

Scaled data based on original data using
LM-46-04 Photometric Testing of Indoor Luminaires Using High Intensity Discharge or
Incandescent Filament Lamps (Reaffirmed 2012)

Test Report Prepared for

Cooper Lighting Solutions

(formerly Eaton)

Brand: SHAPER

Report Number: 253P298

Luminaire Tested: **1220-XX-36-MH/3/150-T5C/1/40**

Issue Date: 3/3/2020

Test Information

Test Method: LM-46-04
Report Number: 253P298
Test Lab: METALUX LABORATORIES
Issue Date: 3/3/2020
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: SHAPER
Catalog Number: 1220-XX-36-MH/3/150-T5C/1/40
Description: SHAPER 36 INCH 1220 SERIES DIRECT/INDIRECT INDOOR PENDANT FIXTURE
WITH DEEP DIFFUSING BOWL
Light Source: THREE 150 WATT T5 CERAMIC METAL HALIDE AND ONE 40 WATTS T5 CIRCLINE
(3)CDM150MH -14000 LUMENS AND (1)TL5C40W/830 - 3300 LUMENS
Ballast/Driver: -

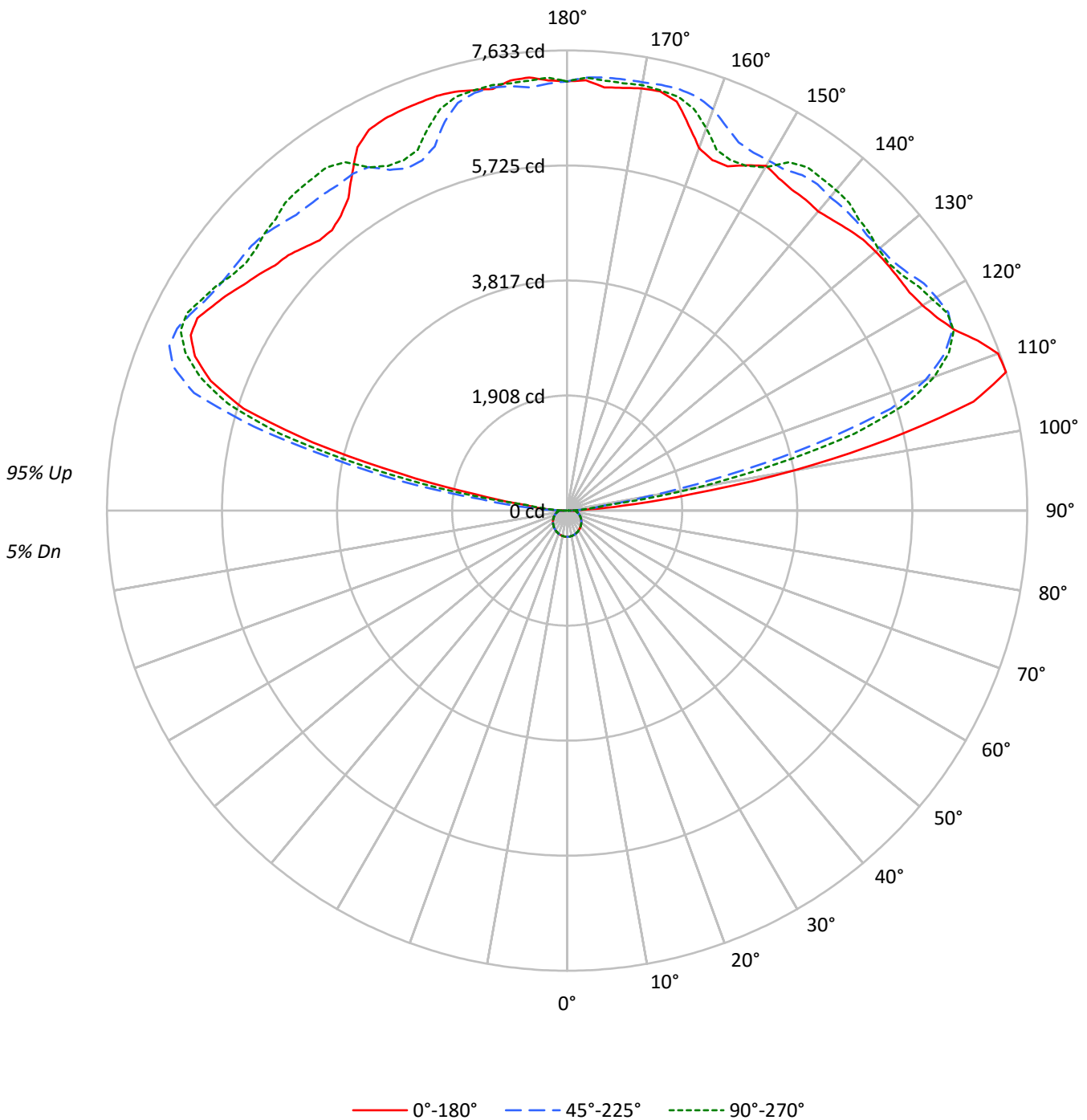
Summary

Lumens per Lamp: 45300 (1 lamp)
Luminaire Lumens: 35647.9 lumens
Efficiency: 78.7%
Efficacy: 829.0 lumens/watt
Spacing Criteria (0/90/45): 1.31 / 1.31 / 1.46
Luminous Opening: Circular (Dia: 3' x H: 0')
CIE Type: Indirect

