

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



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: METALUX

Report Number: P828102

Luminaire Tested: **OHBL-36SE-MCL-UNV-L935-CD-UPL36**

Issue Date: 5/3/2024



Test Information

Test Method: LM-79-08
Report Number: P828102
REPORT IS A COMBINATION OF REPORTS P826318 AND G3-2310-221-2
Test Lab: INNOVATION CENTER
Issue Date: 5/3/2024
Manufacturer: COOPER LIGHTING SOLUTIONS (FORMERLY EATON)
Product Line: METALUX
Catalog Number: OHBL-36SE-MCL-UNV-L935-CD-UPL36
Description:
Light Source: -
Ballast/Driver: -

Summary

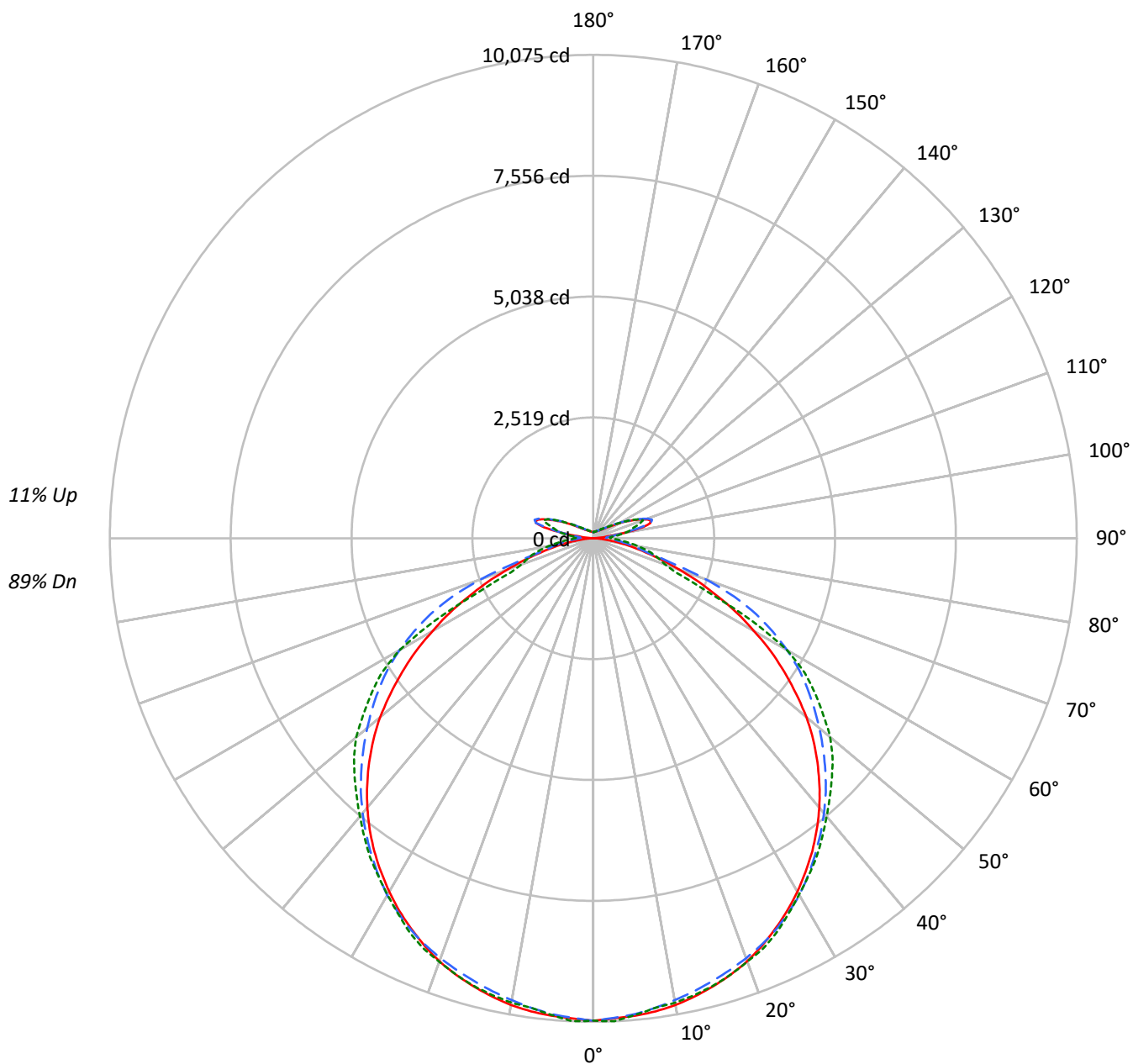
Lumens per Lamp: N/A
Luminaire Lumens: 31403.4 lumens
Efficiency: N/A
Efficacy: 131.0 lumens/watt
Spacing Criteria (0/90/45): 1.26 / 1.27 / 1.39
Luminous Opening: Rectangular w/ Sides (W: 3.78' x L: 1.8' x H: 0.17')
CIE Type: Semi-Direct

Input Watts (W): 239.8
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: P828102

CATALOG NUMBER: OHBL-36SE-MCL-UNV-L935-CD-UPL36

Luminous Intensity Polar Plot





TEST NUMBER: P828102

CATALOG NUMBER: OHBL-36SE-MCL-UNV-L935-CD-UPL36

COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20
RC	80				70				50				30				10
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10
RCR																	
0	117	117	117	117	113	113	113	113	105	105	105	99	99	99	92	92	92
1	107	102	98	94	103	99	95	92	93	90	87	87	85	83	82	80	78
2	97	89	83	77	94	87	81	76	81	76	72	77	73	69	72	69	66
3	89	79	71	64	85	76	69	63	72	66	61	68	63	58	64	60	56
4	81	70	61	55	78	68	60	54	64	57	52	60	55	50	57	52	48
5	75	62	53	47	72	60	52	46	57	50	45	54	48	43	51	46	42
6	69	56	47	41	66	54	46	40	52	44	39	49	43	38	46	41	37
7	64	51	42	36	61	49	41	36	47	40	35	44	38	34	42	37	33
8	59	46	38	32	57	45	37	32	43	36	31	41	35	30	39	33	29
9	55	42	34	29	53	41	34	28	39	32	28	37	31	27	36	30	26
10	52	39	31	26	50	38	31	26	36	30	25	35	29	24	33	28	24

