

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: P309473

Luminaire Tested: **24FCZ2-45-UNV-L82765-HRP-CP125-W2A-U-2700K**

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: P309473
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: 24FCZ2-45-UNV-L82765-HRP-CP125-W2A-U-2700K
Description: 2'X4' TROFFER LED MODULE, HIGH EFFICIENCY RND PERF. LENS, 0.125" POLYCARB SHEET
Light Source: (168) 2700K 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: 2818.0 lumens
Efficiency: N/A
Efficacy: 74.9 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

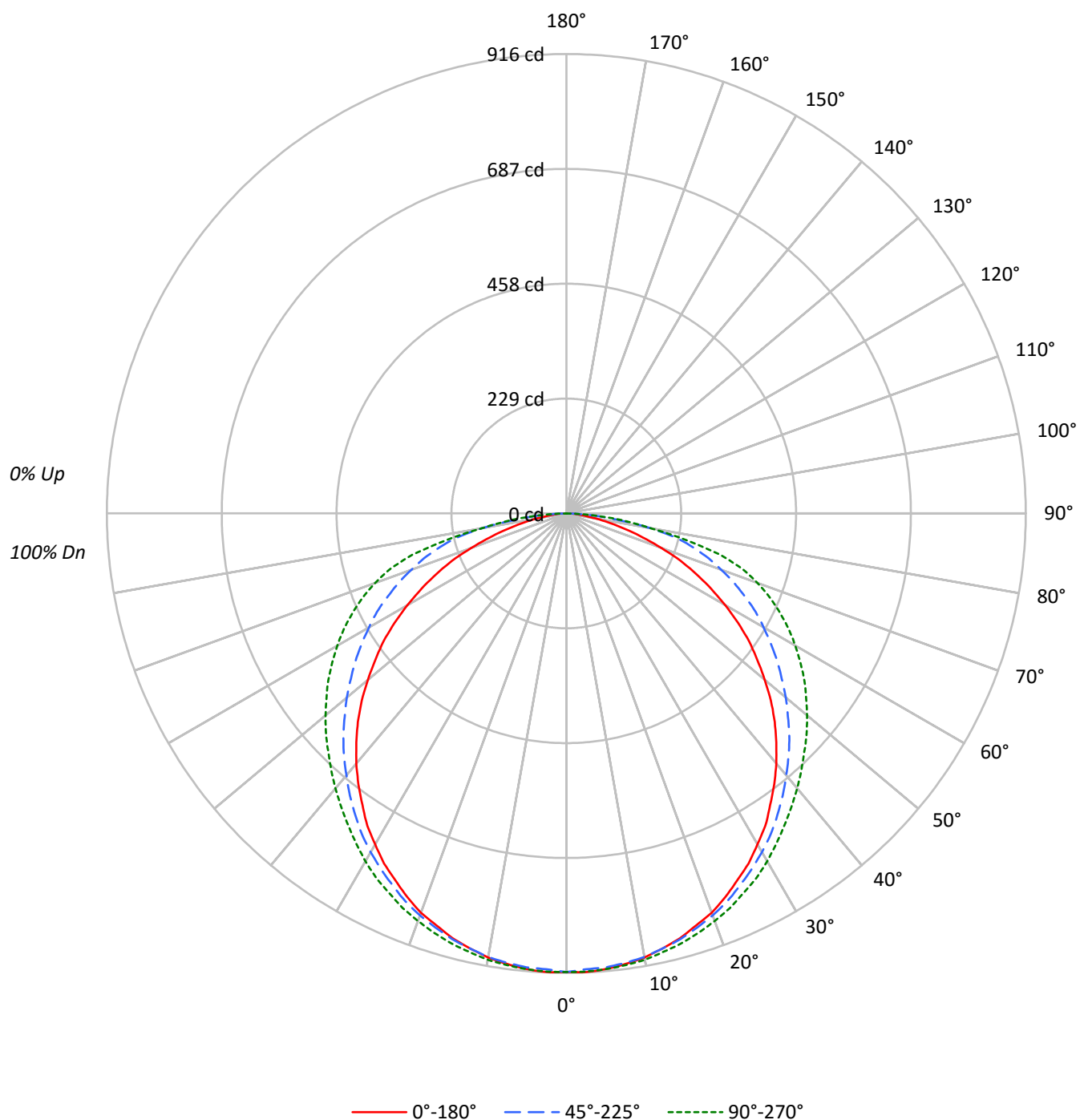
Input Watts (W): 37.6
Input Voltage (V): NR
Input Current (Ain): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 25 FT



