

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: P309315

Luminaire Tested: **24FCZ2-35-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: P309315
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-CP250-W2A-U-4500K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (168) 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: 2326.0 lumens
Efficiency: N/A
Efficacy: 81.6 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

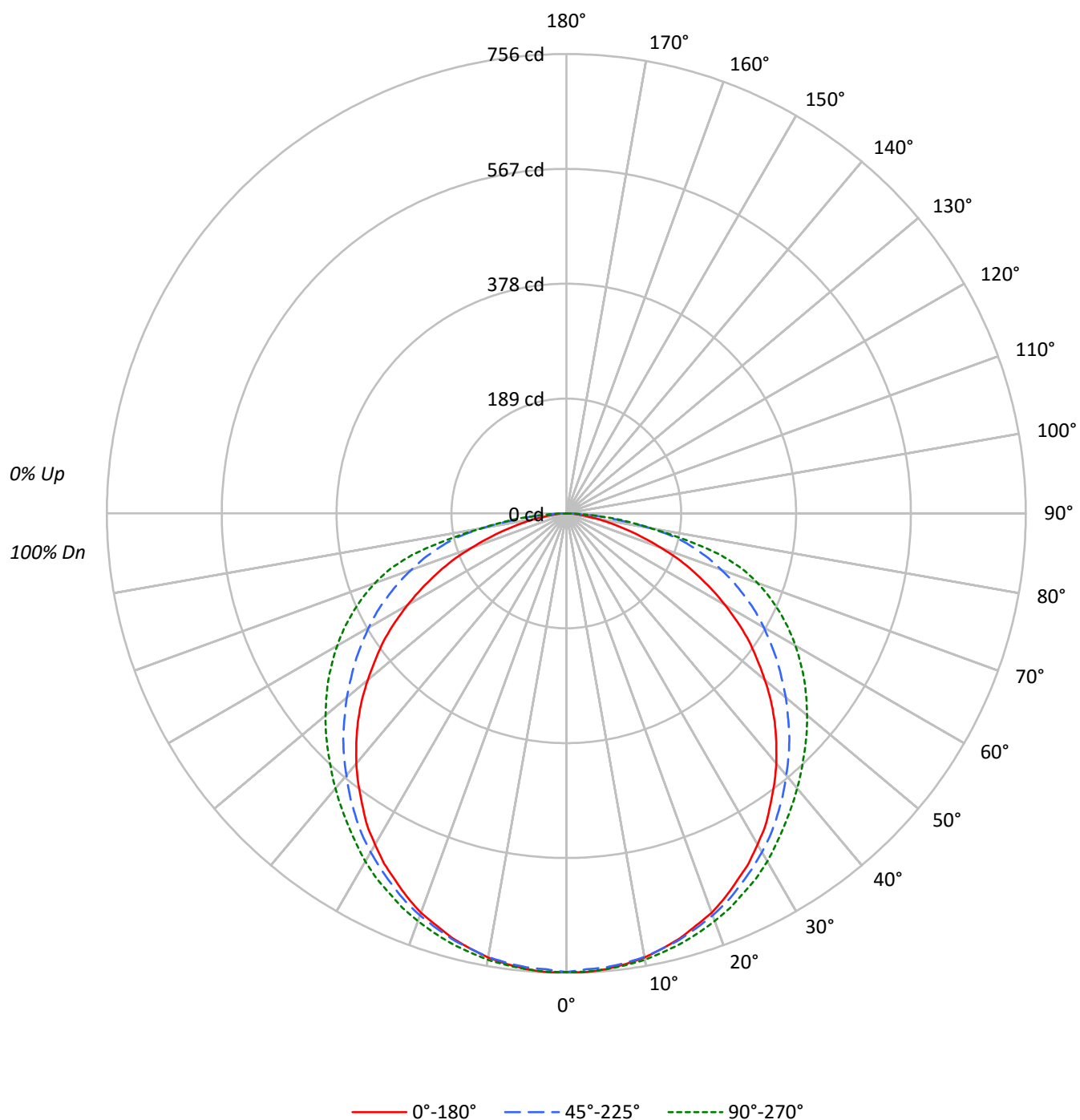
Input Watts (W): 28.5
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1015	1015	1015
5°	1017	1013	1017
10°	1014	1012	1019
15°	1008	1011	1020
20°	1001	1008	1022
25°	989	1003	1023
30°	977	1000	1027
35°	961	995	1028
40°	944	989	1038
45°	923	988	1054
50°	893	987	1082
55°	861	994	1122
60°	812	1009	1171
65°	750	1032	1237
70°	655	1069	1318
75°	531	1124	1362
80°	392	1102	1102
85°	301	812	917



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.5	3.1
10°-20°	205.3	8.8
20°-30°	312.5	13.4
30°-40°	379.5	16.3
40°-50°	400.9	17.2
50°-60°	378.3	16.3
60°-70°	314.6	13.5
70°-80°	207.0	8.9
80°-90°	56.4	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°	589.3	25.3
0°-40°	968.8	41.7
0°-60°	1748.1	75.2
0°-90°	2326.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2326.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	755	755	755	755	755	
5°	753	753	750	753	753	71
15°	724	724	726	732	732	204
25°	666	670	676	688	689	307
35°	585	592	606	621	626	366
45°	485	495	519	544	554	373
55°	367	383	424	464	478	327
65°	236	263	324	372	388	233
75°	102	149	216	256	262	110
85°	20	43	53	58	59	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	754.7	754.7	754.7	754.7	754.7
2.5°	755.6	754.7	750.8	754.7	754.7
5°	752.7	752.7	749.8	752.7	752.7
7.5°	747.9	747.9	745.9	749.8	749.8
10°	742.0	742.0	741.0	745.9	745.9
12.5°	733.2	734.2	733.2	739.1	739.1
15°	723.5	724.5	725.5	732.3	732.3
17.5°	710.9	712.8	714.7	722.5	723.5
20°	699.2	700.1	704.0	712.8	713.8
22.5°	683.6	686.5	691.4	700.1	703.1
25°	666.1	670.0	675.8	687.5	689.4
27.5°	649.5	652.4	660.2	672.9	676.8
30°	629.1	633.9	643.7	656.3	661.2
32.5°	609.6	614.4	626.1	639.8	643.7
35°	585.2	592.1	605.7	621.3	626.1
37.5°	561.9	568.7	585.2	602.8	608.6
40°	537.5	545.3	562.8	583.3	591.1
42.5°	511.2	521.9	541.4	563.8	572.6
45°	484.9	494.7	519.0	544.3	554.1
47.5°	456.7	468.4	494.7	524.9	536.5
50°	426.5	441.1	471.3	504.4	517.1
52.5°	396.3	412.9	447.0	484.0	497.6
55°	367.1	382.7	423.6	463.5	478.1
57.5°	335.0	354.5	399.2	442.1	456.7
60°	301.9	323.3	374.9	419.7	435.3
62.5°	268.8	293.1	351.5	396.3	412.9
65°	235.7	262.9	324.3	372.0	388.5
67.5°	203.5	233.7	298.9	346.7	363.2
70°	166.5	204.5	271.7	318.4	335.0
72.5°	132.4	176.3	245.4	289.2	303.8
75°	102.2	149.0	216.2	256.1	261.9
77.5°	75.0	121.7	186.0	199.6	200.6
80°	50.6	97.4	142.2	140.2	142.2
82.5°	33.1	73.0	89.6	100.3	101.3
85°	19.5	42.8	52.6	58.4	59.4
87.5°	9.7	14.6	18.5	19.5	21.4
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)