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15901	15901	15901
5°	15730	15670	15769
10°	15607	15432	15660
15°	15441	15255	15623
20°	15274	15143	15554
25°	15019	15031	15489
30°	14745	14853	15272
35°	14428	14571	15193
40°	14036	14280	15062
45°	13519	13944	15066
50°	12847	13561	15068
55°	11835	13184	14646
60°	10545	12632	13705
65°	8905	11608	8822
70°	7020	9062	6536
75°	5096	5379	6850
80°	3359	4473	6905
85°	1704	4098	7261



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	948.0	3.0
10°-20°	2718.5	8.7
20°-30°	4152.0	13.2
30°-40°	5037.9	16.0
40°-50°	5280.2	16.8
50°-60°	4784.6	15.2
60°-70°	3207.9	10.2
70°-80°	1440.5	4.6
80°-90°	529.1	1.7
90°-100°	386.6	1.2
100°-110°	1112.6	3.5
110°-120°	896.6	2.9
120°-130°	427.3	1.4
130°-140°	220.0	0.7
140°-150°	129.9	0.4
150°-160°	77.7	0.2
160°-170°	41.3	0.1
170°-180°	12.6	0.0
0°-30°	7818.6	24.9
0°-40°	12856.5	40.9
0°-60°	22921.3	73.0
0°-90°	28098.8	89.5
90°-120°	2395.9	7.6
90°-150°	3173.0	10.1
90°-180°	3305.0	10.5
0°-180°	31403.4	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	10054	10054	10054	10054	10054	
5°	9989	10024	9954	9985	9972	950
15°	9665	9627	9559	9643	9655	2729
25°	8979	8939	9002	9085	9059	4139
35°	7958	7977	8058	8144	8112	4974
45°	6605	6712	6837	7012	7033	5088
55°	4860	5094	5442	5660	5646	4338
65°	2852	3299	3745	3161	2580	2842
75°	1122	1628	1198	1226	1306	1227
85°	193	371	475	574	602	236
90°	8	164	298	368	384	16
95°	53	180	306	380	399	194
105°	1237	1262	1238	960	880	1177
115°	870	864	896	913	908	879
125°	433	449	474	470	464	408
135°	263	270	278	288	291	208
145°	195	200	204	208	211	125
155°	161	165	168	169	168	75
165°	142	144	144	145	146	41
175°	131	131	130	129	130	13
180°	128	128	128	128	128	



TEST NUMBER: P828102

CATALOG NUMBER: OHBL-36SE-MCL-UNV-L935-CD-UPL36

CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	10054.4	10054.4	10054.4	10054.4	10054.4
2.5°	10013.8	10055.9	10003.6	10060.2	10074.8
5°	9989.0	10023.9	9954.1	9984.7	9971.6
7.5°	9943.9	9955.6	9872.7	9897.4	9871.2
10°	9877.1	9871.2	9773.8	9821.8	9827.7
12.5°	9778.2	9760.8	9673.5	9746.2	9747.7
15°	9664.8	9627.0	9558.7	9643.0	9654.7
17.5°	9534.0	9484.6	9439.5	9548.5	9531.1
20°	9381.3	9323.2	9314.4	9433.7	9390.1
22.5°	9192.3	9147.3	9167.6	9281.0	9253.4
25°	8978.6	8939.3	9001.9	9084.8	9058.6
27.5°	8753.2	8730.0	8801.2	8865.2	8814.3
30°	8506.2	8493.1	8587.6	8639.9	8575.9
32.5°	8237.2	8241.6	8331.7	8402.9	8343.3
35°	7958.1	7977.0	8058.3	8144.2	8112.2
37.5°	7651.3	7693.5	7774.9	7872.3	7838.8
40°	7327.1	7388.2	7478.3	7596.1	7565.5
42.5°	6976.8	7053.8	7170.1	7300.9	7298.0
45°	6604.6	6712.2	6837.2	7011.7	7033.4
47.5°	6217.8	6338.5	6497.0	6729.6	6763.1
50°	5797.8	5948.9	6146.7	6425.8	6446.1
52.5°	5329.6	5536.1	5797.8	6065.2	6040.5
55°	4860.0	5094.1	5441.6	5659.6	5646.5
57.5°	4391.9	4655.1	5076.7	5232.2	5230.8
60°	3868.6	4201.5	4662.3	4780.1	4663.8
62.5°	3384.4	3742.1	4220.3	4134.6	3736.2
65°	2852.3	3298.7	3745.0	3160.6	2580.5
67.5°	2379.8	2845.1	3180.9	2164.7	1853.6
70°	1904.5	2417.7	2480.2	1606.4	1584.7
72.5°	1482.8	2029.5	1711.1	1375.2	1445.1
75°	1122.3	1628.3	1197.9	1225.6	1305.5
77.5°	818.5	1250.2	931.9	1074.3	1139.8
80°	562.6	885.3	760.3	902.8	947.8
82.5°	353.2	584.4	609.2	726.9	773.4
85°	193.3	370.8	475.4	574.2	601.8
87.5°	80.0	223.9	363.4	443.4	466.7
90°	8.1	164.4	298.2	368.2	383.6
92.5°	22.2	144.5	264.8	328.6	343.8
95°	53.1	180.4	306.2	380.0	399.2
97.5°	314.6	396.1	431.8	517.6	543.4
100°	673.5	737.6	650.2	679.2	700.2
102.5°	1054.2	1103.2	938.8	814.2	793.6
105°	1236.7	1261.8	1237.8	959.5	880.5



