

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: P308730

Luminaire Tested: **22FCZ2-29HE-UNV-L82765-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: P308730
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G3-1805-783-33)
Test Lab: INNOVATION CENTER(G3)
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: 22FCZ2-29HE-UNV-L82765-CP250-W2A-U-4500K
Description: 2'X2' TROFFER LED MODULE, RIBBED LENS, 0.250" 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: 2420.0 lumens
Efficiency: N/A
Efficacy: 106.1 lumens/watt
Spacing Criteria (0/90/45): 1.2 / 1.28 / 1.37
Luminous Opening: Rectangular (W 2' x L: 2' x H: 0')
CIE Type: Direct

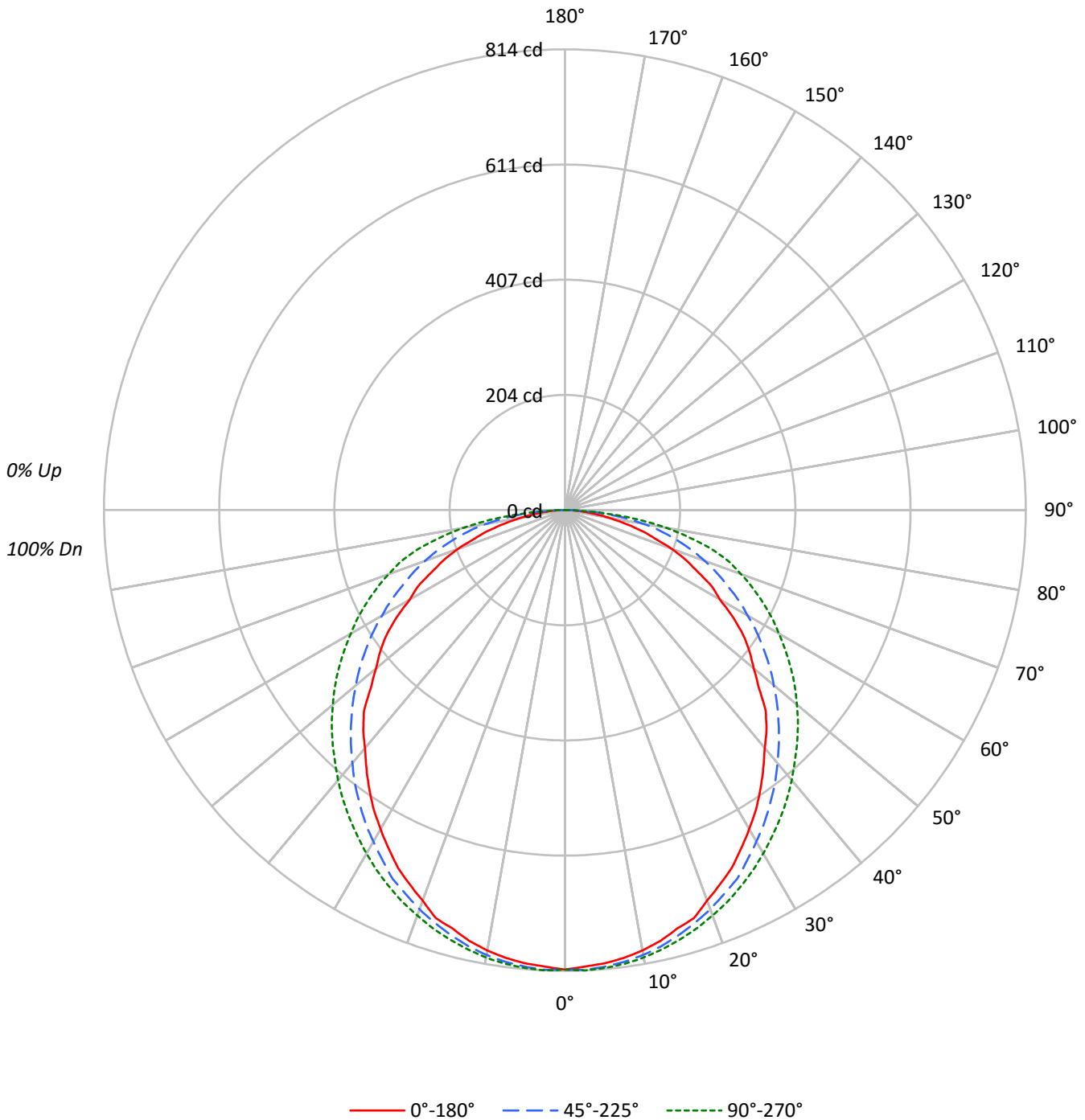
Input Watts (W): 22.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	98	94	105	100	96	92	96	93	90	92	89	87	89	86	84	82
2	98	89	82	76	95	87	80	75	83	78	73	80	75	71	77	73	70	67
3	89	78	69	62	86	76	68	62	73	66	61	70	64	60	68	63	59	56
4	81	69	60	53	79	67	59	52	65	57	51	62	56	51	60	55	50	48
5	74	61	52	45	72	60	51	45	58	50	44	56	49	44	54	48	43	41
6	69	55	46	39	67	54	45	39	52	44	39	51	44	38	49	43	38	36
7	64	50	41	35	62	49	40	34	47	40	34	46	39	34	45	38	34	32
8	59	45	37	31	58	45	36	31	43	36	30	42	35	30	41	35	30	28
9	55	42	33	28	54	41	33	28	40	33	27	39	32	27	38	32	27	25
10	52	38	30	25	51	38	30	25	37	30	25	36	29	25	35	29	25	23