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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	50	30	10	50	30	10
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	101	96	93	96	93	90	92	90	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	59	68	63	58	56		
4	81	68	59	52	79	67	59	52	65	57	51	62	56	50	60	54	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	38	50	43	38	49	42	38	36		
7	63	50	41	34	62	49	40	34	47	39	34	46	39	34	44	38	33	31		
8	59	45	36	30	57	44	36	30	43	36	30	42	35	30	41	34	30	28		
9	55	41	33	27	54	41	33	27	40	32	27	39	32	27	38	31	27	25		
10	52	38	30	25	50	38	30	25	37	30	25	36	29	24	35	29	24	23		

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1230	1230	1230
5°	1232	1227	1232
10°	1228	1227	1235
15°	1221	1224	1236
20°	1213	1221	1238
25°	1198	1215	1240
30°	1184	1212	1244
35°	1165	1205	1246
40°	1144	1198	1258
45°	1118	1196	1277
50°	1082	1195	1311
55°	1043	1204	1359
60°	984	1222	1419
65°	909	1251	1499
70°	793	1295	1596
75°	644	1362	1650
80°	475	1334	1334
85°	364	983	1112



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	86.6	3.1
10°-20°	248.7	8.8
20°-30°	378.6	13.4
30°-40°	459.8	16.3
40°-50°	485.7	17.2
50°-60°	458.3	16.3
60°-70°	381.1	13.5
70°-80°	250.7	8.9
80°-90°	68.3	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°	714.0	25.3
0°-40°	1173.7	41.7
0°-60°	2117.8	75.2
0°-90°	2818.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2818.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	914	914	914	914	914	
5°	912	912	908	912	912	87
15°	877	878	879	887	887	247
25°	807	812	819	833	835	372
35°	709	717	734	753	759	444
45°	588	599	629	660	671	452
55°	445	464	513	562	579	396
65°	286	318	393	451	471	282
75°	124	180	262	310	317	133
85°	24	52	64	71	72	29
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	914.3	914.3	914.3	914.3	914.3
2.5°	915.5	914.3	909.6	914.3	914.3
5°	911.9	911.9	908.4	911.9	911.9
7.5°	906.0	906.0	903.7	908.4	908.4
10°	899.0	899.0	897.8	903.7	903.7
12.5°	888.3	889.5	888.3	895.4	895.4
15°	876.6	877.7	878.9	887.2	887.2
17.5°	861.2	863.6	865.9	875.4	876.6
20°	847.1	848.2	853.0	863.6	864.8
22.5°	828.2	831.7	837.6	848.2	851.8
25°	806.9	811.7	818.7	832.9	835.3
27.5°	786.9	790.4	799.9	815.2	819.9
30°	762.1	768.0	779.8	795.1	801.0
32.5°	738.5	744.4	758.6	775.1	779.8
35°	709.0	717.3	733.8	752.7	758.6
37.5°	680.7	689.0	709.0	730.3	737.3
40°	651.2	660.7	681.9	706.7	716.1
42.5°	619.4	632.3	655.9	683.1	693.7
45°	587.5	599.3	628.8	659.5	671.3
47.5°	553.3	567.5	599.3	635.9	650.0
50°	516.7	534.4	571.0	611.1	626.4
52.5°	480.2	500.2	541.5	586.3	602.8
55°	444.8	463.6	513.2	561.6	579.3
57.5°	405.8	429.4	483.7	535.6	553.3
60°	365.7	391.7	454.2	508.5	527.3
62.5°	325.6	355.1	425.9	480.2	500.2
65°	285.5	318.5	392.9	450.7	470.7
67.5°	246.6	283.1	362.2	420.0	440.0
70°	201.7	247.7	329.1	385.8	405.8
72.5°	160.4	213.5	297.3	350.4	368.1
75°	123.9	180.5	261.9	310.3	317.4
77.5°	90.8	147.5	225.3	241.8	243.0
80°	61.3	118.0	172.2	169.9	172.2
82.5°	40.1	88.5	108.5	121.5	122.7
85°	23.6	51.9	63.7	70.8	72.0
87.5°	11.8	17.7	22.4	23.6	26.0
90°	0.0	0.0	0.0	0.0	0.0

(END OF REPORT)