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CATALOG NUMBER: OHBL-36SE-MCL-UNV-L935-CD-UPL36

CANDELA DISTRIBUTION (continued):

	0°	22.5°	45°	67.5°	90°
112.5°	1018.5	1031.2	1051.1	1060.8	1037.1
115°	870.0	864.1	895.5	912.9	907.5
117.5°	745.8	740.3	768.8	774.2	768.0
120°	629.2	630.6	657.8	653.4	648.2
122.5°	523.3	535.0	556.8	555.8	546.3
125°	432.7	449.2	473.7	470.5	463.7
127.5°	374.2	379.2	402.4	402.6	404.1
130°	323.3	331.4	347.8	355.3	353.7
132.5°	289.8	297.8	310.6	318.9	321.4
135°	263.1	270.3	278.5	288.2	290.6
137.5°	242.8	247.8	252.8	264.3	266.6
140°	224.5	229.5	233.1	242.2	243.7
142.5°	208.1	214.5	217.2	224.1	225.6
145°	194.8	200.3	204.5	208.5	210.8
147.5°	186.2	189.5	193.7	194.5	196.8
150°	177.0	179.5	182.8	184.5	185.3
152.5°	168.7	171.2	174.5	175.3	176.2
155°	161.2	165.2	167.7	169.3	167.8
157.5°	154.5	158.5	161.0	161.8	161.8
160°	149.5	152.7	155.2	155.2	156.0
162.5°	146.0	147.7	149.3	150.2	151.0
165°	141.8	143.5	144.3	145.2	146.0
167.5°	138.5	140.8	140.2	141.0	141.0
170°	135.2	136.0	136.8	135.3	136.2
172.5°	132.7	133.5	134.3	132.8	132.8
175°	131.0	131.0	130.3	128.9	129.8
177.5°	130.8	130.2	128.7	127.2	126.7
180°	127.8	127.8	127.8	127.8	127.8



Report Generated By 670246072 / DESKTOP-50001EG





— 0°-180° - - 45°-225° - - - 90°-270°







107.5°	1249.8	1272.6	1286.2	1155.8	1013.7
110°	1155.4	1180.8	1197.9	1163.5	1100.6



LM-79-2019: Approved Method: Electrical and Photometric Measurements of Solid-State Lighting Products

Report Prepared for

Cooper Lighting Solutions

METALUX

Report Number: SP1-2307-100-7

Test Date: 07/28/2023

Luminaire Tested: OHB-15SE-N-UNV-L935-CD

Data in this report applies to families of products including OHB-15SE-N-UNV-L935-CD.

Test Information

Test Method: LM-79-2019
Report Number: SP1-2307-100-7
Test Lab: COOPER LIGHTING SOLUTIONS
Photometer: SP1 - 76IN SPHERE
Measurement Geometry: 4π
Issue Date: 08/04/2023
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: METALUX
Catalog Number: **OHB-15SE-N-UNV-L935-CD**
Description: 15000 LUMEN OHB SE LED LUMINAIRE WITH 90CRI, 3500K LEDS AND NARROW LENS

LENS

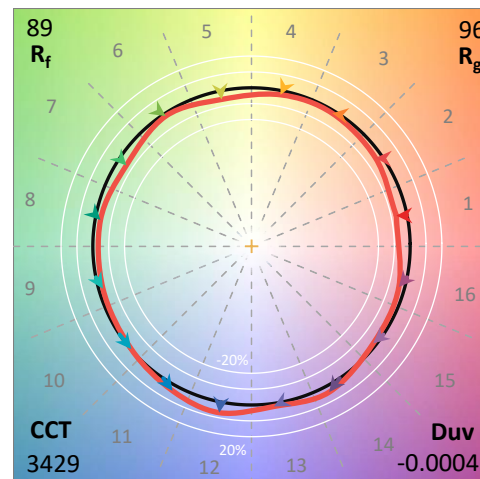
Spectral Parameters

CCT (K): 3429
CIE u': 0.2376
CIE v': 0.5121
Duv: -0.0004
CIE x: 0.4088
CIE y: 0.3916
CIE z: 0.1997
Peak Wavelength (nm): 609
Dominant Wavelength (nm): 581
Purity: 40.4

CRI (Ra): 90.9

R1:	91.1	R9:	50.7
R2:	96.7	R10:	90.8
R3:	97.7	R11:	88.9
R4:	88.8	R12:	74.6
R5:	90.3	R13:	92.9
R6:	94.5	R14:	99.5
R7:	89.8		
R8:	78.2		