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	2185	2185	2185
5°	2171	2187	2193
10°	2158	2181	2193
15°	2133	2165	2188
20°	2103	2149	2182
25°	2070	2136	2180
30°	2023	2102	2177
35°	1979	2077	2180
40°	1929	2051	2189
45°	1909	2032	2208
50°	1823	2017	2240
55°	1804	2011	2288
60°	1702	2007	2350
65°	1652	2021	2456
70°	1585	2068	2607
75°	1445	2131	2806
80°	1238	2208	2836
85°	1000	2109	2433



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	76.8	3.2
10°-20°	219.2	9.1
20°-30°	329.9	13.6
30°-40°	395.9	16.4
40°-50°	413.8	17.1
50°-60°	385.6	15.9
60°-70°	316.3	13.1
70°-80°	213.1	8.8
80°-90°	69.4	2.9
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°	625.9	25.9
0°-40°	1021.8	42.2
0°-60°	1821.2	75.3
0°-90°	2420.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2420.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	812	812	812	812	812	
5°	804	806	810	811	812	76
15°	766	770	777	784	785	216
25°	697	702	719	730	734	321
35°	602	610	632	654	664	377
45°	502	505	534	566	580	383
55°	384	392	429	469	488	341
65°	259	271	317	364	386	258
75°	139	154	205	251	270	146
85°	32	46	68	80	79	39
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	811.9	811.9	811.9	811.9	811.9
2.5°	807.3	809.6	813.1	814.2	814.2
5°	803.8	806.1	809.6	810.8	811.9
7.5°	798.0	800.3	805.0	807.3	808.5
10°	789.9	792.2	798.0	801.5	802.7
12.5°	779.5	781.8	788.8	793.4	794.6
15°	765.6	770.2	777.2	784.1	785.3
17.5°	756.3	755.2	764.4	772.6	774.9
20°	734.3	740.1	750.5	759.8	762.1
22.5°	715.8	720.4	734.3	744.8	749.4
25°	697.3	701.9	719.3	729.7	734.3
27.5°	674.1	681.0	697.3	712.3	718.1
30°	650.9	657.9	676.4	693.8	700.7
32.5°	627.8	635.9	655.6	674.1	682.2
35°	602.3	610.4	632.4	654.4	663.7
37.5°	575.6	586.1	609.2	633.6	644.0
40°	549.0	559.4	583.8	611.6	623.1
42.5°	527.0	531.6	559.4	589.5	601.1
45°	501.5	505.0	534.0	566.4	580.3
47.5°	464.5	477.2	508.5	544.4	558.3
50°	435.5	449.4	481.8	520.1	535.1
52.5°	411.2	420.4	456.3	494.6	511.9
55°	384.5	391.5	428.6	469.1	487.6
57.5°	352.1	364.8	401.9	443.6	462.1
60°	316.2	332.4	373.0	418.1	436.7
62.5°	293.0	302.3	346.3	391.5	412.3
65°	259.4	271.0	317.4	363.7	385.7
67.5°	231.6	243.2	290.7	337.0	359.1
70°	201.5	213.1	262.9	309.3	331.3
72.5°	166.8	183.0	235.1	281.5	304.6
75°	139.0	154.0	205.0	251.3	269.9
77.5°	107.7	127.4	174.9	213.1	227.0
80°	79.9	99.6	142.5	170.3	183.0
82.5°	54.4	74.1	106.6	127.4	134.4
85°	32.4	46.3	68.3	79.9	78.8
87.5°	15.1	19.7	27.8	27.8	26.6
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)