

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: P309270

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-HRP-CP250-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: P309270
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-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
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: 2301.0 lumens
Efficiency: N/A
Efficacy: 86.8 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

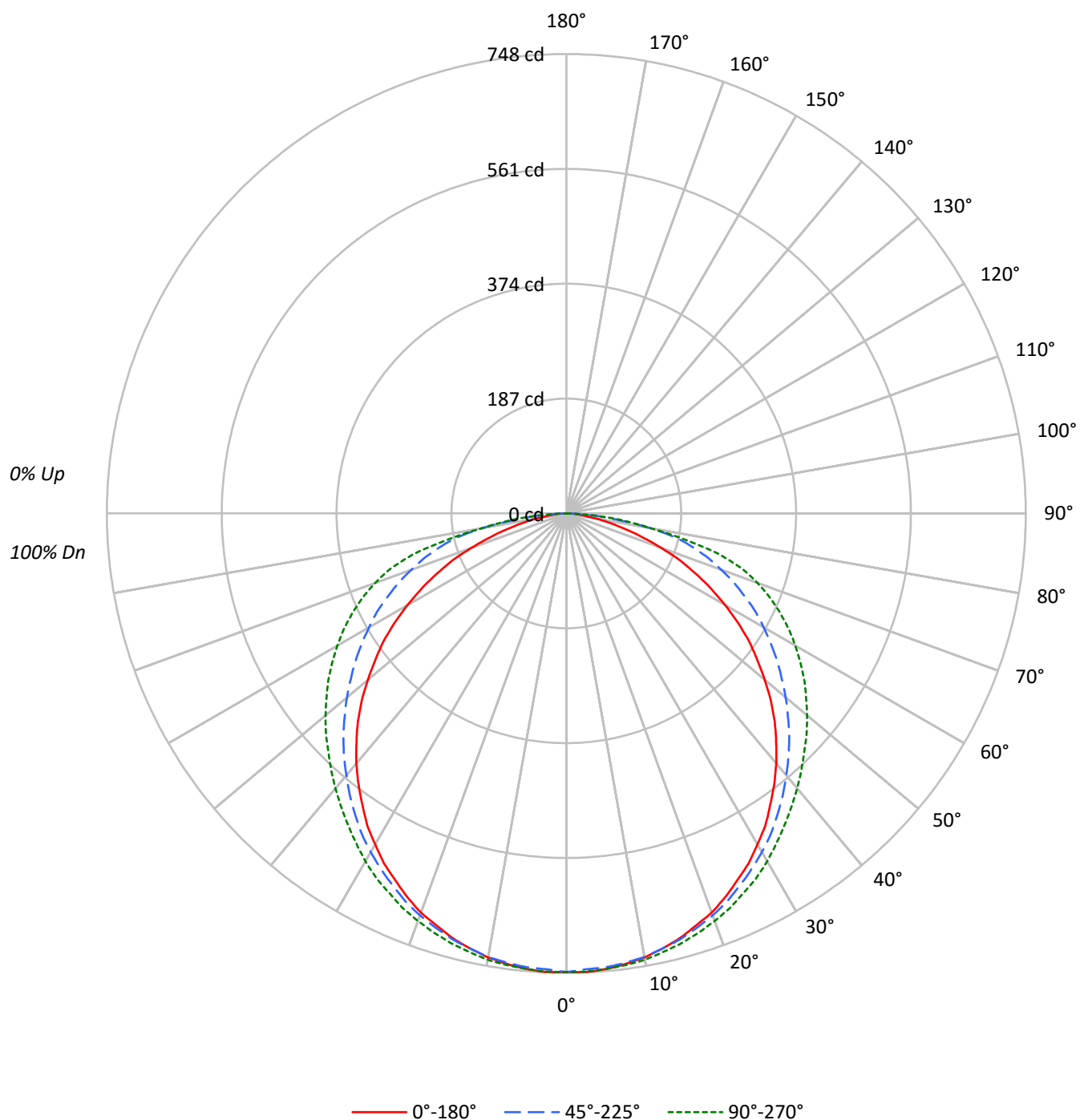
Input Watts (W): 26.5
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1005	1005	1005
5°	1006	1002	1006
10°	1003	1002	1008
15°	997	1000	1009
20°	990	997	1011
25°	978	992	1012
30°	967	989	1016
35°	951	984	1017
40°	934	978	1027
45°	913	977	1043
50°	883	976	1071
55°	852	983	1110
60°	804	998	1159
65°	742	1021	1224
70°	648	1057	1304
75°	526	1112	1347
80°	388	1089	1089
85°	298	803	908



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	70.7	3.1
10°-20°	203.1	8.8
20°-30°	309.2	13.4
30°-40°	375.4	16.3
40°-50°	396.6	17.2
50°-60°	374.3	16.3
60°-70°	311.2	13.5
70°-80°	204.7	8.9
80°-90°	55.8	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°	583.0	25.3
0°-40°	958.4	41.7
0°-60°	1729.3	75.2
0°-90°	2301.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2301.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	747	747	747	747	747	
5°	745	745	742	745	745	71
15°	716	717	718	724	724	202
25°	659	663	668	680	682	304
35°	579	586	599	615	619	362
45°	480	489	513	538	548	369
55°	363	379	419	458	473	323
65°	233	260	321	368	384	230
75°	101	147	214	253	259	109
85°	19	42	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°	746.6	746.6	746.6	746.6	746.6
2.5°	747.5	746.6	742.7	746.6	746.6
5°	744.6	744.6	741.7	744.6	744.6
7.5°	739.8	739.8	737.9	741.7	741.7
10°	734.0	734.0	733.1	737.9	737.9
12.5°	725.4	726.3	725.4	731.1	731.1
15°	715.7	716.7	717.7	724.4	724.4
17.5°	703.2	705.1	707.1	714.8	715.7
20°	691.7	692.6	696.5	705.1	706.1
22.5°	676.2	679.1	683.9	692.6	695.5
25°	658.9	662.8	668.5	680.1	682.0
27.5°	642.5	645.4	653.1	665.6	669.5
30°	622.3	627.1	636.7	649.3	654.1
32.5°	603.0	607.8	619.4	632.9	636.7
35°	578.9	585.7	599.2	614.6	619.4
37.5°	555.8	562.6	578.9	596.3	602.1
40°	531.7	539.5	556.8	577.0	584.7
42.5°	505.7	516.3	535.6	557.8	566.4
45°	479.7	489.4	513.4	538.5	548.1
47.5°	451.8	463.3	489.4	519.2	530.8
50°	421.9	436.4	466.2	499.0	511.5
52.5°	392.1	408.4	442.2	478.8	492.2
55°	363.2	378.6	419.0	458.5	473.0
57.5°	331.4	350.6	395.0	437.3	451.8
60°	298.6	319.8	370.9	415.2	430.6
62.5°	265.9	290.0	347.8	392.1	408.4
65°	233.1	260.1	320.8	368.0	384.4
67.5°	201.3	231.2	295.7	342.9	359.3
70°	164.7	202.3	268.8	315.0	331.4
72.5°	131.0	174.4	242.8	286.1	300.6
75°	101.1	147.4	213.9	253.3	259.1
77.5°	74.2	120.4	184.0	197.5	198.4
80°	50.1	96.3	140.6	138.7	140.6
82.5°	32.8	72.2	88.6	99.2	100.2
85°	19.3	42.4	52.0	57.8	58.8
87.5°	9.6	14.4	18.3	19.3	21.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)