Rf: 88.9
Rg: 96.3



Test Conditions

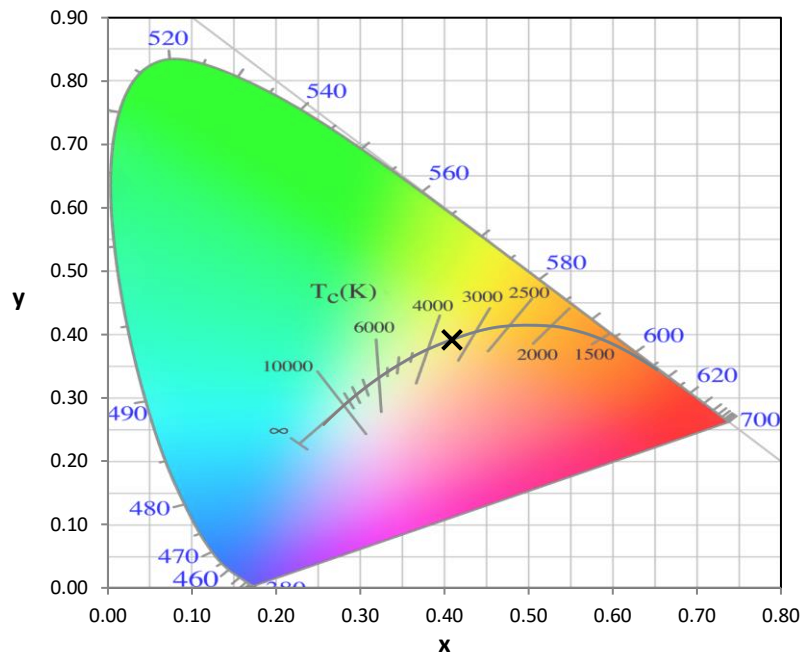
Stabilization Time: 23M
Operation Time: 12H
Room Temperature (°C) / RH%: 25.7/55%
Sphere Temperature (°C): 25.2

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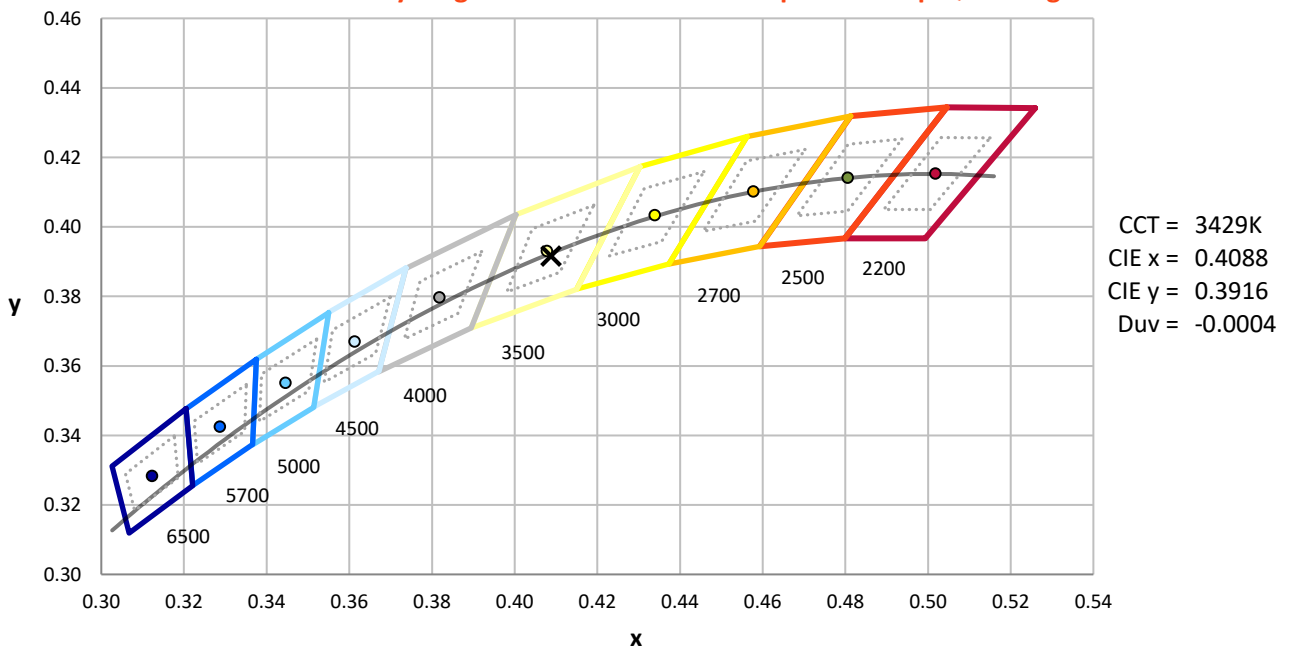
Measurement and Test Equipment			
Instrument	Identification Number	Calibration Date	Calibration Due Date
Photometer	76INCH SPHERE IN0058	2/9/2023	8/9/2023
Power Meter	XITRON 2801 IN0071	11/29/2022	11/29/2023
AC Power Source	CHROMA 61603 IN0063	11/28/2022	11/28/2023
DC Power Source	AGILENT E3634A IN0208	11/28/2022	11/28/2023
Sphere Thermometer	ONSET IN0085	11/28/2022	11/28/2023
Room Thermometer	ONSET IN0046	11/28/2022	11/28/2023

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CIE 1931 Chromaticity Diagram



CIE 1931 Chromaticity Diagram with 2017 ANSI 7-Step and 4-Step Quadrangles



Point lies inside the ANSI 3500K 4-step quadrangle

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Photopic Flux vs. Wavelength



