

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: P308937

Luminaire Tested: **22FCZ2-24HE-UNV-L82765-S-CP125-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: P308937
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-23)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-24HE-UNV-L82765-S-CP125-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, SMOOTH LENS, 0.125" POLYCARB SHEET
Light Source: (168) 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: 2298.0 lumens
Efficiency: N/A
Efficacy: 119.1 lumens/watt
Spacing Criteria (0/90/45): 1.18 / 1.26 / 1.34
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

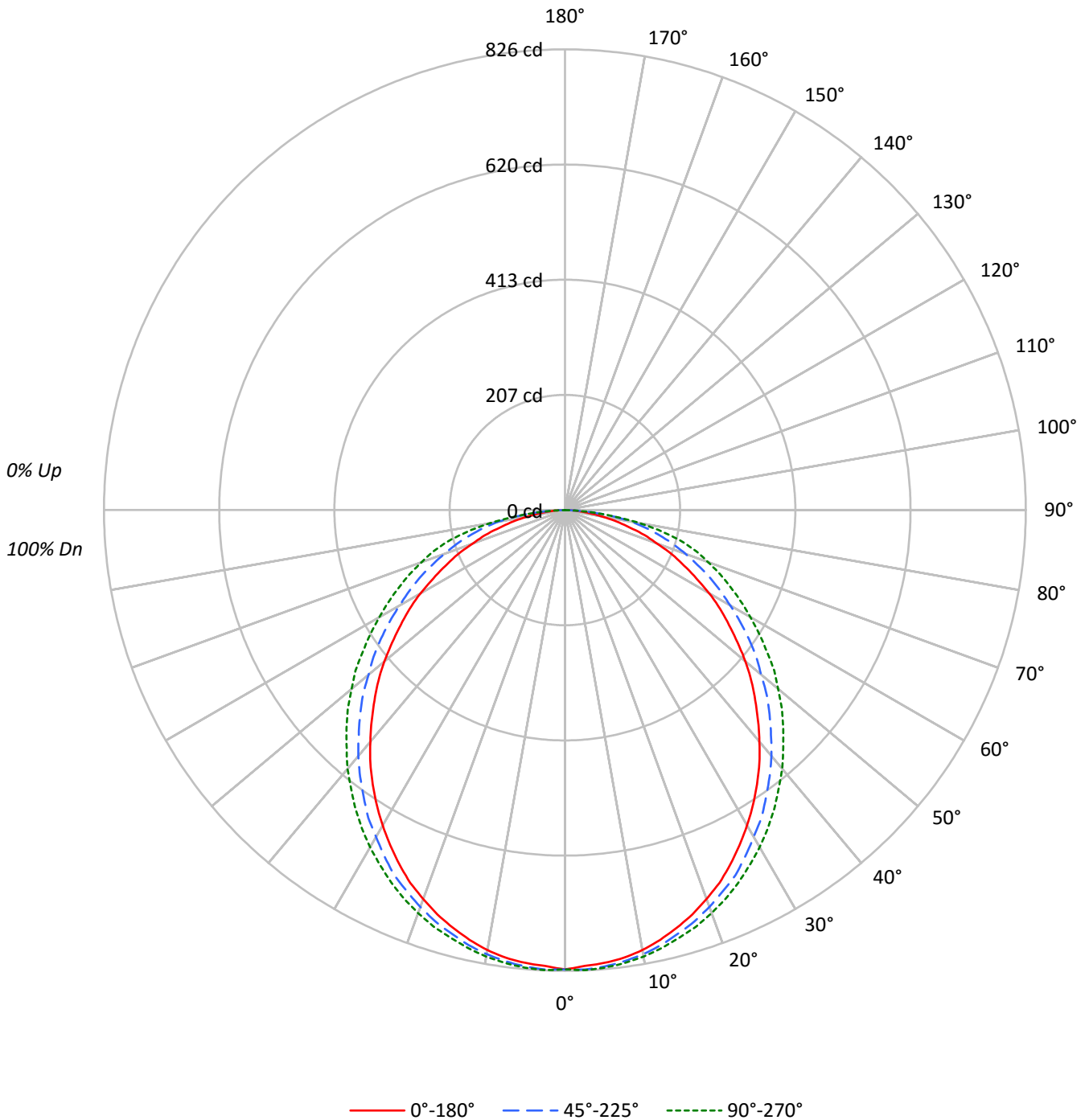
Input Watts (W): 19.3
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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				10	0
RW	70	50	30	10	70	50	30	10	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	102	102	102	100
1	108	103	99	95	106	101	97	94	97	94	91	93	90	88	89	87	85	83
2	98	90	83	77	96	88	82	76	84	79	74	81	77	73	78	74	71	69
3	90	79	71	64	87	77	70	63	74	68	62	72	66	61	69	64	60	58
4	82	70	61	54	80	69	60	54	66	59	53	64	57	52	61	56	52	49
5	75	62	53	47	73	61	53	46	59	52	46	57	51	45	55	50	45	43
6	70	56	47	41	68	55	47	41	53	46	40	52	45	40	50	44	39	37
7	65	51	42	36	63	50	42	36	49	41	36	47	40	35	46	40	35	33
8	60	47	38	32	59	46	38	32	45	37	32	43	37	32	42	36	31	30
9	56	43	35	29	55	42	34	29	41	34	29	40	33	29	39	33	28	27
10	53	40	32	26	51	39	31	26	38	31	26	37	31	26	36	30	26	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2216	2216	2216
5°	2201	2219	2224
10°	2188	2209	2221
15°	2160	2189	2210
20°	2125	2168	2202
25°	2082	2146	2187
30°	2029	2102	2169
35°	1972	2064	2148
40°	1906	2023	2128
45°	1836	1975	2106
50°	1768	1921	2087
55°	1685	1886	2072
60°	1610	1841	2066
65°	1502	1829	2089
70°	1383	1814	2151
75°	1249	1839	2263
80°	1080	1894	2126
85°	892	1590	1590



