85°	19.4	42.7	52.4	58.3	59.2
87.5°	9.7	14.6	18.5	19.4	21.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)