Input Watts (W): 43
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				10	0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																		
0	76	76	76	76	65	65	65	65	46	46	46	28	28	28	11	11	11	4
1	69	66	63	60	59	57	54	52	40	38	37	24	23	23	10	10	9	3
2	63	57	53	49	54	49	46	42	35	32	30	21	20	19	8	8	8	2
3	57	50	45	40	49	43	39	35	30	28	25	18	17	16	7	7	6	2
4	52	44	38	34	44	38	33	30	27	24	21	16	15	13	7	6	5	2
5	47	39	33	29	41	34	29	25	24	21	18	15	13	11	6	5	5	1
6	44	35	29	25	37	30	25	22	21	18	16	13	11	10	5	5	4	1
7	40	31	25	21	34	27	22	19	19	16	14	12	10	8	5	4	3	1
8	37	28	22	18	32	24	20	16	17	14	12	11	9	7	4	4	3	1
9	34	25	20	16	29	22	17	14	16	13	10	10	8	6	4	3	3	1
10	32	23	18	14	27	20	16	13	14	11	9	9	7	6	4	3	2	1

AVERAGE LUMINANCE (cd/sqm):

	0°	90°	180°
0°	661	661	661
5°	662	662	662
10°	662	662	662
15°	662	662	662
20°	663	663	663
25°	665	665	665
30°	668	668	668
35°	677	677	677
40°	688	688	688
45°	704	704	704
50°	727	727	727
55°	759	759	759
60°	804	804	804
65°	872	872	872
70°	975	975	975
75°	1159	1159	1159
80°	1526	1526	1526
85°	2673	2673	2673



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ZONAL LUMENS:

Zone	Lumens	% Fixture	% Lamp
0°-10°	41.2	0.1	0.1
10°-20°	118.7	0.3	0.3
20°-30°	182.6	0.5	0.4
30°-40°	227.9	0.6	0.5
40°-50°	252.5	0.7	0.6
50°-60°	255.9	0.7	0.6
60°-70°	239.8	0.7	0.5
70°-80°	208.1	0.6	0.5
80°-90°	152.6	0.4	0.3
90°-100°	776.1	2.2	1.7
100°-110°	5033.6	14.1	11.1
110°-120°	6924.6	19.4	15.3
120°-130°	6123.2	17.2	13.5
130°-140°	5187.1	14.6	11.5
140°-150°	4197.0	11.8	9.3
150°-160°	3052.1	8.6	6.7
160°-170°	1992.9	5.6	4.4
170°-180°	681.8	1.9	1.5
0°-30°	342.4	1.0	0.8
0°-40°	570.4	1.6	1.3
0°-60°	1078.8	3.0	2.4
0°-90°	1679.4	4.7	3.7
90°-120°	12734.3	35.7	28.1
90°-150°	28241.6	79.2	62.3
90°-180°	33968.0	95.3	75.0
0°-180°	35647.9	100.0	78.7

CANDELA DISTRIBUTION:

