

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: P309271

Luminaire Tested: **24FCZ2-35HE-UNV-L82765-HRP-CP250-W2A-U-5000K**

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: P309271
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-5000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 5000K 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: 2332.0 lumens
Efficiency: N/A
Efficacy: 87.7 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

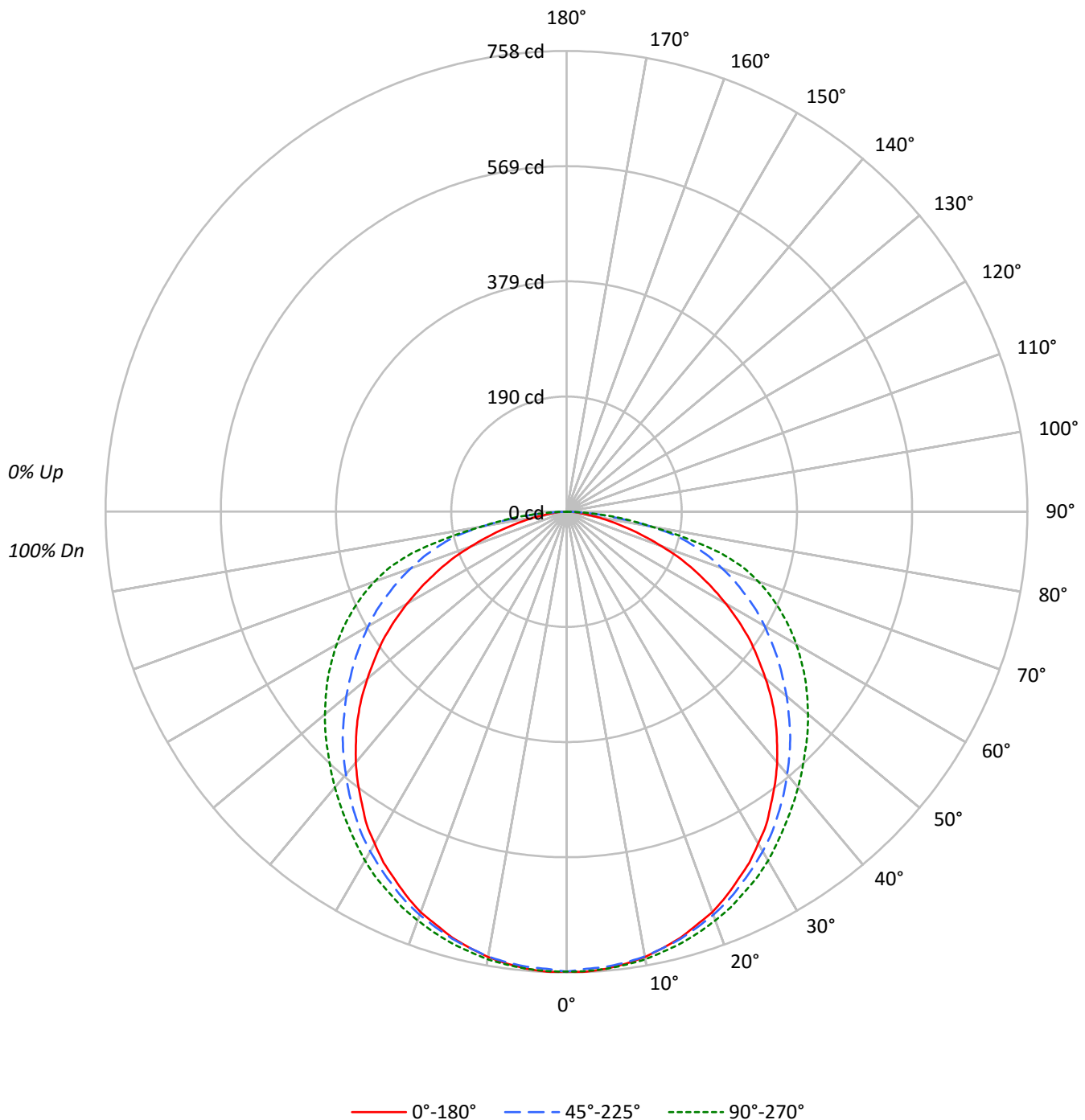
Input Watts (W): 26.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1018	1018	1018
5°	1019	1015	1019
10°	1016	1015	1022
15°	1010	1013	1023
20°	1004	1011	1025
25°	991	1006	1026
30°	980	1003	1030
35°	964	997	1031
40°	947	991	1041
45°	925	990	1057
50°	895	989	1085
55°	863	996	1125
60°	814	1012	1174
65°	752	1035	1240
70°	657	1072	1321
75°	533	1127	1365
80°	394	1104	1104
85°	301	814	920



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	71.7	3.1
10°-20°	205.8	8.8
20°-30°	313.3	13.4
30°-40°	380.5	16.3
40°-50°	402.0	17.2
50°-60°	379.3	16.3
60°-70°	315.4	13.5
70°-80°	207.5	8.9
80°-90°	56.6	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°	590.8	25.3
0°-40°	971.3	41.7
0°-60°	1752.6	75.2
0°-90°	2332.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2332.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	757	757	757	757	757	
5°	755	755	752	755	755	72
15°	725	726	727	734	734	205
25°	668	672	678	689	691	308
35°	587	594	607	623	628	367
45°	486	496	520	546	556	374
55°	368	384	425	465	479	328
65°	236	264	325	373	390	234
75°	102	149	217	257	263	110
85°	20	43	53	59	60	24
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	756.6	756.6	756.6	756.6	756.6
2.5°	757.6	756.6	752.7	756.6	756.6
5°	754.7	754.7	751.7	754.7	754.7
7.5°	749.8	749.8	747.8	751.7	751.7
10°	743.9	743.9	743.0	747.8	747.8
12.5°	735.1	736.1	735.1	741.0	741.0
15°	725.4	726.4	727.3	734.2	734.2
17.5°	712.7	714.6	716.6	724.4	725.4
20°	701.0	701.9	705.9	714.6	715.6
22.5°	685.4	688.3	693.2	701.9	704.9
25°	667.8	671.7	677.5	689.3	691.2
27.5°	651.2	654.1	661.9	674.6	678.5
30°	630.7	635.6	645.3	658.0	662.9
32.5°	611.2	616.0	627.7	641.4	645.3
35°	586.7	593.6	607.2	622.9	627.7
37.5°	563.3	570.1	586.7	604.3	610.2
40°	538.9	546.7	564.3	584.8	592.6
42.5°	512.5	523.3	542.8	565.3	574.1
45°	486.2	496.0	520.4	545.7	555.5
47.5°	457.9	469.6	496.0	526.2	537.9
50°	427.6	442.3	472.5	505.7	518.4
52.5°	397.3	413.9	448.1	485.2	498.9
55°	368.1	383.7	424.7	464.7	479.4
57.5°	335.8	355.4	400.3	443.2	457.9
60°	302.6	324.1	375.9	420.8	436.4
62.5°	269.5	293.9	352.4	397.3	413.9
65°	236.3	263.6	325.1	372.9	389.5
67.5°	204.0	234.3	299.7	347.6	364.2
70°	166.9	205.0	272.4	319.2	335.8
72.5°	132.8	176.7	246.0	290.0	304.6
75°	102.5	149.4	216.7	256.8	262.6
77.5°	75.2	122.0	186.5	200.1	201.1
80°	50.8	97.6	142.5	140.6	142.5
82.5°	33.2	73.2	89.8	100.6	101.5
85°	19.5	43.0	52.7	58.6	59.6
87.5°	9.8	14.6	18.5	19.5	21.5
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)