

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: 4158.0

Luminaire Tested: **HDR-150I-81**

Issue Date: 3/3/2020



Test Information

Test Method: LM-79-08
Report Number: 4158.0
Test Lab:
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: FAIL-SAFE
Catalog Number: HDR-150I-81
Description: FAIL-SAFE
Light Source: 150I 2880 LUMENS
Ballast/Driver: -

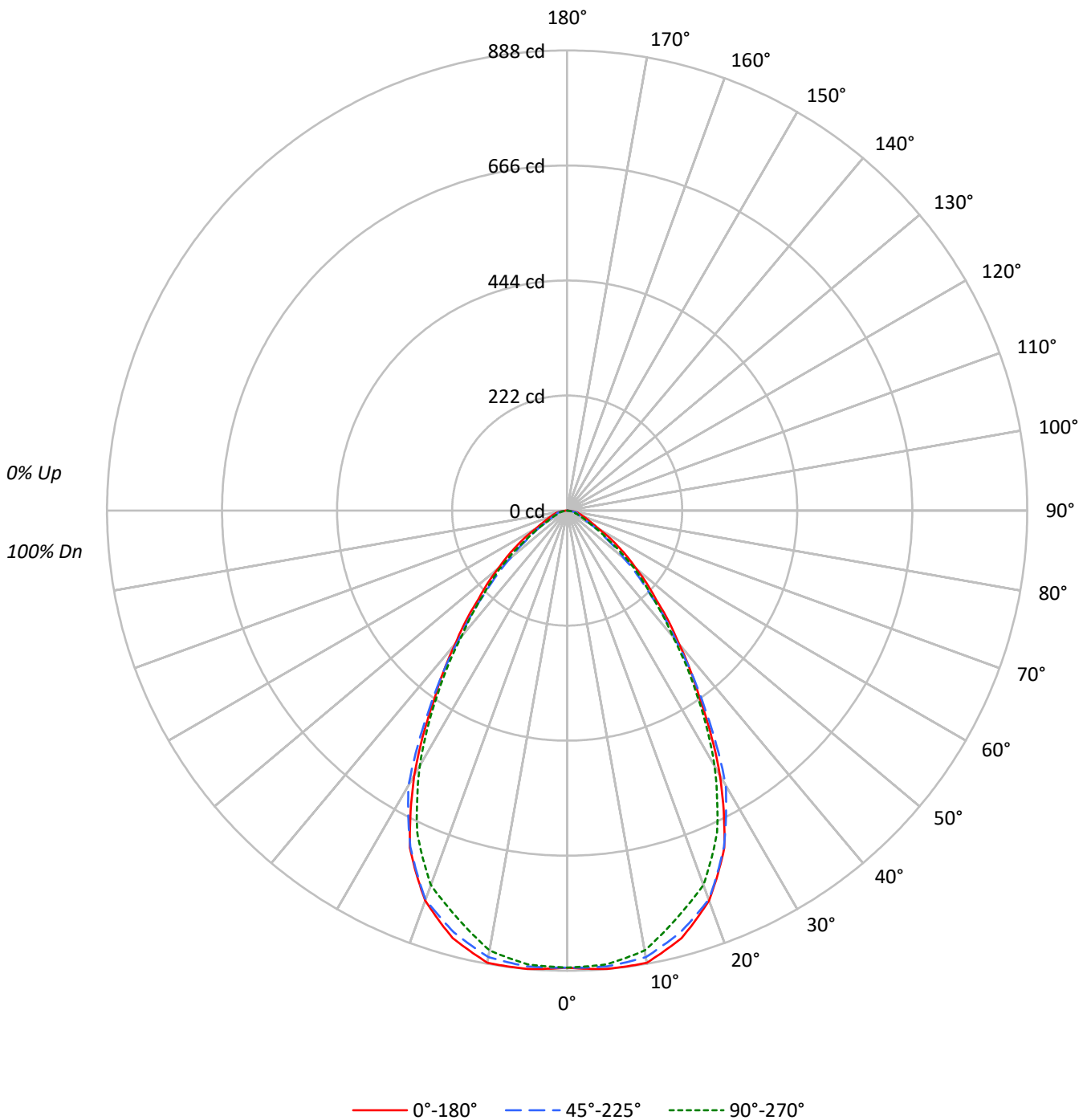
Summary

Lumens per Lamp: 2880 (1 lamp)
Luminaire Lumens: 1256.2 lumens
Efficiency: 43.6%
Efficacy: 8.4 lumens/watt
Spacing Criteria (0/90/45): 1.06 / 1.04 / 1.04
Luminous Opening: Rectangular (W 1' x L: 1' x H: 0')
CIE Type: Direct

Input Watts (W): 150
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

TEST NUMBER: 4158.0
CATALOG NUMBER: HDR-150I-81

Luminous Intensity Polar Plot





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 CATALOG NUMBER: HDR-150I-81