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	77.9	3.4
10°-20°	221.6	9.6
20°-30°	331.6	14.4
30°-40°	392.7	17.1
40°-50°	400.2	17.4
50°-60°	358.7	15.6
60°-70°	280.8	12.2
70°-80°	181.1	7.9
80°-90°	53.5	2.3
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°	631.1	27.5
0°-40°	1023.7	44.5
0°-60°	1782.6	77.6
0°-90°	2298.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2298.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	823	823	823	823	823	
5°	815	817	821	822	823	77
15°	775	780	786	792	793	219
25°	701	708	723	732	737	323
35°	600	608	628	648	654	375
45°	482	493	519	546	553	373
55°	359	371	402	430	442	322
65°	236	250	287	315	328	234
75°	120	138	177	207	218	129
85°	29	40	52	52	52	34
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	823.4	823.4	823.4	823.4	823.4
2.5°	818.1	820.2	824.5	825.6	825.6
5°	814.9	817.0	821.3	822.4	823.4
7.5°	809.5	810.6	815.9	818.1	819.2
10°	800.9	803.1	808.4	811.7	812.7
12.5°	789.1	792.4	798.8	803.1	804.1
15°	775.2	779.5	785.9	792.4	793.4
17.5°	760.2	764.5	773.1	780.6	782.7
20°	742.0	747.3	757.0	765.5	768.8
22.5°	723.7	728.0	739.8	750.5	753.8
25°	701.2	707.6	722.7	732.3	736.6
27.5°	677.6	685.1	700.1	713.0	717.3
30°	653.0	660.5	676.6	692.6	698.0
32.5°	627.2	635.8	655.1	671.2	676.6
35°	600.4	607.9	628.3	647.6	654.0
37.5°	572.6	579.0	602.6	622.9	629.4
40°	542.5	551.1	575.8	599.4	605.8
42.5°	512.5	522.2	546.8	572.6	579.0
45°	482.5	493.2	518.9	545.7	553.3
47.5°	453.5	462.1	491.1	516.8	527.5
50°	422.4	431.0	458.9	487.8	498.6
52.5°	390.3	402.1	432.1	460.0	472.8
55°	359.2	371.0	402.1	429.9	441.7
57.5°	330.2	339.9	372.1	401.0	412.8
60°	299.1	307.7	342.0	373.1	383.8
62.5°	265.9	278.8	314.2	343.1	356.0
65°	235.9	249.8	287.3	315.2	328.1
67.5°	208.0	220.9	257.3	287.3	301.3
70°	175.8	193.0	230.5	260.5	273.4
72.5°	150.1	165.1	203.7	233.7	247.7
75°	120.1	138.3	176.9	206.9	217.7
77.5°	95.4	113.7	150.1	173.7	179.1
80°	69.7	87.9	122.2	134.0	137.2
82.5°	47.2	64.3	87.9	91.1	92.2
85°	28.9	39.7	51.5	51.5	51.5
87.5°	13.9	16.1	18.2	17.2	17.2
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)