#####

λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	5498	NR	490	81900	NR	620	217907	NR	750	17550	NR	880	6189	NR
365	4903	NR	495	90120	NR	625	213734	NR	755	15662	NR	885	6187	NR
370	4767	NR	500	98453	NR	630	206250	NR	760	13792	NR	890	3830	NR
375	5225	NR	505	109244	NR	635	198796	NR	765	12765	NR	895	4688	NR
380	5499	NR	510	117784	NR	640	189406	NR	770	11372	NR	900	4680	NR
385	5081	NR	515	125000	NR	645	180677	NR	775	9965	NR	905	4599	NR
390	4739	NR	520	131786	NR	650	168402	NR	780	9154	NR	910	4495	NR
395	4255	NR	525	136796	NR	655	157693	NR	785	8847	NR	915	3983	NR
400	3864	NR	530	142357	NR	660	145357	NR	790	7937	NR	920	4675	NR
405	3583	NR	535	147243	NR	665	132743	NR	795	6956	NR	925	4952	NR
410	3994	NR	540	152273	NR	670	120757	NR	800	6970	NR	930	6097	NR
415	5055	NR	545	157222	NR	675	108421	NR	805	6299	NR	935	5657	NR
420	7131	NR	550	161271	NR	680	97325	NR	810	6023	NR	940	4574	NR
425	11311	NR	555	167038	NR	685	86839	NR	815	6343	NR	945	5252	NR
430	17754	NR	560	173115	NR	690	76248	NR	820	6462	NR	950	5635	NR
435	28634	NR	565	178502	NR	695	67406	NR	825	5476	NR	955	4501	NR
440	46392	NR	570	184331	NR	700	60039	NR	830	5786	NR	960	2938	NR
445	78344	NR	575	189666	NR	705	53650	NR	835	5884	NR	965	5544	NR
450	131219	NR	580	196488	NR	710	47273	NR	840	4862	NR	970	5050	NR
455	170311	NR	585	202769	NR	715	41664	NR	845	5651	NR	975	5575	NR
460	154269	NR	590	207213	NR	720	37083	NR	850	5178	NR	980	2973	NR
465	126622	NR	595	213472	NR	725	32494	NR	855	5510	NR	985	4912	NR
470	109065	NR	600	218473	NR	730	28665	NR	860	5438	NR	990	5454	NR
475	91762	NR	605	220737	NR	735	25540	NR	865	5848	NR	995	6068	NR
480	78213	NR	610	221090	NR	740	22878	NR	870	4969	NR	1000	9406	NR
485	77035	NR	615	220059	NR	745	20304	NR	875	5438	NR			

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Scotopic Flux vs. Wavelength



Scotopic Lumens: 19629.6

S/P: 1.6

λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	5498	NR	490	81900	NR	620	217907	NR	750	17550	NR	880	6189	NR
365	4903	NR	495	90120	NR	625	213734	NR	755	15662	NR	885	6187	NR
370	4767	NR	500	98453	NR	630	206250	NR	760	13792	NR	890	3830	NR
375	5225	NR	505	109244	NR	635	198796	NR	765	12765	NR	895	4688	NR
380	5499	NR	510	117784	NR	640	189406	NR	770	11372	NR	900	4680	NR
385	5081	NR	515	125000	NR	645	180677	NR	775	9965	NR	905	4599	NR
390	4739	NR	520	131786	NR	650	168402	NR	780	9154	NR	910	4495	NR
395	4255	NR	525	136796	NR	655	157693	NR	785	8847	NR	915	3983	NR
400	3864	NR	530	142357	NR	660	145357	NR	790	7937	NR	920	4675	NR
405	3583	NR	535	147243	NR	665	132743	NR	795	6956	NR	925	4952	NR
410	3994	NR	540	152273	NR	670	120757	NR	800	6970	NR	930	6097	NR
415	5055	NR	545	157222	NR	675	108421	NR	805	6299	NR	935	5657	NR
420	7131	NR	550	161271	NR	680	97325	NR	810	6023	NR	940	4574	NR
425	11311	NR	555	167038	NR	685	86839	NR	815	6343	NR	945	5252	NR
430	17754	NR	560	173115	NR	690	76248	NR	820	6462	NR	950	5635	NR
435	28634	NR	565	178502	NR	695	67406	NR	825	5476	NR	955	4501	NR
440	46392	NR	570	184331	NR	700	60039	NR	830	5786	NR	960	2938	NR
445	78344	NR	575	189666	NR	705	53650	NR	835	5884	NR	965	5544	NR
450	131219	NR	580	196488	NR	710	47273	NR	840	4862	NR	970	5050	NR
455	170311	NR	585	202769	NR	715	41664	NR	845	5651	NR	975	5575	NR
460	154269	NR	590	207213	NR	720	37083	NR	850	5178	NR	980	2973	NR
465	126622	NR	595	213472	NR	725	32494	NR	855	5510	NR	985	4912	NR
470	109065	NR	600	218473	NR	730	28665	NR	860	5438	NR	990	5454	NR
475	91762	NR	605	220737	NR	735	25540	NR	865	5848	NR	995	6068	NR
480	78213	NR	610	221090	NR	740	22878	NR	870	4969	NR	1000	9406	NR
485	77035	NR	615	220059	NR	745	20304	NR	875	5438	NR			

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Melanopic Flux vs. Wavelength



