

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: P309447

Luminaire Tested: **24FCZ2-45HE-UNV-L82765-HRP-CP250-W2A-U-3000K**

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: P309447
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: 24FCZ2-45HE-UNV-L82765-HRP-CP250-W2A-U-3000K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.250"
POLYCARB SHEET
Light Source: (336) 3000K 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: 2725.0 lumens
Efficiency: N/A
Efficacy: 81.1 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

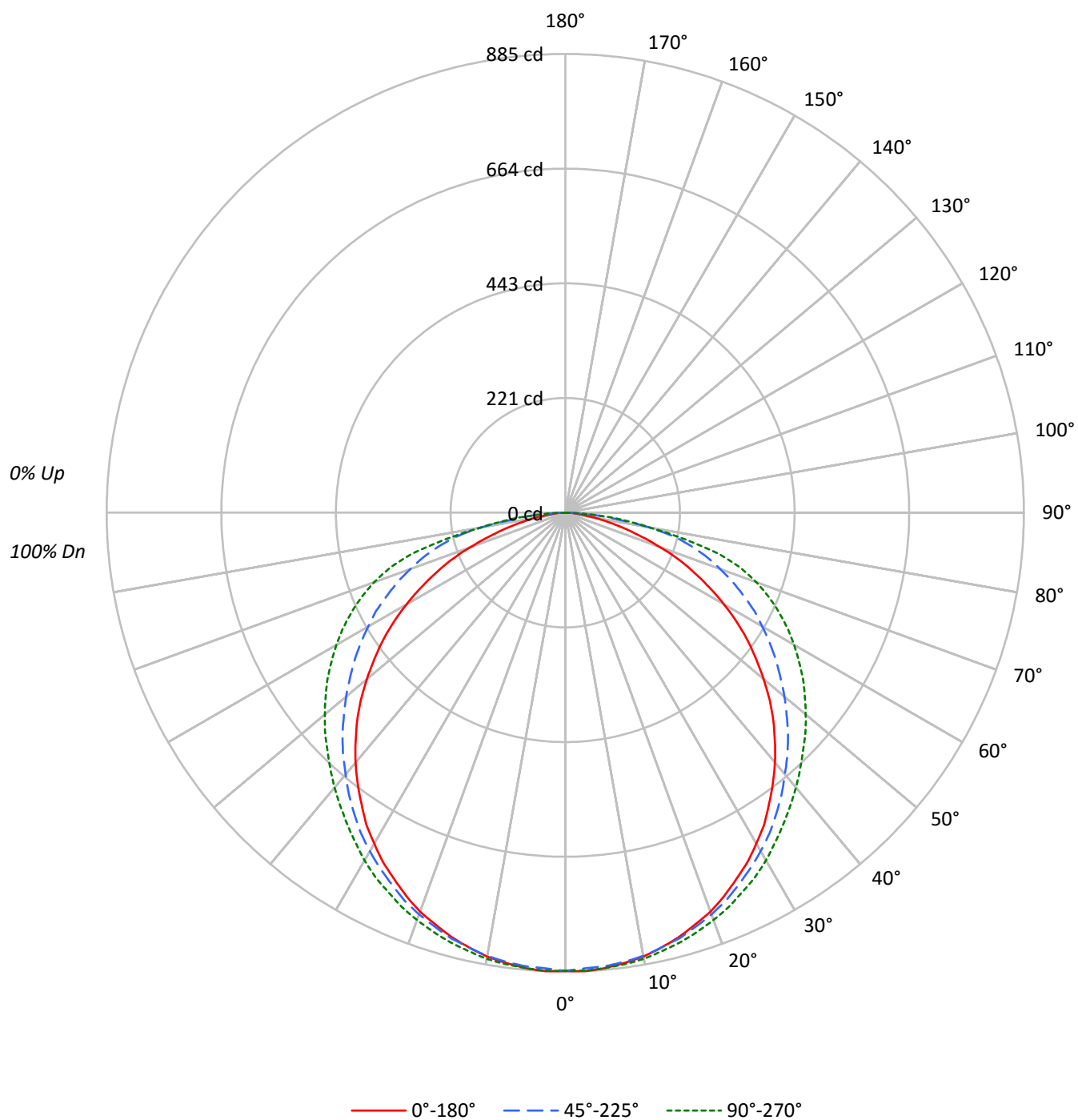
Input Watts (W): 33.6
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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°	1190	1190	1190
5°	1191	1186	1191
10°	1188	1186	1194
15°	1181	1184	1195
20°	1173	1181	1197
25°	1158	1175	1199
30°	1145	1172	1203
35°	1126	1166	1205
40°	1106	1158	1216
45°	1081	1157	1235
50°	1046	1156	1268
55°	1009	1164	1314
60°	952	1182	1372
65°	879	1209	1449
70°	768	1252	1544
75°	623	1317	1595
80°	459	1291	1291
85°	352	951	1074