	0°	45°	90°	135°	180°	Flux
0°	434	434	434	434	434	
5°	433	433	433	433	433	41
15°	420	420	420	420	420	119
25°	396	396	396	396	396	183
35°	364	364	364	364	364	228
45°	327	327	327	327	327	253
55°	286	286	286	286	286	256
65°	242	242	242	242	242	240
75°	197	197	197	197	197	208
85°	153	153	153	153	153	129
90°	53	27	10	31	46	65
95°	924	396	310	797	452	1357
105°	6976	4274	4930	5379	4367	6800
115°	7092	7047	7074	7141	6889	7100
125°	6714	6887	6796	6851	6540	6033
135°	6594	6788	6837	6721	6171	5105
145°	6496	6794	6952	6602	6325	4093
155°	6299	6736	6413	6265	7169	2960
165°	7025	7232	7108	7003	7192	1945
175°	7047	7210	7159	7044	7211	676
180°	7119	7119	7119	7119	7119	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
0°	434	434	434	434	434	434	434	434	434
2.5°	434	434	434	434	434	434	434	434	434
5°	433	433	433	433	433	433	433	433	433
7.5°	431	431	431	431	431	431	431	431	431
10°	428	428	428	428	428	428	428	428	428
12.5°	425	425	425	425	425	425	425	425	425
15°	420	420	420	420	420	420	420	420	420
17.5°	415	415	415	415	415	415	415	415	415
20°	409	409	409	409	409	409	409	409	409
22.5°	403	403	403	403	403	403	403	403	403
25°	396	396	396	396	396	396	396	396	396
27.5°	388	388	388	388	388	388	388	388	388
30°	380	380	380	380	380	380	380	380	380
32.5°	372	372	372	372	372	372	372	372	372
35°	364	364	364	364	364	364	364	364	364
37.5°	355	355	355	355	355	355	355	355	355
40°	346	346	346	346	346	346	346	346	346
42.5°	336	336	336	336	336	336	336	336	336
45°	327	327	327	327	327	327	327	327	327
47.5°	317	317	317	317	317	317	317	317	317
50°	307	307	307	307	307	307	307	307	307
52.5°	296	296	296	296	296	296	296	296	296
55°	286	286	286	286	286	286	286	286	286
57.5°	275	275	275	275	275	275	275	275	275
60°	264	264	264	264	264	264	264	264	264
62.5°	253	253	253	253	253	253	253	253	253
65°	242	242	242	242	242	242	242	242	242
67.5°	231	231	231	231	231	231	231	231	231
70°	219	219	219	219	219	219	219	219	219
72.5°	208	208	208	208	208	208	208	208	208
75°	197	197	197	197	197	197	197	197	197
77.5°	186	186	186	186	186	186	186	186	186
80°	174	174	174	174	174	174	174	174	174
82.5°	164	164	164	164	164	164	164	164	164
85°	153	153	153	153	153	153	153	153	153
87.5°	142	142	142	142	142	142	142	142	142
90°	53	21	27	32	10	36	31	18	46
92.5°	229	229	175	182	162	211	250	162	197
95°	924	655	396	415	310	710	797	371	452
97.5°	2053	1057	565	620	636	1812	1431	535	677
100°	3804	2197	1373	1701	2166	3321	2753	1384	1533
102.5°	5453	3298	2724	2988	3534	4908	3961	2716	2831
105°	6976	4730	4274	4477	4930	6290	5379	4277	4367
107.5°	7633	6042	5631	5679	5898	7003	6492	5681	5630
110°	7608	6721	6326	6280	6480	7208	6947	6429	6293



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CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°	112.5°	135°	157.5°	180°
112.5°	7367	7090	6771	6658	6855	7211	7143	6889	6682
115°	7092	7214	7047	6876	7074	7091	7141	7170	6889
117.5°	6926	7164	7127	6923	7105	6964	7049	7245	6914
120°	6806	7061	7073	6847	6999	6833	6946	7193	6787
122.5°	6736	6978	7015	6762	6913	6740	6877	7131	6672
125°	6714	6922	6887	6645	6796	6716	6851	7001	6540
127.5°	6701	6889	6798	6553	6727	6691	6838	6915	6440
130°	6681	6887	6775	6471	6742	6681	6833	6917	6326
132.5°	6655	6857	6752	6444	6808	6684	6798	6906	6272
135°	6594	6794	6788	6425	6837	6642	6721	6967	6171
137.5°	6529	6750	6797	6397	6925	6607	6654	7005	6080
140°	6478	6743	6787	6419	6940	6588	6632	6999	6071
142.5°	6501	6716	6823	6501	6942	6592	6623	7001	6164
145°	6496	6692	6794	6546	6952	6589	6602	6926	6325
147.5°	6536	6677	6706	6650	6851	6618	6622	6737	6634
150°	6602	6561	6698	6804	6573	6616	6581	6589	6957
152.5°	6456	6354	6694	6888	6445	6431	6372	6510	7121
155°	6299	6281	6736	6937	6413	6297	6265	6534	7169
157.5°	6293	6325	6894	7036	6478	6301	6287	6708	7189
160°	6397	6510	7082	7140	6749	6427	6428	6963	7197
162.5°	6704	6835	7192	7192	6987	6742	6759	7142	7210
165°	7025	7032	7232	7194	7108	7017	7003	7219	7192
167.5°	7122	7109	7232	7166	7142	7092	7097	7239	7143
170°	7112	7145	7214	7132	7166	7098	7127	7235	7101
172.5°	7070	7122	7213	7184	7150	7064	7098	7205	7196
175°	7047	7064	7210	7199	7159	7039	7044	7189	7211
177.5°	7143	7090	7189	7156	7187	7125	7091	7189	7141
180°	7119	7119	7119	7119	7119	7119	7119	7119	7119

(END OF REPORT)