Melanopic Lumens: 7912.5

M/P: 0.65

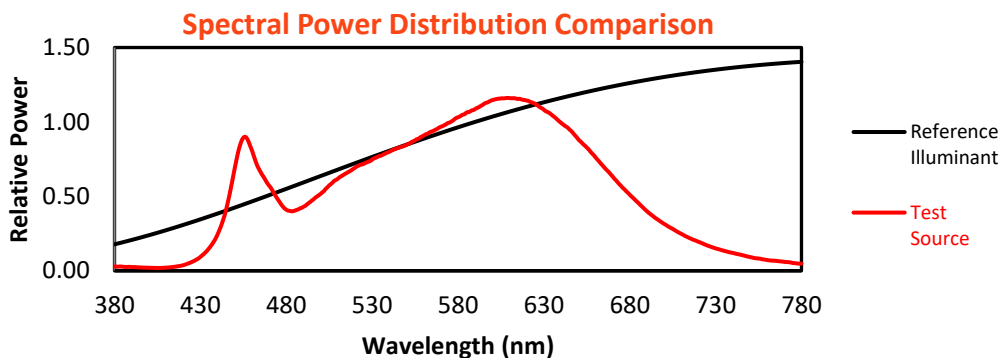
λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)	λ (nm)	Power (μW/nm)	Lumens (φ/nm)
360	5498	NR	490	81900	NR	620	217907	NR	750	17550	NR	880	6189	NR
365	4903	NR	495	90120	NR	625	213734	NR	755	15662	NR	885	6187	NR
370	4767	NR	500	98453	NR	630	206250	NR	760	13792	NR	890	3830	NR
375	5225	NR	505	109244	NR	635	198796	NR	765	12765	NR	895	4688	NR
380	5499	NR	510	117784	NR	640	189406	NR	770	11372	NR	900	4680	NR
385	5081	NR	515	125000	NR	645	180677	NR	775	9965	NR	905	4599	NR
390	4739	NR	520	131786	NR	650	168402	NR	780	9154	NR	910	4495	NR
395	4255	NR	525	136796	NR	655	157693	NR	785	8847	NR	915	3983	NR
400	3864	NR	530	142357	NR	660	145357	NR	790	7937	NR	920	4675	NR
405	3583	NR	535	147243	NR	665	132743	NR	795	6956	NR	925	4952	NR
410	3994	NR	540	152273	NR	670	120757	NR	800	6970	NR	930	6097	NR
415	5055	NR	545	157222	NR	675	108421	NR	805	6299	NR	935	5657	NR
420	7131	NR	550	161271	NR	680	97325	NR	810	6023	NR	940	4574	NR
425	11311	NR	555	167038	NR	685	86839	NR	815	6343	NR	945	5252	NR
430	17754	NR	560	173115	NR	690	76248	NR	820	6462	NR	950	5635	NR
435	28634	NR	565	178502	NR	695	67406	NR	825	5476	NR	955	4501	NR
440	46392	NR	570	184331	NR	700	60039	NR	830	5786	NR	960	2938	NR
445	78344	NR	575	189666	NR	705	53650	NR	835	5884	NR	965	5544	NR
450	131219	NR	580	196488	NR	710	47273	NR	840	4862	NR	970	5050	NR
455	170311	NR	585	202769	NR	715	41664	NR	845	5651	NR	975	5575	NR
460	154269	NR	590	207213	NR	720	37083	NR	850	5178	NR	980	2973	NR
465	126622	NR	595	213472	NR	725	32494	NR	855	5510	NR	985	4912	NR
470	109065	NR	600	218473	NR	730	28665	NR	860	5438	NR	990	5454	NR
475	91762	NR	605	220737	NR	735	25540	NR	865	5848	NR	995	6068	NR
480	78213	NR	610	221090	NR	740	22878	NR	870	4969	NR	1000	9406	NR
485	77035	NR	615	220059	NR	745	20304	NR	875	5438	NR			

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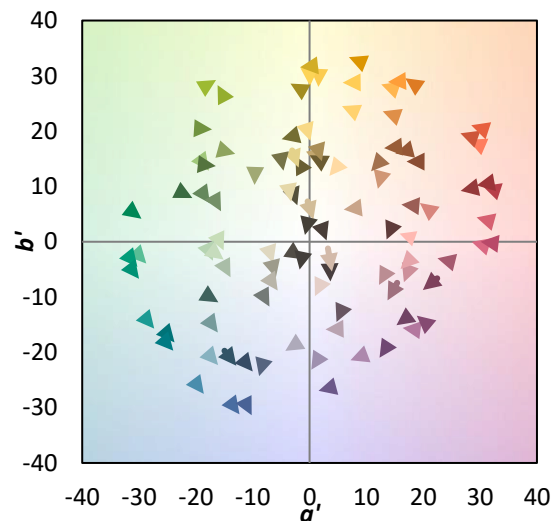
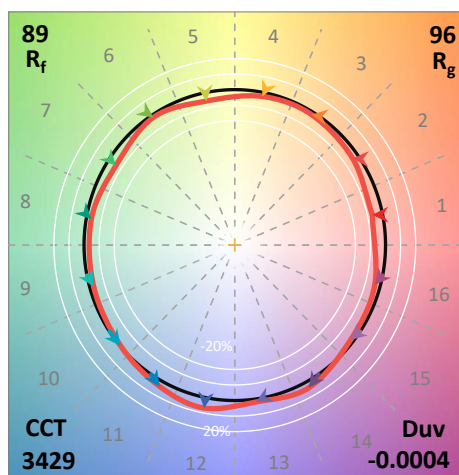
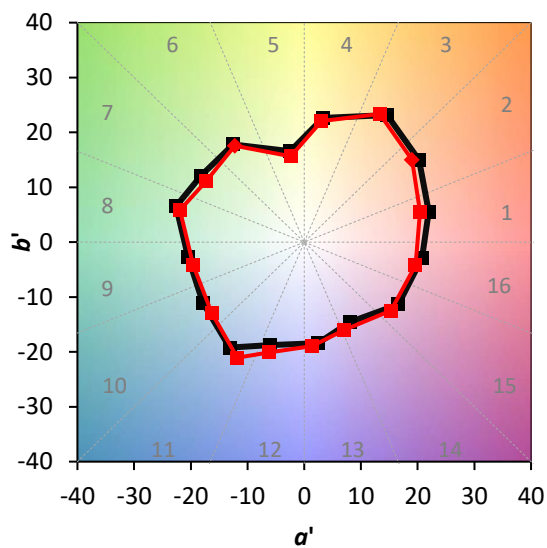
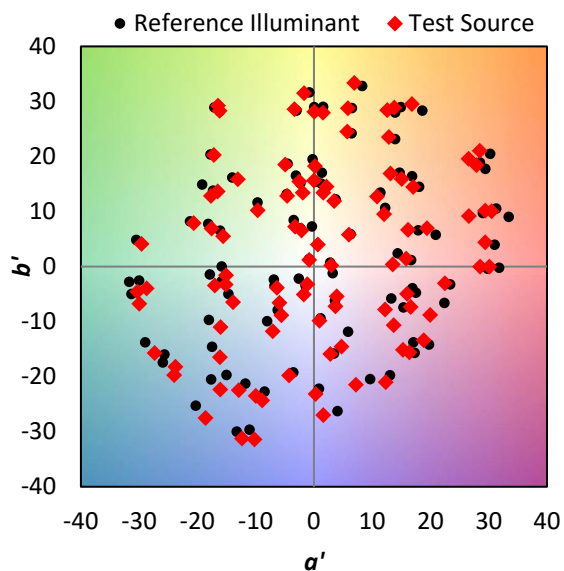
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Summary