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	83.8	3.1
10°-20°	240.5	8.8
20°-30°	366.1	13.4
30°-40°	444.6	16.3
40°-50°	469.7	17.2
50°-60°	443.2	16.3
60°-70°	368.5	13.5
70°-80°	242.5	8.9
80°-90°	66.1	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°	690.4	25.3
0°-40°	1135.0	41.7
0°-60°	2047.9	75.2
0°-90°	2725.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2725.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	884	884	884	884	884	
5°	882	882	878	882	882	84
15°	848	849	850	858	858	239
25°	780	785	792	805	808	360
35°	686	694	710	728	734	429
45°	568	580	608	638	649	437
55°	430	448	496	543	560	383
65°	276	308	380	436	455	273
75°	120	174	253	300	307	129
85°	23	50	62	68	70	28
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	884.1	884.1	884.1	884.1	884.1
2.5°	885.3	884.1	879.6	884.1	884.1
5°	881.8	881.8	878.4	881.8	881.8
7.5°	876.1	876.1	873.9	878.4	878.4
10°	869.3	869.3	868.2	873.9	873.9
12.5°	859.0	860.2	859.0	865.9	865.9
15°	847.6	848.8	849.9	857.9	857.9
17.5°	832.8	835.1	837.4	846.5	847.6
20°	819.1	820.2	824.8	835.1	836.2
22.5°	800.8	804.3	810.0	820.2	823.7
25°	780.3	784.9	791.7	805.4	807.7
27.5°	760.9	764.3	773.5	788.3	792.9
30°	737.0	742.7	754.1	768.9	774.6
32.5°	714.1	719.9	733.5	749.5	754.1
35°	685.6	693.6	709.6	727.8	733.5
37.5°	658.2	666.2	685.6	706.2	713.0
40°	629.7	638.9	659.4	683.3	692.5
42.5°	598.9	611.5	634.3	660.5	670.8
45°	568.1	579.5	608.1	637.7	649.1
47.5°	535.0	548.7	579.5	614.9	628.6
50°	499.7	516.8	552.2	590.9	605.8
52.5°	464.3	483.7	523.6	567.0	583.0
55°	430.1	448.3	496.3	543.0	560.1
57.5°	392.4	415.3	467.7	517.9	535.0
60°	353.7	378.7	439.2	491.7	509.9
62.5°	314.9	343.4	411.8	464.3	483.7
65°	276.1	308.0	379.9	435.8	455.2
67.5°	238.4	273.8	350.2	406.1	425.5
70°	195.1	239.6	318.3	373.0	392.4
72.5°	155.2	206.5	287.5	338.8	355.9
75°	119.8	174.5	253.3	300.0	306.9
77.5°	87.8	142.6	217.9	233.9	235.0
80°	59.3	114.1	166.6	164.3	166.6
82.5°	38.8	85.6	105.0	117.5	118.6
85°	22.8	50.2	61.6	68.4	69.6
87.5°	11.4	17.1	21.7	22.8	25.1
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)