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	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	50	30	10	50	30	10	0														
RCR																																						
0	52	52	52	52	51	51	51	51	48	48	48	46	46	46	45	45	45	44	44	44	44	44	44	44														
1	49	47	46	45	48	46	45	44	45	44	43	43	42	42	42	41	40	40	40	40	40	40	40	40														
2	46	43	41	39	45	42	40	39	41	39	38	40	38	37	38	37	36	35	35	35	35	35	35	35														
3	43	39	37	35	42	39	36	34	38	35	34	36	35	33	35	34	33	32	32	32	32	32	32	32														
4	40	36	33	31	39	36	33	31	35	32	30	34	32	30	33	31	30	29	29	29	29	29	29	29														
5	38	33	30	28	37	33	30	28	32	29	27	31	29	27	30	28	27	26	26	26	26	26	26	26														
6	35	31	27	25	35	30	27	25	30	27	25	29	27	25	28	26	25	24	24	24	24	24	24	24														
7	33	28	25	23	32	28	25	23	27	25	23	27	24	23	26	24	23	22	22	22	22	22	22	22														
8	31	26	23	21	31	26	23	21	26	23	21	25	23	21	25	22	21	20	20	20	20	20	20	20														
9	29	25	22	19	29	24	21	19	24	21	19	23	21	19	23	21	19	18	18	18	18	18	18	18														
10	28	23	20	18	27	23	20	18	22	20	18	22	20	18	22	19	18	17	17	17	17	17	17	17														

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	9494	9494	9494
5°	9595	9541	9498
10°	9684	9564	9422
15°	9517	9394	9082
20°	9175	9152	8809
25°	8527	8504	8136
30°	7333	7607	7072
35°	5900	6045	5769
40°	4721	4581	4454
45°	3699	3395	3456
50°	2897	2411	2696
55°	2233	1651	1727
60°	1507	1119	1098
65°	1197	840	815
70°	1070	692	661
75°	998	790	624
80°	1178	806	496
85°	741	0	0



TEST NUMBER: 4158.0
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ZONAL LUMENS:

CANDELA DISTRIBUTION:

Zone	Lumens	% Fixture	% Lamp		0°	22.5°	45°	67.5°	90°	Flux
0°-10°	83.9	6.7	2.9	0°	882	882	882	882	882	
10°-20°	235.8	18.8	8.2	5°	888	890	883	882	879	85
20°-30°	320.8	25.5	11.1	15°	854	847	843	838	815	240
30°-40°	286.4	22.8	9.9	25°	718	714	716	706	685	325
40°-50°	183.1	14.6	6.4	35°	449	466	460	459	439	284
50°-60°	87.8	7.0	3.0	45°	243	236	223	229	227	191
60°-70°	36.0	2.9	1.2	55°	119	99	88	86	92	107
70°-80°	19.5	1.6	0.7	65°	47	39	33	33	32	48
80°-90°	2.8	0.2	0.1	75°	24	19	19	18	15	27
90°-100°	0.0	0.0	0.0	85°	6	0	0	0	0	7
100°-110°	0.0	0.0	0.0	90°	0	0	0	0	0	
110°-120°	0.0	0.0	0.0							
120°-130°	0.0	0.0	0.0							
130°-140°	0.0	0.0	0.0							
140°-150°	0.0	0.0	0.0							
150°-160°	0.0	0.0	0.0							
160°-170°	0.0	0.0	0.0							
170°-180°	0.0	0.0	0.0							
0°-30°	640.5	51.0	22.2							
0°-40°	926.9	73.8	32.2							
0°-60°	1197.8	95.4	41.6							
0°-90°	1256.2	100.0	43.6							
90°-120°	0.0	0.0	0.0							
90°-150°	0.0	0.0	0.0							
90°-180°	0.0	0.0	0.0							
0°-180°	1256.2	100.0	43.6							



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CANDELA DISTRIBUTION (FULL):

	0°	5°	15°	25°	35°	45°	55°	65°	75°	85°	90°
0°	882	882	882	882	882	882	882	882	882	882	882
5°	888	890	890	890	885	883	880	885	875	878	879
10°	886	882	879	877	878	875	867	872	862	854	862
15°	854	851	839	850	849	843	843	840	832	827	815
20°	801	790	781	797	804	799	790	781	775	760	769
25°	718	701	713	715	714	716	721	711	693	691	685
30°	590	589	591	590	593	612	595	574	576	555	569
35°	449	469	469	465	462	460	465	462	450	432	439
40°	336	335	345	335	343	326	341	341	327	323	317
45°	243	240	239	235	236	223	234	230	226	233	227
50°	173	173	163	152	153	144	144	153	143	151	161
55°	119	110	104	97	91	88	87	85	89	90	92
60°	70	64	65	53	50	52	50	47	50	51	51
62°	59	54	48	44	40	39	39	38	42	41	42
65°	47	43	39	39	33	33	31	33	34	30	32
67°	41	38	34	33	28	29	28	30	29	25	27
70°	34	28	30	28	26	22	24	27	24	22	21
72°	30	24	25	24	23	21	22	24	21	19	17
75°	24	19	20	19	19	19	20	19	17	17	15
77°	22	17	16	15	16	19	18	13	13	12	13
80°	19	13	10	10	11	13	16	8	9	7	8
82°	14	9	7	4	5	7	6	4	5	4	1
85°	6	2	0	0	0	0	0	0	0	0	0
87°	0	0	0	0	0	0	0	0	0	0	0
90°	0	0	0	0	0	0	0	0	0	0	0

(END OF REPORT)