$R_f = 88.9$
 $R_g = 96.3$
 $CIE R_a = 90.9$
 $R_9 = 50.7$



Color Vector Graphics

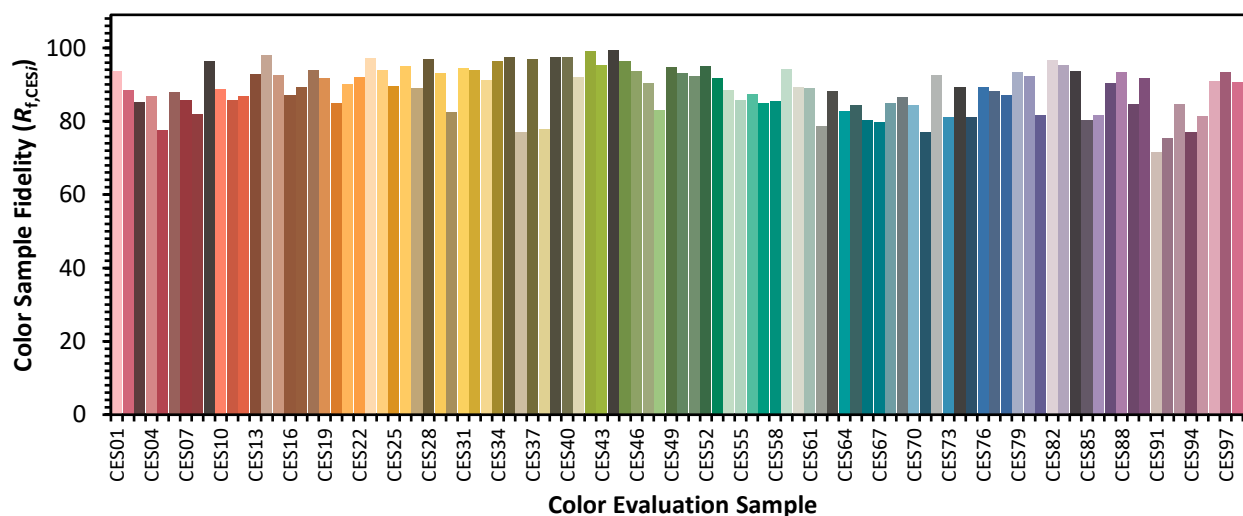


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Individual Sample Fidelity Index ($R_{f,i}$)

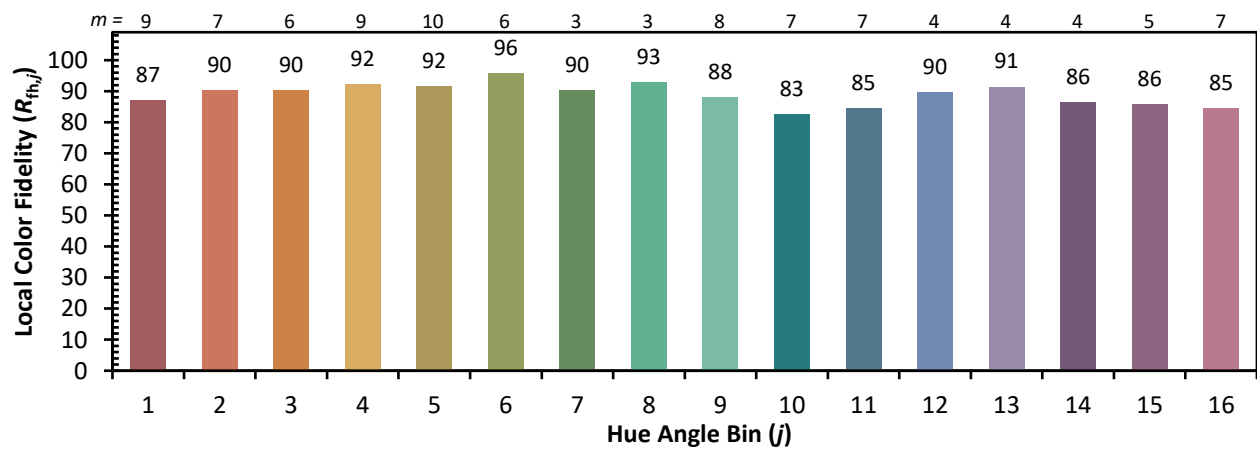
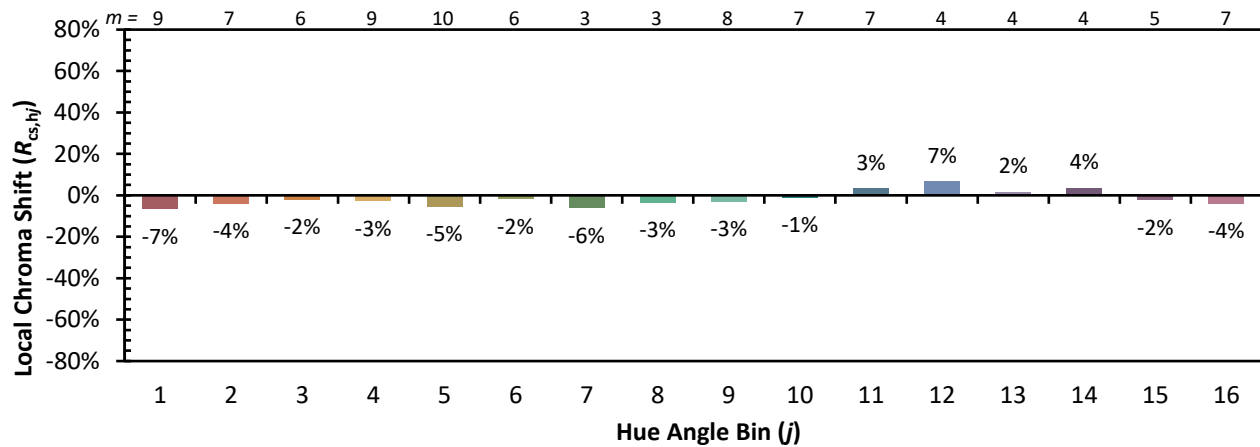
CES01 = 86	CES26 = 95	CES51 = 92	CES76 = 89
CES02 = 62	CES27 = 89	CES52 = 95	CES77 = 88
CES03 = 31	CES28 = 97	CES53 = 92	CES78 = 87
CES04 = 70	CES29 = 93	CES54 = 89	CES79 = 93
CES05 = 49	CES30 = 82	CES55 = 86	CES80 = 92
CES06 = 51	CES31 = 95	CES56 = 87	CES81 = 82
CES07 = 42	CES32 = 94	CES57 = 85	CES82 = 97
CES08 = 41	CES33 = 91	CES58 = 85	CES83 = 95
CES09 = 29	CES34 = 96	CES59 = 94	CES84 = 94
CES10 = 75	CES35 = 97	CES60 = 89	CES85 = 80
CES11 = 58	CES36 = 77	CES61 = 89	CES86 = 82
CES12 = 64	CES37 = 97	CES62 = 79	CES87 = 90
CES13 = 43	CES38 = 78	CES63 = 88	CES88 = 93
CES14 = 74	CES39 = 97	CES64 = 83	CES89 = 85
CES15 = 71	CES40 = 98	CES65 = 84	CES90 = 92
CES16 = 47	CES41 = 92	CES66 = 80	CES91 = 72
CES17 = 50	CES42 = 99	CES67 = 80	CES92 = 75
CES18 = 56	CES43 = 95	CES68 = 85	CES93 = 85
CES19 = 71	CES44 = 99	CES69 = 86	CES94 = 77
CES20 = 66	CES45 = 96	CES70 = 84	CES95 = 81
CES21 = 86	CES46 = 94	CES71 = 77	CES96 = 91
CES22 = 78	CES47 = 91	CES72 = 93	CES97 = 93
CES23 = 91	CES48 = 83	CES73 = 81	CES98 = 91
CES24 = 90	CES49 = 95	CES74 = 89	CES99 = 87
CES25 = 71	CES50 = 93	CES75 = 81	



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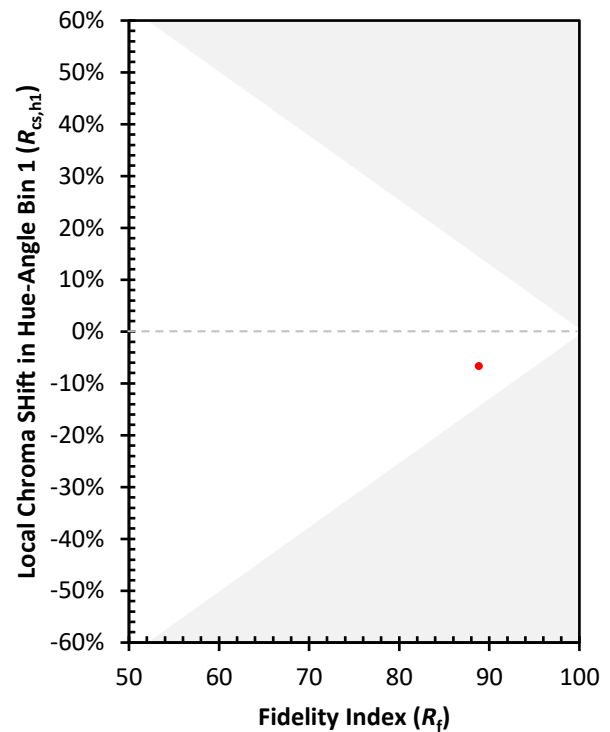
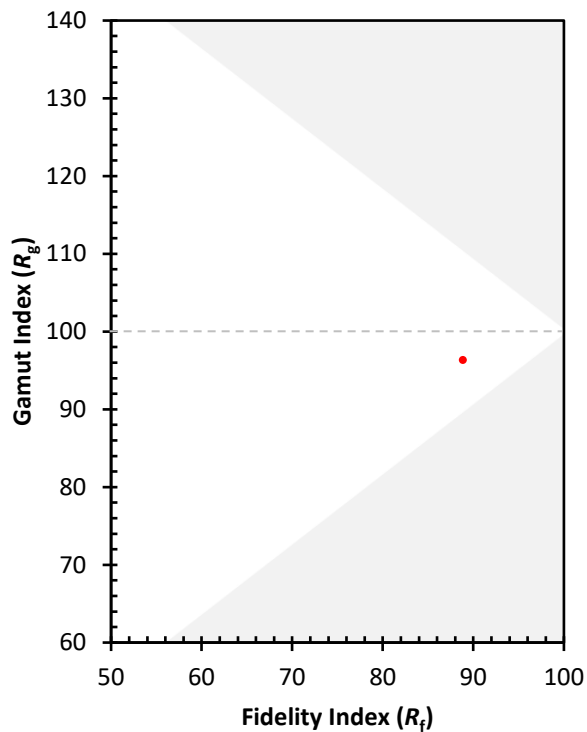
Color Rendition by Hue-Angle Bin



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Measure Comparisons



(END OF REPORT)